

THE USAGE OF ELECTRONIC INFORMATION RESOURCES IN INFORMATION SEARCHING: A CASE STUDY OF STUDENTS OF FACULTY OF ENGINEERING, UTHM JOHOR

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Abstract:

The emergence of information technology in the library has led to the increasing use of electronic information resources by the users. However, it will also generate a critical challenge that must be addressed in providing electronic services in the library. The issues are related to the user's skill and competency in using the electronic resources. This study investigates the usage of the electronic resources in information searching by undergraduate students of Faculty of Civil Engineering, Universiti Tun Hussein Onn Malaysia (UTHM). The purpose of this study is to describes or investigate the different types of electronic information resources used by the students, contemporary used of electronic information, the access condition and searching techniques used and problems occurs while using the electronic resources.

Keywords: *Electronic Information Resources, Information Searching, Civil Engineering, Undergraduate Students*

1. Introduction

Computers and related electronic resources have come to play a central role in education. Thus, we must believe that the need of using electronic information resources is becoming the important aspects to the students. Most of electronic information resources can be downloaded either via email or printed from any location like library, computer labs and others. Recently, new technology provided by the library can help students to perform better and effective. Brinkley (2000) said that the most extensive, if still not fully developed, source for electronic resources is the World Wide Web. Students should explore websites related to a course can bring compelling evidence and arguments back to the class. Nowadays, people are highly skilled using computer technology and know how to teach themselves to do almost anything. But, many other people have limited computer skills are easily intimidated by new and unfamiliar tasks, and tend to avoid doing things that require them to learn something very different from the things to which they are accustomed. If they fall in the latter group but wish to expend their ability to use electronic tools, they need to find help. Therefore, the need studying the skills and searching technique will lead them to do better operating the electronic resources and limiting the search.

2. The Problem

This study examines the usage of electronic information resources in information searching in UTHM Johor. Basically, most of the students think the right way to use the electronic resources in order to search the information based on their needs. This is because most of them think that electronic information resources is much easier and faster to use but at the same way they do not know how to use and search the information according to what they needs. Besides that, some of them also do not know the skill and technique needed to use in searching the information. Some of them faced problems in limiting the search. Furthermore, this study is done in order to discover:

- i. How to search the information based on the information needed?
- ii. What is the searching technique used in order to limit the search?
- iii. What is benefit of using the electronic information resources?
- iv. How to limit search according to the searching technique used?

Library information resources are expensive. The librarians need to manage these resources and make them accessible and also costly in terms of recruitment, and retention. To attain cost effectiveness in the university library services and promotes the use of library information resources, this study sought to establish ways of improving the information seeking of undergraduate students. To attain that goal, the study stipulated the following objectives:

- i. To investigate types of electronic information resources that often used by Civil Engineering students in accessing information;
- ii. To identify the contemporary use of electronic information resources by Civil Engineering student;
- iii. Establish the condition under which access and searching techniques are being used in information searching;
- iv. To identify the problems which occur while using the electronic information resources and to recommend some ideas to overcome the problems.

3. Literature Reviews

Previous research on electronic information resources has clearly considered the usage in information searching. It seems that current interest of researchers, librarians, scholars and students has been general usage of the internet. Students are increasingly expected to use electronic resources while study at the university. Ray (1997) noted that many respondents do use some electronic resources and aware with the benefits of it. But, majority of the students still like to use printed material to complement the technology. Total of 96.4 per cent of the students acknowledge an awareness of access to a computer network via university. Limited time and lack of effective information retrieval skills form the main problems in using the electronic resources. A study done by Asemi and Riahi (2007) concluded that 87.2 per cent of students in Isfahan University of Medical Sciences felt that the available digital resources had met their information needs. Students had less use of offline databases, attributed to factors such as infrequent periodic orientation and lack of education on the use of offline databases.

There is an assumption that users adequately understand with the technique of information searching and retrieval through electronic devices. But, is it any proof that shows the users mostly understand with the searching skills and techniques? The difficulties of inexperience electronic searches have been examined in nine studies (Debowski and Wood, 1999). These studies done for university students and adult in a wider community group, which provided with database or Internet training. These studies explored the strategies use by the participants and problems encountered were been examined. In this case, two major problems were identified. Generally, the problems occur related to the use of computer and its peripheral devices to enable online access. It happen because the limitation in understanding the computer and skills in searching the information. Coffman and sexton (1999) found that networked reference service based on the call center model could reduce the staff cost significantly. The evolution studies reported in this study reveal that:

- a) Users find it difficult to categorize their reference questions;
- b) Users spend very little time on searching a given search tool or database;
- c) Users formulate very short and simple queries with one or two word search terms and very few search operators;

- d) Users spend very little time in looking and deciding the usefulness or relevance of the retrieved items; and
- e) Very few queries contain advance search features.

Debowski (2000) reported that user need to understand the differences between library catalogues, document delivery, full-text search, web portals, search engine, web browsers and others. She also stated that users are forced to become familiar with a range of different protocols due to erratic and non-uniform nature of many of these “aids” to search. Inexperienced users tend to rely with limited sets of tools and use these to exclusion of all others. This brings to reduce their search power.

