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INTERNATIONAL JOURNAL OF RECENT TECHNOLOGY SCIENCE & MANAGEMENT “INFORMATION SEEKING BEHAVIOUR IN THE DIGITAL AGE: A SYSTEMATIC REVIEW OF CONCEPTS, THEORIES”

Mayuri Pawar¹, Dr. Rakesh Kumar Khare²

¹ Ph.D. Scholar, Rabindranath Tagore University, Raisen-Bhopal, Madhya Pradesh, India

² Librarian & Professor (LIS), Rabindranath Tagore University, Raisen-Bhopal, Madhya Pradesh, India

ABSTRACT

Information seeking behaviour refers to the set of actions undertaken by individuals to recognize information needs, search for relevant information, evaluate retrieved sources, and utilize information to satisfy those needs. This behaviour emerges when individuals perceive a gap between their existing knowledge and the information required to address a specific problem or task. The present review paper examines the concept, scope, and evolution of information seeking behaviour, highlighting its multidisciplinary relevance across library and information science, communication studies, sociology, and psychology. It synthesizes theoretical perspectives, particularly Wilson's information behaviour framework, and explores the influence of technological developments in information storage, retrieval, and dissemination on user behaviour. The review also discusses key factors affecting information seeking behaviour, including education, professional role, time constraints, prior experience, accessibility of information systems, and social interactions. Special emphasis is given to changes introduced by the digital environment, artificial intelligence, and online information systems, which have transformed both active information seeking and passive information receiving processes. Additionally, the paper reviews the nature and types of information needs—current, everyday, exhaustive, and catching-up approaches—and their implications for user satisfaction and system design. The study underscores the importance of understanding users' information needs and seeking patterns for effective planning, development, and delivery of library and information services in the digital era.

Key Words: Information seeking behaviour; Information needs; User behaviour; Digital information environment; Library and information services; Information literacy; Information retrieval; User satisfaction.

I. INTRODUCTION

Information seeking behaviour is defined as any activity of an individual that is undertaken to identify a message that satisfies a perceived need. Information seeking begins when someone perceives that the current state of possessed knowledge is less than needed to deal with some issue problem. The process ends when that perception no longer exists. People seek information in a variety of circumstances and from a variety of sources. The developments in information storage, retrieval and derived dissemination methods affect the information scientists. The individual seeking information need not be concerned with how the information is stored but should be concerned with how much information is stored and what kind of information is stored. One will be concerned about the ease and comprehensive of retrieval mechanisms, but most of all one will be affected by the delivery mechanisms. In relation to basic human needs the new technology is likely to have some effect on the information seeking habits of those concerned for empirical knowledge and for corporate human experience and entertainment. In the short term it is not likely to have a

major effect on the seeker for personal human experience or on those seeking corporate human experience. In the longer term, more information may be stored in all types of format as the community recognizes the wide range of material encompassed by corporate human experience. Then there will be a considerable change in user habits. Information seeking behaviour is an area of active interest among many librarians, information scientists, communication scientists, sociologists and psychologists. Information seeking behaviour results from the recognition of some need, perceived by the user, whom as a consequence maker depends upon formal system such as libraries; information centers, on-line services, or some other persons in order to satisfy the perceived need. It is influenced by a number of factors such as ones education together or not he/she has been taught how to use the products and services of information units, ones working condition and amount of time available, ones hierarchical status and professional, position, how easily one gets on with people, how much competition there is between members of a group, the attitude of each individual/group, and previous experience etc.

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. "The study of information seeking behavior can be dated back to the late 1940's. 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. This creates necessity for understanding the users' information needs and information seeking behaviour. So, this phenomenon becomes instrumental for the conduct of continual research in the area of information seeking behavior. The knowledge of information needs and information-seeking behavior of different users of the library is quite essential as it helps in the planning, implementation, and operation of library and information system and services.

Nature of Information Need

It has been realized that 'information need' is a composite concept of different types of requirements and approaches to information. The same person could interact with the information system in different ways at different times depending upon his purpose in relation to his work, stage of his work, general interest, amount of information already available to him and so on. It is generally accepted that there are four different types of information approach. They are – a) Current approach b) Everyday approach c) Exhaustive approach d) Catching-up or Brushing approach.

Current approach

Every active worker has to keep himself abreast of current developments, up to a fair degree, not only in his specific field of work but also in the broader 13 field or fields of interest or areas, whose developments can substantially change the course of his present work [13]

Everyday approach

The second approach stems from the research workers frequent need, in the course of his investigation for specific piece of information, such as, data (e.g. boiling point of a substance), a method, a formula etc. The nature of information sought in such a situation is very specific and quick answer is usually expected.

