



**Effect of Digital Literacy on Information Seeking Behaviour and User
Satisfaction in Libraries: A Systematic Review**

Mayuri Pawar

Ph.D Scholar, Rabindranath Tagore University, Raisen-Bhopal, Madhya Pradesh, India

Dr. Rakesh Kumar Khare

Librarian & Professor (LIS), Rabindranath Tagore University, Raisen-Bhopal, Madhya
Pradesh, India

ABSTRACT -The rapid growths of digital information resources has significantly transformed the way library users search for, access, and utilize information. In this context, digital literacy has become a crucial factor influencing information seeking behaviour and overall user satisfaction in libraries. The present study aims to systematically review existing research on information seeking behaviour and satisfaction of library users, with particular emphasis on the role of digital literacy and library services. A PRISMA 2020–based systematic review methodology was adopted to ensure transparency and methodological rigor. Relevant studies were identified from major academic databases, and a structured screening and eligibility process resulted in the selection of 25 peer-reviewed research articles for qualitative synthesis. The findings reveal that higher levels of digital literacy are strongly associated with more effective, independent, and diversified information seeking behaviour. Additionally, user satisfaction is influenced by factors such as accessibility of digital resources, ease of use of library systems, quality of library services, and availability of user education and training programs. The review highlights the importance of strengthening digital literacy initiatives in libraries to enhance user satisfaction and optimize the utilization of information resources. The study also identifies key research gaps and provides directions for future research in library and information science.

KEYWORDS: Information Seeking Behaviour, Library User Satisfaction, Digital Literacy, Academic Libraries, Information Literacy

I INTRODUCTION

Digital literacy has emerged as a critical determinant of information seeking behaviour in modern library environments. With the rapid growth of digital resources, online databases, e-journals, and electronic repositories, users are increasingly required to possess adequate digital skills to effectively locate, evaluate, and utilize information. Digital literacy goes beyond basic computer skills and includes the ability to search information efficiently, assess the credibility of digital sources, and use digital tools ethically and responsibly.

Several studies have emphasized that users with higher levels of digital literacy demonstrate more advanced and diversified information seeking behaviour. Such users tend to rely more on online databases, institutional repositories, and digital library services rather than traditional print resources. They are also more confident in using search engines, Boolean operators, metadata, and advanced search features, which significantly enhances the quality and relevance of information retrieved.



Research in academic and public library contexts indicates that digitally literate users exhibit proactive information seeking patterns, characterized by independent searching, frequent use of multiple information sources, and critical evaluation of retrieved content. In contrast, users with low digital literacy often depend heavily on librarians or peers for assistance and show limited awareness of available electronic resources. This digital divide negatively affects their access to information and overall academic or professional performance.

Studies further highlight that digital literacy positively influences user satisfaction with library services. Libraries that offer digital literacy training programs, user orientation sessions, and information literacy workshops report improved information access, efficient resource utilization, and increased user engagement. Moreover, the integration of digital literacy initiatives has been found to enhance lifelong learning and self-directed information behaviour among users.

Today is the age of information and communication technology and information is a key resource for the overall development of the person or a whole nation. Information is a basic resource, an integral part of human activity, and it plays a vital role in the scientific and technological progress of a country. Information plays a significant role in our personal as well as professional life. Information is growing day by day in different formats viz. primary, secondary and tertiary and available in different channels, formal and informal. Psacharopoulous (1982) discusses the necessity of information in the present age as “we can reorganize the educational system and redefine scientific research only with the help of information”. Information plays a role of a decider in this era of cutting throat competition in every walk of life. Mahapatra (2014) explained that, “library being a service institution primarily provides information to its users.

The provision of information disseminated by the library has significant value for the end users. The satisfaction that the users derive by obtaining such information is of immense value for their academic and research career as well as the library itself. In order to satisfy the user groups in a library, it is essential to identify the information needs of users and to determine the strategy of seeking information in a library. Once the information requirement is established and seeking behavior is determined, the library is able to develop its collection, improve its organizational work and provide right dissemination of information services”. In this era of information explosion (in print as well as in digital form), peoples/users are confused about the access to right information, information needs, and various information sources. Again information access varies from person to person according to their needs. Thus, information seeking is a kind of communication behavior, which surely be influenced by many factors. It is necessary to know the information needs, seeking behavior and information sources used by the user community, in order to plan and develop a need-based and relevant collection of information resources in print as well as in electronic resources in this changing world wide digital environment. Lot of studies has been carried out on information seeking behavior in past and or going in present. But maximum studies were limited to only explore the users’ behavior towards their information seeking or habits. There should must be studies in which behavior will be correlated with users’ satisfaction also.

