

Towards Effective Information Provision: A Study on Library User Search Patterns and Selection Criteria

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Abstrak

Understanding how library users access and utilize information resources is crucial for librarians to enhance their library services. This research delves into the search strategies employed by library users to access information resources and the criteria they use in selecting such resources. The study involves interviews with 20 participants, all final-year students majoring in library science at Alauddin State Islamic University of Makassar. The research reveals that library users commonly employ mental and basic search strategies. This observation underscores the potential drawbacks of relying solely on mental and basic approaches, as it may result in suboptimal outcomes in terms of both quantity and quality of information resources. The study further identifies currency, the minimum acceptable standard, and availability or accessibility as the primary indicators guiding the selection of information resources. Consequently, librarians should ensure that the information resources they provide meet these criteria. The findings emphasize the necessity for librarians to incorporate complex and written search strategies, integral components of information literacy empowerment, into any information literacy program. Additionally, librarians should prioritize the regular updating and accessibility of information resources, recognizing that quality serves as the baseline standard for such resources. Librarians should prioritize updating and accessibility information sources, even if the quality of these sources is at a minimum level.

Kata Kunci: Search Strategies; Selection Criteria; Library Users; Information Access

A. Introduction

The advancement of technology and information has transformed how information is stored, managed, accessed, and retrieved (Peterson, 1994; Borgman, 2003; Chowdhury, 2010). Library science as a discipline that studies information needs to undergo curriculum changes to equip students in organizing and retrieving information so that they will be able to provide an effective information provision.

The activity of retrieving information is not a simple task but rather a complex activity as it requires a series of knowledge and skills in finding information relevant

to our needs. This set of knowledge and skills includes an individual's ability to recognize and express their information needs, create information search strategies, and evaluate and utilize the information found (Doyle, 1995; Bowden, 2001; Pinto & Sales, 2008; Given, 2008; Tekedere & Goker, 2023).

The sequence of activities in information retrieval is one of the objects studied in library science, known as information behavior. The effort to equip this set of knowledge and information skills is obtained through the course of information literacy. This course is intended not only for students to have the skills to interact with information but also to be able to design and implement information literacy activities when they work in libraries. Thus, knowledge about information behavior can contribute to the development of Information Literacy and Information Retrieval System courses.

Several studies related to information literacy discuss themes around the creation of information literacy programs or focus on the design process of information literacy programs, which have been widely conducted by university libraries for students. How students' information behavior reflects their information literacy skills is not widely known.

Information behavior, as one of the focal points in the library science discipline, can contribute significantly to the development of library services (Barrett & Andy, 2005; Haglund & Olsson, 2008; Urquhart & Rowley, 2007; Lyudmila, 2020). For instance, in acquiring library materials, understanding user behavior is crucial to effectively choose library resources suitable for users (Spiller, 1996; Mustafa et.al, 2021). Ensuring that library services align with the needs of users is another important aspect, as highlighted by (Katz 1997; Song, 2009; Proffitt, Michalko, & Renspie, 2015). Therefore, conducting regular surveys or research on library users is advisable to enhance library services periodically (Bonk, 1990; Gibbons, 2013; Emezie, 2018).

In this study, the author assumes that coursework is a condition that prompts students from the Faculty of Adab & Humanities at UIN Alauddin to conduct information searches. In fulfilling their information needs, they exhibit certain information behaviors. With this assumption, the research question becomes: What strategies are employed in searching and finding the information they need? What attributes/indicators are used to assess the quality and relevance of information.

B. Research Methodology

This research aims to provide a qualitative description of the experiences of university students as library users in accessing and evaluating information resources, with a particular focus on the search strategy and indicators utilized in this process.

The population for this research consisted of final-year students from the Library Science department at UIN Alauddin. They were chosen as the sample because they had completed information literacy and information retrieval subjects. A total of 20 students were selected as participants for this research. These participants were interviewed immediately after conducting information searches to find resources related to their research topics.

A total of 21 pages, comprising 6,194 words, from the interview results were analyzed using common steps in qualitative data analysis. The data was categorized by employing codes established by the researchers to derive conclusions as the findings of the research. The codes utilized are as follows:

Variables	Code	Categorization
Search strategy used to find information resources	SS	Query words used to find information resources
	SS1	Basic search for example author name, title, and subject
	SS2	Advanced search for example Boolean operator (and, or, not), proximity, and truncation
Attribute used to evaluate information resources	AT	The indicators used to judge the quality and the relevant of the information resources found.
	AT1	Currency for example year of publication
	AT2	Completeness for example the coverage and the deep of the information resources
	AT3	Authority for example the author, publisher, and the journal name of the information resources taken
	AT4	Other indicators mentioned by participants

The findings of this research were interpreted using two perspectives: empowering information literacy for library users and addressing the criteria of information resources needed by library users. This includes considerations for both the library collection and improving the quality of information retrieval, such as enhancing the library catalog.