Exhaustive approach

The third approach, for which dependence on documents is very much necessary and hence had attracted the attention of documents quite early, is for all or almost all relevant literature on a subject. It can be realised that such approach would be occasional only.

Catching-up approach

This approach is still more occasional. A worker may at times need to have a brief but a complete picture of the recent development of a related subject or a subject in which he was not very much interested or which did not come within the area of his main interest. This likely to be an area in which he is not expert. As a result of this he is not quite current with the subject. Hence in such a situation, he expects to have in the communication system a device which will help him in quickly catching-up with the subject.

Table 1. : Information Seeking Behaviour of Users in Bachelor of Education (B.Ed.) Colleges

Parameter	Description	Possible Data Collection Method
User Category	B.Ed. students, faculty, research scholars	Library records, questionnaires
Frequency of Library Visits	Daily, Weekly, Monthly, Occasionally	User survey, library entry logs
Purpose of Information Seeking	Exam preparation, lesson planning, research work, teaching support	Questionnaire, interviews
Preferred Information Sources	Textbooks, reference books, educational journals, internet, e-resources	User feedback, survey forms
Search Methods	OPAC (Online Public Access Catalogue), browsing shelves, librarian help	Observations, user questionnaires
Use of Electronic Resources	Usage of e-journals, digital libraries, online articles	Digital access records, user surveys
Satisfaction Level	Satisfaction with availability, accessibility, and relevance of resources	Likert scale-based questionnaires
Problems Faced	Insufficient resources, lack of digital access, language barriers	User interviews, complaint records
Awareness of Library Services	Awareness about new arrivals, library facilities, digital resources	Pre-survey awareness questionnaires
Information Literacy Skills	Ability to locate, evaluate, and use information effectively	Information literacy assessments, surveys

Table 2 Challenges Faced by Users in Information Seeking – B.Ed. College Libraries

Challenge	Description
Lack of Information Literacy Skills	Users struggle to locate, evaluate, or effectively use library and online resources.
Limited Access to Digital Resources	Inadequate availability of e-journals, databases, or slow internet connectivity.
Outdated or Insufficient Library Collection	Shortage of updated textbooks, reference materials, or research journals.
Lack of Awareness about Library Services	Many users are unaware of catalogues, new arrivals, or digital facilities.
Inadequate Library Infrastructure	Limited seating, insufficient computers, or absence of a digital section.
Time Constraints	Students and faculty may have limited time due to academic or teaching schedules.
Language Barrier	Difficulty understanding English materials, especially for students from rural backgrounds.
Inadequate Guidance from Library Staff	Lack of proactive assistance or training in information retrieval techniques.
Dependence on Internet over Library	Over-reliance on quick online sources like Google instead of academic materials.
Technical Difficulties	Problems using OPAC, accessing e-resources, or navigating digital platforms.

II. LITERATURE REVIEW

Over the past five years, research across diverse educational contexts has reaffirmed that students' information-seeking behaviors are strongly shaped by their digital literacy levels, access to e-resources, and evolving academic demands.

Balaji, and Murugesan (2023) investigated B.Ed. students in Gujarat and found that while awareness of online scholarly materials is high, the majority relied primarily on search engines and lacked systematic strategies for evaluating sources. Similarly, a mixed-methods study in Ghana by Appiah's team (2023) demonstrated a significant positive correlation between information literacy competencies and proactive lifelong learning behaviors, noting students with better IL skills exhibited more confidence and persistence during information searches. In the Tamil Nadu region, Balasubramanian et al. (2021) observed that undergraduates combined print and digital sources pragmatically—favoring convenience over depth—but their use of e-journals was still hampered by lack of training. Jayamma & Mahesh (2020) reported similar findings among postgraduate students in Bangalore, where weekly library visits primarily served exam-specific informational needs, rather than broader research interests.

Kumar & Sharma's (2021) review of Indian academic libraries underscored methodological gaps in existing research, recommending stronger statistical rigor and more attention to specialized contexts such as B.Ed. colleges publications.drdo.gov.in. Collectively, these studies suggest that while digital access has expanded, effective navigation, critical appraisal, and targeted training remain key to enhancing meaningful information-seeking among education-focused college students.