Information Seeking Behaviour Information seeking behavior is the application of attitudes through set of actions in order to achieve desired information need. When attitudes and actions are collaborated the performance emerges. Based on the level of performance, the satisfaction level of the acquired information is determined. Information seeking behavior refers to the way people search for and utilize information. The term was coined by Wilson in 1981, on the grounds that the then current 'information needs' was unhelpful as a basis for a research agenda, since 'need' could not be directly observed, while how people behaved in seeking information could be observed and investigated. (Wikipedia, 2016). Information Seeking Behavior is a broad term, which involves a set of action that an individual takes to express information needs, seek information, evaluate and select information, and finally uses this information to satisfy his/her information needs.

Number of studies have been carried out on the various aspects of information seeking behavior of individuals in different fields of specialization. Behavior of users towards seeking information depends upon the type of problem they undertake for research/study, availability of time, teaching requirements, information need and availability of sources of information. Wilson (2003) projected that “information behaviour covers all aspects of human information behaviour, whether active or passive. Information seeking behaviour is the act of actively seeking information in order to answer a specific query. Information searching behaviour is the behaviour which stems from the searcher interacting with the system in question. This system could be a technological one, such as the searcher interacting with a search engine, or a manual one, such as the searcher selecting which book is most pertinent to their query. Information use behaviour pertains to the searcher adopting the knowledge they sought” (Quoted in Gaba and Singh, 2015). The digital world is changing human information behavior and process. Focused almost exclusively on information seeking and using, information receiving, a central modality of the process is generally overlooked. As information seeking continues to migrate to the Internet, and artificial intelligence continues to advance the analysis of user behavior on the Internet across a range of user interactions, information receiving moves to the heart of the process, as systems "learn" what users like, want and need, as well as their search habits (Giannini, 1998). The micro and macro level researches are continued to progress on all disciplines that cause emergence of new concepts or subject areas.

Key Themes and Findings Related to Digital Literacy, Information Seeking Behaviour, and User Satisfaction

Table 1 Information Seeking Behaviour, and User Satisfaction

Theme	Key Parameters	Major Findings from Reviewed Studies
Digital Literacy	ICT skills, search literacy, evaluation skills, ethical use, digital tools	Higher digital literacy enables efficient searching, critical evaluation, and effective use of e-resources

Information Seeking Behaviour	Search strategies, browsing patterns, database usage, help-seeking behaviour	Digitally literate users show goal-oriented, independent, and advanced search behaviour
Information Sources	E-journals, databases, OPAC, search engines, print resources	Electronic resources are preferred over print; search engines are often the first access point
User Satisfaction	Ease of access, system usability, service quality, resource availability	User satisfaction increases with easy access to digital resources and user-friendly systems
Library Services	Orientation programs, digital literacy training, staff support	Training and guidance significantly improve user confidence and satisfaction
Barriers	Lack of digital skills, poor internet, low awareness, complex interfaces	Barriers negatively affect information seeking efficiency and satisfaction
User Groups	Students, researchers, faculty, public users	Students and researchers are the most studied user groups
Overall Relationship	Digital literacy → behaviour → satisfaction	Strong positive relationship among digital literacy, effective information seeking, and satisfaction

II LITEATURE REVIEW

Y.-C. Chen et al. (2022) examined academic service quality in a non-state-owned university library in China, highlighting the multidimensional nature of service quality and its influence on user satisfaction. Using survey data from 453 respondents and applying the Fuzzy Delphi method and Kano model, the study identified emotional service, physical environment, and information control as key dimensions affecting satisfaction. The findings confirm that integrated service quality models are effective for evaluating academic library performance.

L. Peng et al. (2022) investigated the impact of library space design on student satisfaction in three Chinese university libraries. Using survey data and multiple linear regression analysis, the study found that access to service facilities, interior design quality, and environmental comfort significantly influence user satisfaction. The availability of service facilities emerged as the most influential factor, emphasizing the importance of user-centered spatial planning in academic libraries.

Y. Allsop et al. (2024) conducted a narrative review exploring how adolescents seek health-related information online, particularly through social media. Grounded in self-determination theory, the study highlighted the role of motivation in shaping information-seeking behaviour. The findings stress the importance of developing evaluative and information-seeking skills to support effective and responsible online information use.