C. Research Findings

1. User-preferred search strategies for accessing information resources.

The research indicates that participants utilized various query words as part of their search strategy to locate the information resources necessary for completing their assignments and final projects. The query words entered by participants into the search box of information retrieval systems include subject (content of the publication), title, author name (if available in the library catalog), or keyword. In the case of online searching, participants employed truncation when using Google.

Subject (the aboutness of a publication) is one of the search strategies employed by participants to find information resources for completing their assignments or final projects, as indicated by the following participants:

“I employed the subject search feature on the OPAC to retrieve an information resource [p1]. Opting for the subject search on the OPAC was my preferred method to access information resources due to its simplicity compared to other search strategies [p4]. In instances where the author or title was unknown, I utilized the subject approach [p11]. I specifically chose the subject option in the OPAC for searching information resources because it yielded more results compared to using the title or author name [p19].”

The decision to prioritize the subject as the primary approach for retrieving information varies among participants. The essence of an information need is predominantly housed within the user's cognition, making the subject the focal point of retrieval. In a similar vein, the usage of author names or publication titles has become less prevalent among library users when seeking information resources.

Some participants also utilize the title of a publication as a means to retrieve information resources, as indicated by the following participants:

“I enter the title of a publication into the search box if it is known, but the results are often very limited [p5]. In cases where the author's name is unknown, I still type the title of a publication into the search box, but the outcomes are not consistently satisfactory [p7]. At times, I resort to using the title to locate a publication in the OPAC, though the results can be inconsistent [p6].”

The aforementioned statements indicate that the title of a publication is commonly employed only when it meets certain criteria, such as when the title is familiar or when users have no information about the author. Interestingly, even though users use the title of a publication as an access point to retrieve information

resources, they still anticipate obtaining more search results. However, utilizing the publication title to search for information resources ultimately leads to the to the specific source entered in the search box.

Instead of employing simple words to represent the aboutness or subject of the required publications, certain participants entered the complete title of their thesis into the search box of the Google search engine to find relevant information resources. This approach is articulated by the following participants:

“I typically enter the complete title of my thesis into the Google search box to discover pertinent information resources for my final project, as it facilitates obtaining the necessary resources [p9]. I favor using the entire title of my thesis to identify works identical to its title, and I do not utilize Boolean operators such as AND, OR, NOT to retrieve information resources [p10]. Initially, I input the title of my final project to acquire resources, but if unsuccessful, I switch to the subject option [p25].”

Such a method, entering the complete title of a thesis, signifies an effort to locate more identical information resources related to their final project. The primary objective of this approach is to grasp the structure or organization from these identical resources, making it easier for them to write their thesis.

The author's name is another option for finding information resources, as indicated by the following statements:

“Indeed, I have previously employed the author's name to locate a specific book requested by a lecturer [p2]. I resort to using the author's name if I am familiar with the author's publications; if not, I then turn to the title of a publication. It is more effective to use the author's name when I am aware of the author of a publication [p6]. However, I seldom use the author as a means to find information resources [p25].”

A situation arises where the author of a publication becomes an access point for retrieving information resources. This circumstance may stem from external sources, such as a request from an academician, or it may originate internally, when the author of a publication is already embedded in an individual's memory. As a result, this access point for information retrieval is utilized less frequently by library users compared to other access points.

Keywords, as another access point for information retrieval, are also employed as a search strategy, as indicated by the following participants:

“I directly use keywords to retrieve information resources from the internet [p4]. Typically, I employ keywords by directly entering the title of my thesis

into the query box on the internet to download journal articles [p9]. For instance, I use 'motivation' as a keyword in Google Scholars, but then I need to select because the results are numerous [p13]. At home, I open the internet, use keywords, and ultimately acquire a substantial number of references [p15]”.

Keywords serve as a widely utilized access point for information retrieval, particularly when users utilize the Internet as a primary source. The selection of channels is a prerequisite for choosing keywords as the access point for retrieving information. The use of keywords in obtaining information resources has two consequences for users: the selection of information resources, as mentioned by [p13], and a sense of satisfaction from the substantial information resources they discover on the Internet, as indicated by [p15].

Library users also utilize bookshelf arrangement to obtain relevant information resources as indicated by the following participants:

“I search for books directly on the shelves by looking at the call numbers [p1]. If I cannot find a book in the OPAC, I then go to the shelves to browse books. In the faculty library, I go directly to the shelves to find relevant resources because the collection is not large enough [p2]. When there is a long queue in the OPAC, I go directly to the shelves to find resources relevant to my needs. While I search for books directly on the shelves, it takes time to browse the title and table of contents to find relevant information resources [p5]. I use the book order on the shelves to find printed journals [p11]. Initially, I go to the shelves, and if I cannot find the books I want, I then check the OPAC [p14]. For printed materials, I directly go to the shelves to find books [p19]. I go directly to the shelves because I already know the location of the books [p16]. When searching for theses, I go directly to the shelves so I can open the table of contents to decide which ones are relevant and which are not [p24]”.

