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Jun 5th, 12:00 AM

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Nguyen Hong Sinh and Hoang Thi Hong Nhung, "Users' Searching Behaviour in Using Online Databases at Vietnam National University - Ho Chi Minh City." *Proceedings of the IATUL Conferences*. Paper 27.
<https://docs.lib.purdue.edu/iatul/2012/papers/27>

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Users' searching behaviour in using online databases at Vietnam National University – Ho Chi Minh city

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Abstract

Purpose: This paper focuses on identifying the searching behaviors of the users, their difficulties as well as their expectations from library supports while using online databases at the Central Library of Vietnam National University – Ho Chi Minh city.

Methods: Usage Reports of six online databases subscribed by the Central Library were analyzed and a survey by emailing users a questionnaire was conducted.

Findings: The amount of usage increases yearly, however it is still low in comparison with the amount of subscribers who have registered for using online databases. Users did search for their research and study rather than for their teaching or professional knowledge update. Often they looked for journal articles and thesis rather than e-book. Key words and titles were used the most when searching. Reading the guidance from the library websites or from the databases was most used. This suggested that most users did not know how to use the databases and preferred to learn by themselves. Email was user preferred mean to communicate with library staff. English language and database searching skills were the biggest barriers preventing users from employing online database.

Originality and implication: This paper provides the understanding of users' behaviors and suggests the necessity to assist users in using online databases in Vietnam universities. Up to now, these issues have not been known. They are relevant to improve the utilization of online databases.

Keywords: Searching behavior, Online databases, Vietnam

Paper type: Research paper

1. Introduction

Online database is an important part of the information resources provided by universities in many countries. This is a valuable and up to date source of information, therefore it is indispensable to the learning, teaching and investigating for the university communities. They become accustomed to the use of the online database to search the information and develop certain searching skills.

However, the provision of this kind of resources is very limited in the universities in Vietnam. Most of the students and instructors do not have the skills and habit to use online databases as one of their main information resources. Up to the end of 2011, there were only 20 out of 400 university libraries that subscribed and provided online databases to their users.

The Central Library of Vietnam National University – Ho Chi Minh City (VNU-HCM) is one of the pioneers in Vietnam that has permanently subscribed and provided online resources for its

users since 2005. In the early years, the Central Library provided access to 10 databases at computer terminals located within VNU-HCM. At that time the Central Library did not regularly collect data of online database usage. Training services to educate users how to access and use online databases were not well established. Basically, the library staff introduced the websites, trained the users in groups according to the schedule established by the instructors without knowing about or paying attention to the individual needs of the users.

Since early 2009, the remote access has been established by the Central Library to provide this service to the users who had registered for ID and password. Currently, the Central Library provides access to the users 12 databases. Among these databases Proquest, SpringerLink, ScienceDirect, Emerald, MathScinet and Wilson are the most favorites to the users. Also, the Library provides more services supporting users as well as collects data on users' searching behaviors more regularly and systematically. Regarding services, the Library provides orientation sessions to train basic search techniques, training courses on advanced search techniques, individual training required by the users. Regarding users' study the Library collects statistics from Usage Reports provided by the Vendors, feedback from each training activities and pocket questionnaires collecting the evaluations from users after their each search.

We found that the amount of online database usage has been steadily increased and information behaviors of users at VNU-HCM have changed. However, the usage of online databases is still scarce; therefore finding the ways to support the users in order to promote usage of online databases remains a great challenge of the Central Library.

This paper focuses on identifying the searching behaviors of the users including their specific reactions, their difficulties as well as their expectations from the library supports while using online databases provided by the Central Library. As a result, this study establishes the recommendations of new activities and services to assist more effectively online database's users. This investigation contributes to the efforts to increase the online database using at VNU-HCM.