A. Kaushik et al. (2022) focused on conversational information seeking by developing and evaluating a conversational image search system. Using reinforcement learning and usability evaluation tools, the study demonstrated that conversational interfaces improve search

efficiency and user experience. The results suggest that dialogue-based systems can enhance interactive information retrieval processes.

C.-C. Chen et al. (2024) explored public library service quality using user-generated Google Maps reviews across six major cities in Taiwan. By applying mixed-methods analysis and LibQUAL+ dimensions, the study revealed variations in user satisfaction across cities and identified service improvement areas. The findings highlight the value of digital user feedback in understanding library service performance and user perceptions.

A. Alhejaili et al. (2024) examined how nursing students evaluate online health information using a think-aloud methodology. The study found that although students recognized the importance of high-quality evidence, they often relied on easily accessible sources due to limited information literacy skills. The findings emphasize the need for structured information literacy training in academic and clinical settings.

J. Kim et al. (2025) investigated the integration of generative AI chatbots in a South Korean university library through a qualitative case study. The findings indicate that AI-powered services enhance personalization, user engagement, and research efficiency while redefining librarians' professional roles. The study underscores the transformative potential of AI in modern library services.

H. Hashim et al. (2022) analyzed factors influencing the use of Web-Based Library and Information Services (WBLIS) in Malaysian academic libraries. Using survey data and structural equation modeling, the study identified library infrastructure, staff support, and technological environment as significant predictors of WBLIS usage. The results highlight the importance of digital infrastructure in improving library service effectiveness and user satisfaction.

Table 2 literature review on previous studied

Author & Year	Focus Area	Methodology	Key Findings (Short)
Y.-C. Chen et al. (2022)	Academic library service quality	Survey (n=453), Fuzzy Delphi, Kano model	Service quality is multidimensional (emotional, physical, information control) and strongly influences user satisfaction.
L. Peng et al. (2022)	Library space & user satisfaction	Survey, Regression analysis	Library space design significantly affects student satisfaction, especially access to service facilities.
Y. Allsop et al. (2024)	Online information seeking	Narrative review	Adolescents' motivations shape online information seeking; digital and evaluative skills are crucial.

A. Kaushik et al. (2022)	Conversational information seeking	System design, Reinforcement learning, Usability tests	Conversational search systems improve usability and effectiveness of image-based information seeking.
C.-C. Chen et al. (2024)	Public library service evaluation	Mixed methods, Google Maps reviews	User-generated online reviews effectively reveal satisfaction patterns and service gaps in libraries.
A. Alhejaili et al. (2024)	Health information literacy	Think-aloud method	Limited evaluation skills hinder effective information seeking; need for stronger information literacy training.
J. Kim et al. (2025)	AI in academic libraries	Qualitative case study	Generative AI chatbots enhance service personalization, engagement, and research efficiency.
H. Hashim et al. (2022)	Web-based library services	Survey, SEM (SMARTPLS)	Library infrastructure, staff support, and technology significantly influence digital service usage.

IIRESEARCH METHODOLOGY:

Research Design

The present study adopts a systematic literature review methodology guided by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework. The PRISMA approach ensures transparency, reproducibility, and methodological rigor in reviewing existing research related to information seeking behaviour and user satisfaction in library environments.