Several conditions apply to the use of the book order on the shelves for obtaining relevant information resources. These conditions include a small library collection [p2], the OPAC status being in use [p5], the type of publication being in printed format [p19], already knowing the location of an item [p16], and the ease of deciding on relevant works by directly examining the table of contents [p24].

The use of OPAC and the bookshelf arrangement are interchangeable [p14]. Library users may initially use the OPAC to check the availability of information resources and then proceed to the shelves to obtain the book. Conversely, library users may directly go to the shelves to explore relevant works based on their needs. If they cannot find the desired work, they may then turn to the OPAC to check its availability.

Library users commonly utilize subject, title, author, keywords, and bookshelf arrangement as preferred search strategies to access information resources. This process involves four steps: setting conditions, selecting search strategies, forming expectations, and making adjustments. When users precisely know the publication they are looking for, they typically choose author or title access points, expecting to confirm the availability of the specific item. Conversely, if users are uncertain about the publication they need, they opt for subject or keyword access points to explore relevant publications. In cases the library has a small or limited collection, users may resort to browsing bookshelf arrangements in order to locate known items and discover publications related to their needs through this strategy. The adjustment phase occurs when users react to the results of their search strategy, indicating a dynamic aspect of the search process.

By synthesizing the findings above, it can be concluded that the choice of specific search strategies comprises 4 layers in the user brain; conditions or requirements, option search strategies, expectation, alteration. An illustration of this can be seen in the following: first, there must be a condition prior to selecting search access point. A condition which requires user to select author name or publication title is called lookup search, a strategy which is defined as a known item where the users only want to check the availability of the item. Or in other word, Lookup searches, also referred to as "known item searches" or "navigational searches," are performed with a specific objective in mind and produce accurate outcomes with minimal necessity for scrutinizing result sets and comparing items. Second, a condition where users want to navigate what are the publications relevant to their needs is called exploratory search which is defined as a strategy where the users would like to know more resources relevant to their needs. Or Exploratory searching involves a learning process where users seek exposure to various, occasionally conflicting knowledge sources to develop their understanding of a subject. Users initiate a preliminary query to explore documents closely related to their topic of interest and then navigate through the environment to enhance their understanding, actively seeking and passively acquiring cues for their subsequent actions. Third, heuristic search strategy, which is defined as

2. Attributes and Indicators for Assessing Information Resource Quality and Relevance

The diverse document types and the abundance of available information resources compel library users to carefully select resources relevant to their needs. Users may employ various indicators to assess the quality and relevance of information resources. The goal of this information judgment is to filter and choose resources that will be useful in completing information tasks.

There are a number of attributes and indicators used by the participants of this study to judge the relevance and the quality of information resources as stated by the following participants.

The participants in this study utilize several attributes and indicators to assess the relevance and quality of information resources, as stated by the following participants:

“When dealing with a thesis, I pay attention to the year of publication [p1]. Specifically for theses, I scrutinize the year of publication, focusing on the last two years at least [p2]. This practice is influenced by my supervisors who recommend filtering the year of publication to within 5 or 10 years from the present [p4]. While it is crucial to check the year of publication for theses, the same level of importance does not apply to books; if it is relevant, I consider it regardless of the publication year [p5]. I follow the suggestion of a friend to pay attention to the year of publication, particularly for theses [p6]”.

It is evident that the document type [p1] and academic requirements, such as writing a thesis [p4], necessitate users to consider currency as a crucial attribute in selecting information resources. However, in specific instances, this attribute may be overlooked in the selection process, as users may struggle to find relevant information resources, as expressed by a participant: 'I haven't yet thought about the currency because it is hard to find relevant information resources for my thesis [p12].

In addition to currency, the completeness of an information resource is also considered an attribute in selecting information resources. Two indicators of completeness include having sufficient supporting data for research results and a comprehensive bibliography. One participant state, “If it is a journal article, I check the section on research results for adequate supporting data and examine the bibliography to ensure its availability[p15]”.

The authorship of a work is a crucial consideration for users in determining the quality of an information resource. Participants use this attribute, as indicated by one participant who mentions, “I check the author because my friends suggest always ensuring our own supervisors' works are cited in our thesis” [p1]. Additionally, the clarity of authorship is essential, with one participant stating, “I check the availability of the author for each downloaded article. If it lacks a clear author, I disregard it” [p2]. The competence of an author is also a factor in determining the authority of a work, as expressed by a participant: “When searching for theses relevant to my project, I assess the author's competency in writing the thesis” [p3].