2. Data collection

This study adapted the definition of information searching behavior suggested by Wilson (2000): "Information Searching Behavior is the 'micro-level' of behavior employed by the searcher in interacting with information systems of all kinds. It consists of all the interactions with the system, whether at the level of human computer interaction (for example, use of the mouse and clicks on links) or at the intellectual level (for example, adopting a Boolean search strategy or determining the criteria for deciding which of two books selected from adjacent places on a library shelf is most useful), which will also involve mental acts, such as judging the relevance of data or information retrieved."

To identify and understand specific reactions of the users in online database searching, different kinds of data were collected and analysed. First, Usage Reports during the last three years (2009, 2010 and 2011) of 6 online databases (Proquest, SpringerLink, ScienceDirect, Emerald, MathScinet and Wilson) subscribed by the Central Library were analysed. This analysis allowed examining the amounts and changes in searches, sessions, browsing materials and downloading materials. These indicators contribute into the identifying the searching behavior of the users at the VNU-HCM.

Second, a survey by emailing users a questionnaire was conducted. The results allowed examining the frequency of online database usage, purposes for database search, preference of types of materials, the ways users learn to search and how they search. The data from the questionnaires also provided information about users' difficulties as well as their expectations from the library supports while using online databases in VNU-HCM. There were 119 users gave their feedbacks out of 150 questionnaires sent out. All of them had registered for ID and password to remote access into databases by the Central Library.

Third, in order to get deep understanding on issues revealing from the questionnaire analysis, four deep interviews were conducted. The combined of data from these three sources provide rich information that helps to achieve the purpose of the study.

3. Findings

The searching behaviors are identified by following determinants: purpose of usage, preferred types of materials, ways to learn the search, search techniques, frequency of online database usage as well as users' difficulties and expectations in using databases.

Main purpose of usage

The data analysis showed that primary purpose for database searching was studying (45.6%). It followed by performing research (29.7%) and keeping updated with progress (20.6%). It ended by teaching (only 4.1%).

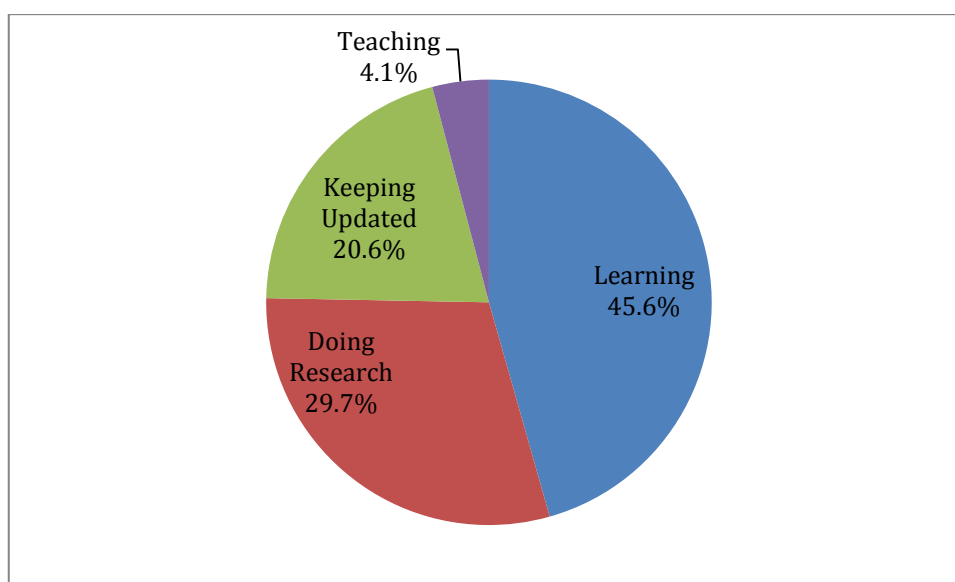


Figure 1: The main purpose of online database usage

The survey results showed that most users used the databases provided the Central Library for their learning then for doing research and for keeping updated with new information rather than for their teaching.