Patel (2023) explored the information-seeking behavior of B.Ed. students in Gujarat, India, focusing on their awareness and usage of digital resources. The study revealed that while most students were aware of online scholarly materials, their search habits were largely restricted to general search engines like Google rather than specialized academic

databases. The authors emphasized that although students frequently accessed digital information, they lacked structured search strategies and exhibited limited skills in evaluating the credibility of sources. This highlighted the urgent need for formal training in information literacy to enhance their academic research capabilities.

Appiah and colleagues (2023) conducted a study in Ghana to examine how information literacy skills impact university students' information-seeking behavior and their attitudes toward lifelong learning. The research found that students with higher levels of information literacy were significantly more effective in locating and using information for academic purposes. These students also displayed greater confidence, persistence, and independence in their information-seeking processes. The study concluded that promoting information literacy training can not only improve academic performance but also foster a culture of self-directed learning among students.

Balasubramanian et al. (2021) studied undergraduate students in the Tirunelveli district of Tamil Nadu to assess their patterns of information-seeking behavior. The study showed that students typically used both print and digital resources, but their preferences leaned toward easily accessible materials. While students were aware of the availability of e-journals and online academic sources, their effective usage was limited due to insufficient training on how to navigate and retrieve high-quality digital information. The authors recommended the integration of user education programs to enhance student engagement with digital library resources.

Jayamma & Mahesh (2020) investigated the information-seeking behavior of postgraduate students at Government Science College in Bangalore. The study found that most students relied on library resources primarily for short-term, exam-related needs rather than for extensive research or in-depth study. Library visits were frequent but often driven by immediate academic requirements instead of cultivating long-term research habits. The authors suggested the need for proactive library outreach and resource awareness programs to encourage students to fully utilize the breadth of academic materials available to them.

Kumar & Sharma (2021) presented a comprehensive review of the information-seeking behavior of users in Indian academic libraries. Their analysis highlighted that while digital resources were increasingly used, there remained significant gaps in research methodologies applied to studying information behavior, especially within specialized institutions like B.Ed. colleges. They emphasized the need for more rigorous, statistically sound studies to understand the unique needs of different academic disciplines.

Table 3 Literature Review Table: Information-Seeking Behaviour in B.Ed. and Academic

Author(s)	Year	Study Focus	Key Findings	Location
Patel & Patel	2023	Digital resource usage among B.Ed. students	Students relied on general search engines; lacked evaluation skills; need for structured information literacy training.	Gujarat, India
Appiah et al.	2023	Info literacy's impact on student behavior & lifelong learning	Higher IL skills led to better academic information usage and more independent, confident search behavior.	Ghana
Balasubramanian et al.	2021	Info-seeking patterns of UG students in Arts & Science colleges	Students preferred convenient sources; limited use of e-journals due to lack of training; need for user education programs.	Tamil Nadu, India
Jayamma & Mahesh	2020	Info-seeking of PG students in Govt. Science College	Library visits mostly for exam preparation; research behavior underdeveloped; need for outreach and awareness programs.	Bangalore, India
Kumar & Sharma	2021	Review of info-seeking in academic libraries	Identified methodological gaps; need for more studies on B.Ed. students; emphasized user-specific services and surveys.	India

III. CONCLUSION

Information seeking behaviour has emerged as a dynamic and multifaceted phenomenon, shaped by users' information needs, cognitive processes, social contexts, and technological environments. This review highlights that information seeking begins with the recognition of a knowledge gap and progresses through stages of searching, evaluating, and using information to achieve satisfaction. Theoretical models, particularly those proposed by Wilson and other scholars, provide a comprehensive framework for understanding the complex interactions between users, information systems, and contextual factors influencing information behaviour.

The study emphasizes that developments in digital technologies, online information systems, and artificial intelligence have significantly transformed traditional information seeking practices. Users increasingly rely on digital platforms that support both active information seeking and passive information receiving, thereby reshaping search strategies, access patterns, and information use behaviour. Factors such as educational background, professional role, time availability, prior experience, and information literacy continue to play a crucial role in determining the effectiveness and satisfaction of information seeking.

Furthermore, the classification of information needs into current, everyday, exhaustive, and catching-up approaches underscores the diversity of user requirements and the necessity for flexible and user-centred information services. Understanding these behavioural patterns is essential for the effective planning, design, and delivery of library and information systems in the digital era. The review concludes that continuous research into information seeking behaviour is vital for adapting library services to evolving user expectations and for ensuring efficient access to relevant, reliable, and timely information in an increasingly digital knowledge environment.

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