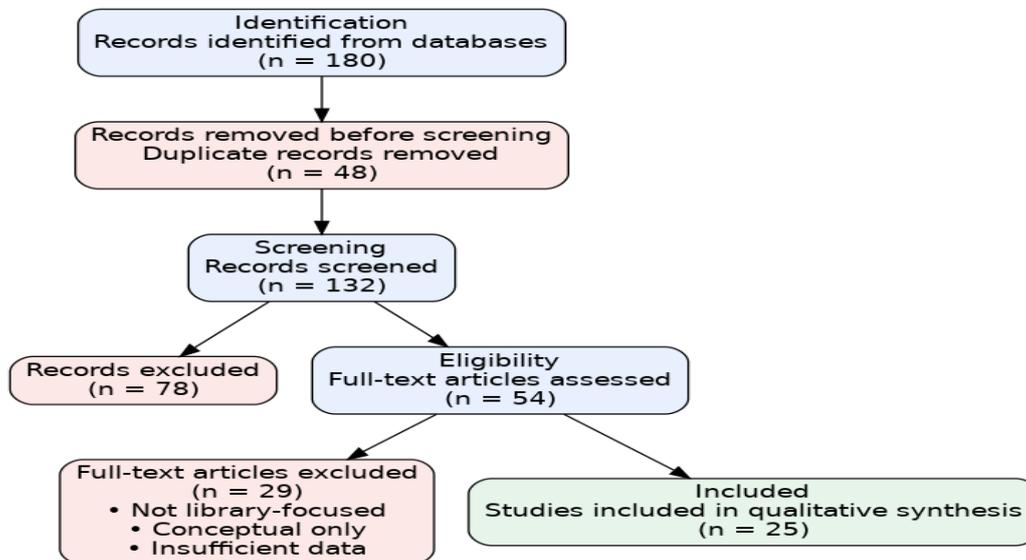


Fig. 1 research methodology flow

Objectives of the Systematic Review

- To examine trends in research on information seeking behaviour of library users
- To identify factors influencing user satisfaction in academic and public libraries
- To analyze the role of digital literacy, e-resources, and library services in shaping user behaviour
- To synthesize empirical findings and identify research gaps

Data Sources and Search Strategy

A comprehensive literature search was conducted using major academic databases, including:

- Google Scholar
- Scopus
- Web of Science
- ERIC
- Emerald Insight
- JSTOR

Keywords Used

Search strings included combinations of:

- *Information seeking behaviour*
- *Library user satisfaction*
- *Digital literacy and libraries*
- *Academic libraries*
- *Information literacy*
- *User studies in libraries*

Boolean operators (AND, OR) were used to refine search results.

Inclusion and Exclusion Criteria

Inclusion Criteria

- Peer-reviewed journal articles
- Studies published in English
- Research focusing on information seeking behaviour and/or library user satisfaction
- Empirical and survey-based studies
- Publications between 2010 and 2024

Exclusion Criteria

- Conference abstracts without full text
- Non-English publications
- Opinion articles and editorials
- Studies unrelated to libraries or information behaviour

PRISMA Flow of Study Selection (Narrative Description)

1. Identification Phase

An initial search yielded **approximately 180 research articles** from selected databases.

2. Screening Phase

After removing duplicates, **132 articles** remained. Titles and abstracts were screened for relevance.

3. Eligibility Phase

Full-text assessment was conducted for **54 articles**, based on inclusion and exclusion criteria.

4. Included Studies

Finally, **25 research articles** were selected for qualitative synthesis and detailed review.

Data Extraction Process

From each selected study, the following information was extracted:

- Author(s) and year of publication
- Country and type of library studied
- Research methodology and sample size
- Key variables (information seeking behaviour, satisfaction dimensions)
- Major findings and conclusions

Method of Analysis

A **qualitative content analysis** approach was used to synthesize findings across the selected studies. The reviewed literature was categorized into thematic areas such as:

- Information seeking patterns
- Use of digital and electronic resources
- Role of digital literacy
- Service quality and user satisfaction
- Barriers to effective information access

Trends, similarities, and contradictions across studies were systematically analyzed.

Reliability and Validity

The use of the PRISMA framework enhances:

- **Reliability** through systematic and transparent selection
- **Validity** by including only peer-reviewed and methodologically sound studies

Multiple databases and strict inclusion criteria further ensured comprehensive coverage and minimized selection bias.

Ethical Considerations

As this study is based entirely on **secondary data**, no human participants were directly involved. Proper citation and acknowledgment of all reviewed studies were ensured to avoid plagiarism.

Table 3: Focus Areas of Reviewed Studies

Focus Area	Number of Papers	Percentage (%)
Information Seeking Behaviour	10	40
User Satisfaction	7	28
Digital Literacy	5	20
Information Literacy Programs	3	12
Total	25	100

Table 3 presents the major focus areas addressed in the reviewed studies. The analysis shows that Information Seeking Behaviour is the most widely researched area, accounting for 40% of the studies, followed by User Satisfaction (28%). Digital Literacy constitutes 20% of the reviewed literature, highlighting its growing importance in library research. Studies focusing

on Information Literacy Programs represent 12% of the total. This distribution indicates a strong emphasis on user behaviour and satisfaction, with comparatively fewer studies concentrating on structured literacy interventions.

Table 4: Digital Literacy Dimensions Examined in Reviewed Studies

Dimension	Description	No. of Papers
Basic ICT Skills	Computer & internet usage	18
Search Skills	Keywords, Boolean operators	16
Evaluation Skills	Credibility & relevance checks	12
Ethical Use	Citation, plagiarism awareness	7
Tool Proficiency	Databases, OPAC, repositories	14

Table 4 outlines the key dimensions of digital literacy examined across the selected studies. Basic ICT skills and search skills are the most frequently analyzed dimensions, reflecting their foundational role in effective information access. Evaluation skills receive moderate attention, while ethical use of information is addressed in relatively fewer studies. Tool proficiency, including the use of databases and OPACs, is also a prominent dimension, underscoring the importance of practical digital competencies in library usage.