Obviously, the reason why studying was the main purpose for the database search was because students formed the largest user group at VNU-HCM. However, it was a surprise that there were very few users searching for their teaching while lecturers also formed a large user group of VNU-HCM. From the interview data, some reasons were revealed. Interviewers indicated that for teaching, lecturers mainly provided students with fundamental or core knowledge within the disciplines. Such kind of knowledge could be found in many printing sources that were more convenient for lecturers to use. In addition, subscribed online databases at VNU-HCM did not cover all disciplines and many journals within each database did not have a license for full-text access. These facts caused dissatisfactions to the users and as a result, they did not use database resources. Furthermore, many lecturers had studied abroad and had good connections with their international colleagues. Therefore when they needed, they could get help from their former colleagues to obtain full-text materials. Thus, the information the lecturers need may be satisfied by outside resources. Again, as a result, the lecturers do not need to use online databases at their own university library.

Preferred reading type of materials

Among the material types provided from online databases, users preferred reading articles (44.7%) and theses (43.3%) than e-books (30.7%).

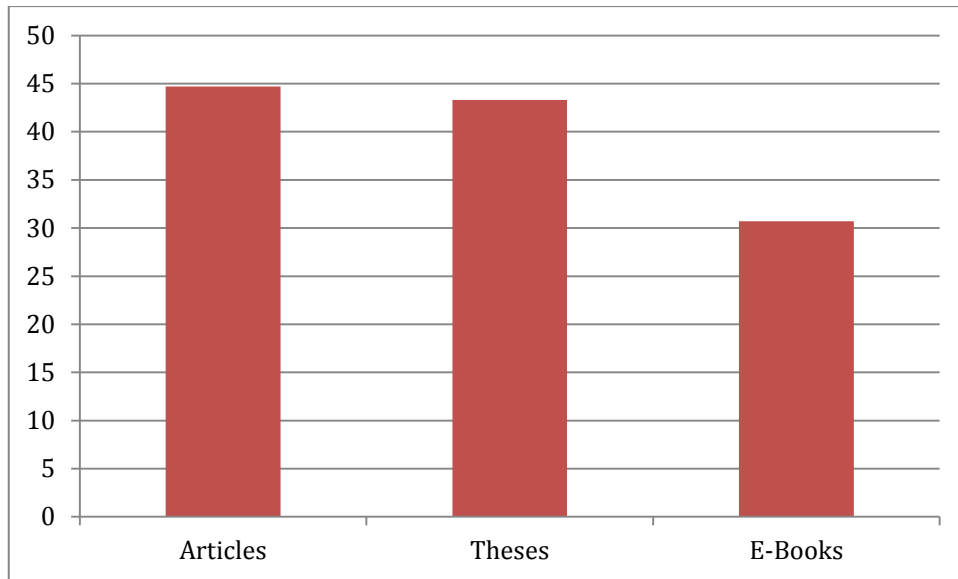


Figure 2: Preferred reading material types

The survey results showed that more users employed the databases to search for articles and theses than e-books. The vertical axis indicates the percentage of user's preferences.

The statistic data from User Reports showed that the amount of the full-text requests was greater than the abstract requests. Of the article requests, there were 14.2% abstract requests in comparison with 85.8% full-text requests in 2009, 10% abstract requests while 90% full-text requests in 2010, and 12.5% abstract requests while 87.5% full-text requests in 2011.