Another method for assessing the relevance of obtained information resources is by examining the title and table of contents of a publication, as noted by one informant: “Normally, the title is the starting point to determine the relevance of an information resource. Then, I go through the table of contents because often the title does not fully reflect the content of a publication” [p11]. Additionally, when a publication includes an abstract, users commonly refer to it to assess the relevance of an article, as stated by another informant: “I read the abstract, and if it is related to my topic, then I pick it up” [p12]. The process often involves starting with the title, moving to the abstract, and then reading parts of the article content [p7]. Therefore, the title, table of contents, and abstract serve as the three main sources for users to determine the relevance of obtained information resources with their needs.

The indicators employed by participants to evaluate obtained information resources can be categorized into two groups. First are the attributes used to assess the quality of information resources, including currency, completeness, and the authority of the author. Second are the attributes used to determine the relevance of information resources, such as title, table of contents, and abstract.

D. Discussion

The research findings suggest implications for the optimal design of a library catalog as a tool to assist patrons in finding information. Considering the central role of subjects in information retrieval, title based searches, keywords access point, author centric access, and bookshelf arrangement, the catalog should prioritize intuitive subject categorization and indexing, incorporate an intuitive and expansive title-based search functionality, provide clear instructions and suggestions to guide users in formulating effective keyword queries, facilitate easy access to works by a specific author, and seamlessly integrate with the physical arrangement of the library shelves or be able to transition from online searches to physical exploration with ease.

Consequently, the catalog interface should be designed to accommodate and encourage subject-based searches by allowing users to add descriptive tags (subject headings) to the bibliographic data provided by librarians in catalog records. A study reveals that users and catalogers approach these subject descriptors differently. Due to these variations, user-generated descriptive tags can enhance subject access to library materials, but they cannot completely replace controlled vocabularies, such as the Library of Congress subject headings (Rolla, 2011).

While a user-friendly catalog interface is essential, educating users on clear search queries, navigating subject categories, and utilizing catalog features significantly improves information access. This comprehensive approach enables users to adapt to diverse information environments, retrieve pertinent information

efficiently, and discern reliable sources. This aligns with Michael Gusenbauer's call for improved search literacy in academic research, emphasizing the importance of dedicated education and tailored search systems. Integrating these strategies enables libraries to better support users in accessing scholarly resources effectively (Gusenbauer, 2020).

Information literacy programs should educate users on various effective search approaches, encouraging them to explore beyond titles and authors. Given the significance of keywords, literacy programs should provide guidance on formulating effective keyword searches. This involves teaching users how to select channels and optimize keywords to improve the relevance of search results. Information literacy programs can emphasize the importance of author-centric approaches, particularly in academic settings where specific authors may be known or recommended by educators. Programs should highlight the seamless integration of physical and digital resources. Users should be aware of the advantages of utilizing both OPAC and bookshelf arrangements in their information retrieval processes.

Before retrieving or downloading publications or literature they come across during their information search, they engage in evaluating the literature. The criteria they employ in assessing the information they discover include currency criteria (whether the information is up-to-date), utility criteria (whether the information can be immediately applied to their academic tasks), and availability criteria. The use of these criteria depends heavily on the type and source of obtaining information. For instance, if the information is derived from a blog spot, the list of references becomes the evaluation criterion, whereas for theses, the publication year is considered. Participants' strategies for assessing the level of suitability or relevance involve examining the table of contents, publication abstract, and reading the publication's content. Meanwhile, to assess the quality, reliability, and validity of the information, participants look at journal accreditation, the list of references, and the authorship.

The criteria employed by participants in evaluating the information they come across often involve predictive judgment, where they assess the quality of publications based on predictions or estimations. Consequently, in endeavors aimed at promoting information literacy, it is important to guide library users in examining the content quality of publications, regardless of journal accreditation, references, or authorship. For instance, this could entail assessing the methodology employed in the research and identifying potential biases within the writing. Meanwhile, the interface design of library catalogs should facilitate users in evaluating the information they discover. This could include features such as allowing users to comment on the quality of a publication and its relevance to different user groups.

While this study sheds light on the search strategies and criteria employed by final-year students in a localized context, several limitations warrant consideration.

The participant pool was relatively small and specific, focusing solely on final-year students within a single university's library science program. Consequently, the generalizability of the findings may be constrained, and insights from a broader demographic may be overlooked. Moreover, the exclusive focus on final-year students might limit the applicability of the study's outcomes to users in different academic stages. To enhance the robustness of future research, it is recommended to expand the participant pool, encompassing diverse students from various institutions and academic levels. Comparative studies between different academic programs and levels could provide nuanced insights, and integrating qualitative approaches would offer a deeper understanding of library user behavior. Additionally, exploring multinational contexts would contribute to a more comprehensive understanding, acknowledging potential cultural variations in library usage patterns.

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