Electronic information sources offer today's students different opportunities from their predecessors. Brophy (1993) details the advantages of networking for the user as being in the information needed can be delivered from the most appropriate source to the user; the user can re-specify his or her needs dynamically; the information is obtained when it is wanted, so becomes "just in time" rather than "just in case"; the user selects only the information needed to answer the specific question and, finally, the information is only stored should the user wish. Electronic information can therefore provide a number of advantages over traditional print based sources.

Mehta and Young (1995) conducted a survey on the use of electronic sources to fulfill the information need of science and engineering faculty users. The survey was done at University of Alabama showed that the users familiar with electronic products but there are still were inclined to use printed sources or informal channel to get needed information. Besides that, half of the students have negative opinion about electronic information resources in terms of relevancy, comprehensive and ease of use.

3.1 Need of information skills and techniques in Information Searching

The need of information skills and techniques in searching influence the users to identify metadata and to find the materials in the library. There are techniques which users can use to locate material in the library such as:

- a) BOOLEON operator (“AND”, “OR” and “NOT”)
- b) Keyword search/free text search
- c) Truncation
- d) Word proximity, and others

The technique used by user is to seek information from a variety sources to fulfill their needs. These needs are often initially vague and evolve during the searching process so that browsing is more accurate description of users’ behavior than searching. The term browsing emphasizes the determinate, situated and unexpected aspects of searching, which contrast sharply with the single-query or single-answer model of traditional information retrieval.

Twidale, et al. (1995) notes through informal observation in university library regarding to searching behavior, several kinds of collaborative interactions between users have been observed:

- a) A group of students (2-4) work around a single terminal, discussing their ideas and planning their next actions. The interaction involves frequent pointing at the terminal screen. They are involved in a group task, either one set as such by their lecturer or one where they have chosen to collaborate on searching the literature before working on their individual assignments.

- b) A group working on adjacent terminals, discussing what they are doing, comparing results, sometimes seemingly competing to find the information. Much leaning over terminals occurs and they may occasionally all cluster around one terminal.
- c) Individuals working at adjacent terminals occasionally leaning over and asking their neighbor for help. These questions could be asked of a member of the library staff, but it is much more convenient (and perhaps less embarrassing) to ask a neighbor rather than to stand in a queue at the enquiries desk. In addition, the helper can see the context of the questioner's problem, something that is lost (with existing technology) if the questioner leaves her terminal.
- d) Individuals working at separate terminals monitoring the activity of others. There is a substantial degree of awareness while working in the library. Much of this is social (e.g. noticing friends walking past), but some appears to be an informal monitoring of the activity of others. Occasionally, this leads to a query of the form "How did you do that?". These interactions were rarer than the other kinds and occurred, unsurprisingly, most often between colleagues.
- e) Patterns of work cross at a shared resource such as a printer or a photocopier. For example, a student printing search results found an uncollected printout and inquired whose it was - when the owner was identified he proceeded to use the results to discuss the CD-ROM system.

3.2 Improving Information Seeking Strategies

Finding ways of intercepting the barriers to information seeking is one of the solutions to improving the students' information seeking behavior. Bearing in mind that contact with students in information institutions is either through reference interviews or bibliographic instruction sessions.

Martin and Metcalfe (2001) acknowledged that modes of informing are specific to each person's concern, as are the topics they want to be informed about. Both note that libraries in the past require to accommodate this need by promoting current awareness services (CAS) and selective dissemination of information (SDI), either through print or electronic means. These are user outreach avenues that can still be optimally utilized in addition to customizing access points in agreement with user interests using Internet or the university intranet.

Lau (2001) observed that although librarians had assumed the role of user information educators, their work tended to occur in isolation. Teamwork was needed to make library instruction part of the learning process. The publicity services provided in an information institution play a big role in influencing how its resources are utilized and how the users seek for information. Finally, it should be evident to the library, which plays a key role in helping users to develop this knowledge and particularly reference librarian can disseminate these searching skill and techniques clearly.

4. Methodology

The study used questionnaire based survey method, as many similar studies conducted earlier, have also used this method for data collection. This method is also preferred as it was less time consuming for a scattered population. The population of the study is the library users which involve UTHM's students from engineering background. Since the number of sampling has to depend on the number of population, the sampling design used in the study is non-proportional sampling that is proportional

stratified sampling. One class (sample) will be selected from four classes (population). This is about 100 of engineering student from Bachelor of Engineering.

A set of questionnaire was developed and constructed from literature review of user studies, and logical reasoning and questionnaire sample. A sample questionnaire needs to be evaluated before distribute and test. The format of the questionnaire was based upon open-ended and close-ended questionnaires in order to measure the intensity of respondent's views to the questionnaire. These structured questions are multiple choice items from which respondents were asked to choose. In order to save time and ensure better response rate, the questionnaire will personally distributed to the engineering students.

5. Conclusion

The use of electronic resources, although found in various electronic formats, are becoming ever more popular and pervasive. Moreover, e-resources have give a freedom to the user to access the electronic content right on his desktop easily. However, the users are supposed to know the right technique to overcome the searching process. This study had set out to determine the types and use of electronic resources and searching technique used in information searching. The results should cover lack basic skills of UTHM undergraduate students in using the library services and resources. The result from this study hope could give a positive impact for the students and also UTHM library.

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