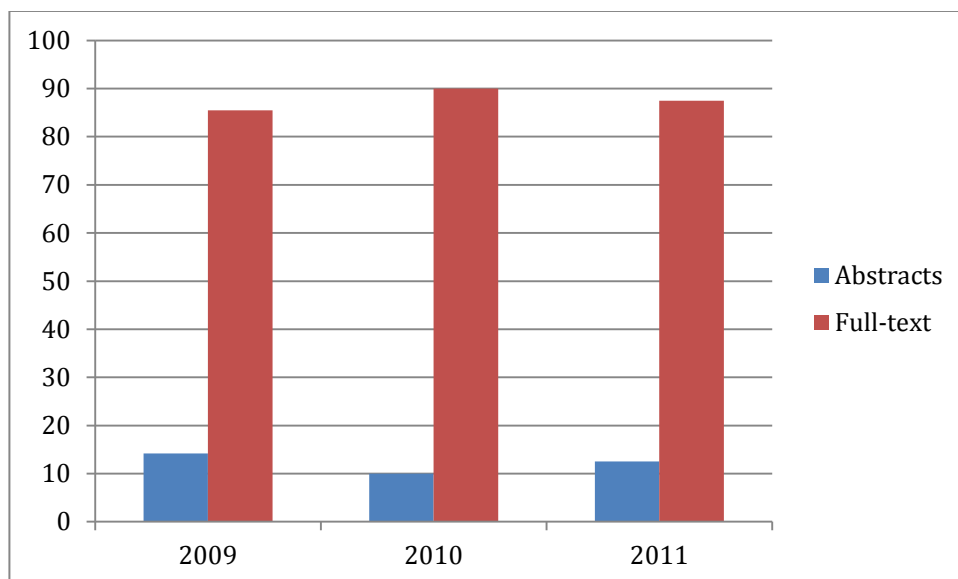


Figure 3: Full-text and abstract requests

The statistic data from User Reports during 3 consecutive years showed that the library users who requested for articles overwhelmingly preferred having the full-text versions rather than abstracts. The vertical axis indicates the percentage of user's preferences.

The interview data analysis provided an interpretation for the results above. Article was the type of material that was the most updated and fastest to browse or download. Therefore users prefer reading it. Of the users who registered for ID and password, graduated students was the largest group. One of their great challenges was working on their own theses for the Master's degree; therefore they were very interested in reading theses in their fields as well as in other

fields in order to learn how a thesis should be. On the other hand, reading e-book took time and could be easily interrupted because of the instability of the online transmission. Regarding full-text vs. abstract, the interviewers explained that after browsing bibliography information, if users thought the materials were relevant to their needs, they liked directly to read the full-text rather than the abstract of materials. It seems that they do not want to make more effort to consider the relevance before spending time for reading the whole materials.

Learning to search

Users learn how to search in a database by different ways: 91% learned by trial and error (play with functions and options offered by the search engine and then discovery how to search), 89.2% learned by reading guideline materials from database itself, 81.7% learned by reading guideline materials from the Central Library websites, 63% learned from friends, 59.7% learned from training sessions and 57.4% learned by asking library staff. This data revealed that the users intend learning on their own rather than having directly individual support.

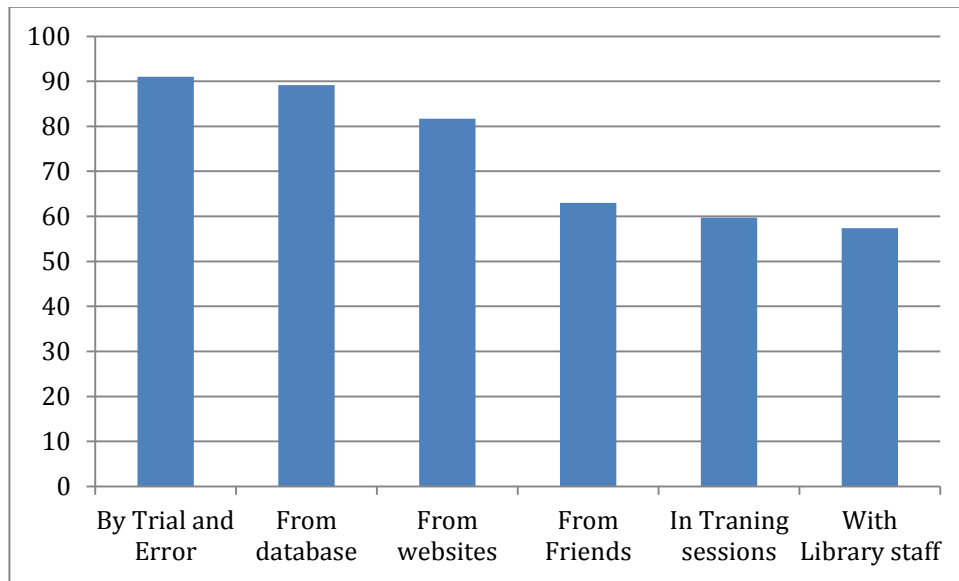


Figure 4: The learning ways to database search

The survey results showed that users learned using the online search by different ways. The vertical axis indicates the percentage of the users' ways for learning database search