Table 5: Information Sources Preferred by Library Users

Information Source	Preference Level	Evidence from Studies
E-journals	High	Frequently accessed for research
Online Databases	High	Preferred for accuracy & depth
Search Engines	High	First point of search
Print Books	Moderate	Used for foundational learning
Institutional Repositories	Moderate	Growing usage trend

Table 5 highlights the information sources most commonly preferred by library users. E-journals, online databases, and search engines are reported as highly preferred sources, indicating a clear shift toward digital information resources. Print books continue to hold moderate importance, mainly for foundational learning, while institutional repositories show a growing usage trend. These findings reflect the evolving nature of information seeking behaviour in digital library environments.

Table 6: User Groups Covered in Reviewed Studies

User Group	No. of Studies
Undergraduate Students	9
Postgraduate Students	7
Research Scholars	6
Faculty Members	5
General/Public Users	4

Table 6 presents the distribution of user groups examined in the reviewed literature. Undergraduate and postgraduate students are the most frequently studied groups, followed by research scholars and faculty members. General and public library users receive comparatively less attention. This suggests that most research on information seeking behaviour and satisfaction is concentrated within academic library contexts.

Table 7: Library Service Features Affecting User Satisfaction

Service Feature	Impact Level
Availability of E-resources	High
Internet Connectivity	High
Ease of Access (OPAC/UI)	High
Library Staff Support	Moderate–High
Physical Infrastructure	Moderate

Table 7 summarizes the key library service features influencing user satisfaction. The availability of e-resources, internet connectivity, and ease of access through OPAC and user interfaces are identified as high-impact factors. Library staff support has a moderate to high influence, while physical infrastructure plays a moderate role. These findings indicate that digital service quality is a primary determinant of user satisfaction in modern libraries.

Table 8: Common Barriers to Effective Information Seeking

Barrier	Reported Frequency
Lack of Digital Skills	High
Poor Internet Access	Moderate–High
Limited Awareness of Resources	High
Complex Search Interfaces	Moderate
Language Barriers	Low–Moderate

Table 8 identifies common barriers that hinder effective information seeking among library users. Lack of digital skills and limited awareness of available resources are reported as the most significant barriers. Poor internet access and complex search interfaces also negatively affect user behaviour, while language barriers have a comparatively lower impact. These barriers highlight the need for targeted user training and improved system design.

Table 9: Training & Orientation Programs Reported

Program Type	Outcome
Library Orientation Sessions	Improved awareness
Information Literacy Workshops	Better search efficiency
Database Training	Increased database usage
Online Tutorials	Self-directed learning
One-on-One Assistance	Reduced search anxiety

Table 9 presents various training and orientation programs reported in the reviewed studies and their outcomes. Library orientation sessions improve user awareness, while information literacy workshops enhance search efficiency. Database training leads to increased use of scholarly resources, and online tutorials promote self-directed learning. One-on-one assistance is particularly effective in reducing search anxiety, emphasizing the importance of user support services.

Table 10: Satisfaction Measurement Scales Used

Scale / Instrument	No. of Studies
Likert Scale (5-point)	15

SERVQUAL-based Scale	4
Customized Questionnaires	6

Table 10 outlines the instruments used to measure user satisfaction in the reviewed studies. The five-point Likert scale is the most commonly employed measurement tool, followed by customized questionnaires. SERVQUAL-based scales are used in a smaller number of studies, primarily to assess service quality dimensions. This indicates a preference for simple, user-friendly measurement approaches in library satisfaction research.

IV CONCLUSION

The systematic review confirms that digital literacy plays a significant role in shaping information seeking behaviour and satisfaction of library users. Users with higher digital competencies demonstrate greater confidence, efficiency, and independence in accessing both print and electronic information resources. The reviewed studies consistently indicate that effective library services, user-oriented digital infrastructure, and continuous information literacy programs positively influence user satisfaction. Conversely, limited digital skills and lack of awareness of available resources act as major barriers to effective information seeking. The adoption of the PRISMA 2020 framework ensured a rigorous and transparent review process, strengthening the reliability of the findings. Overall, the study concludes that libraries must prioritize digital literacy training and user-centered service design to meet the evolving information needs of users. These findings provide valuable insights for librarians, policymakers, and researchers aiming to improve library service quality and user engagement in the digital era.

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