Regarding the question which ways the users preferred the most to learn searching the databases, 25% chose trial and error, 21.2% chose reading guideline from the website, 5% chose asking friends, 4.1% chose asking library staff and 44.7% had no specific preference.

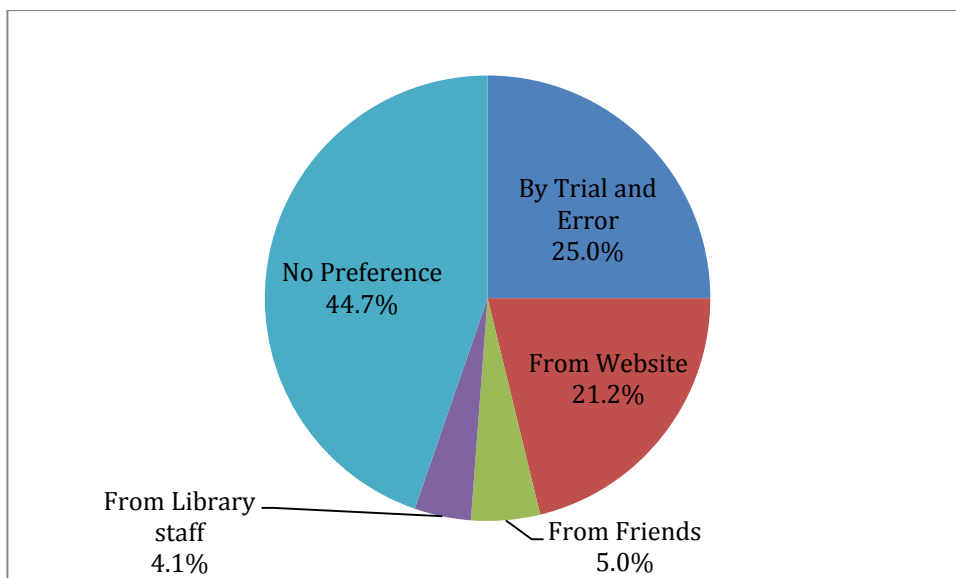


Figure 5: The most preferred ways to learn the database search

The survey results showed that most users had no specific preference, many intended learning in their own. This chart shows the percentage of the most preferred ways users chose to learn the search online databases.

There were many reasons affecting users in choosing learning in their own. Postgraduate students and lecturers believed that users could control their times while learning on their own; therefore they avoided going to the library for help or to participate in the training whenever possible. Another opinion is that based on their experiences from the orientation training sessions, they deemed that training activities could only provide them with very general principles and skills for searching online databases while each person had his/her very own needs. Therefore, a general training session was not helpful to them. In addition, there were many internet forums providing tips or recommendations for diverse search strategies. According to the interviewers, such a forum was very useful and even more useful than supports from the library staff.

Yet, there are other opinions. Undergraduate students deemed that training sessions were helpful. Some of them indicated that during these sessions they learned useful guidelines of how to use the databases and got information on future advanced training activities. Some of them indicated that the trainings would be useful but they did not get informed about such activities. Besides, a great percentage of users had no preference on which ways to learn.

Search techniques

Of the different kinds of search techniques offered by database search interface (simple, advanced and expert), the users preferred the simple one. Using the simple search, keyword search was employed the most (77.7%), followed by title search (62.5%) and then by author search (36.9%). There were 20.5% users using advanced search (using search limitations) but 51.9% never used and 22.2% users using expert search (using operators such as NOT, OR) but 51.8% never used.

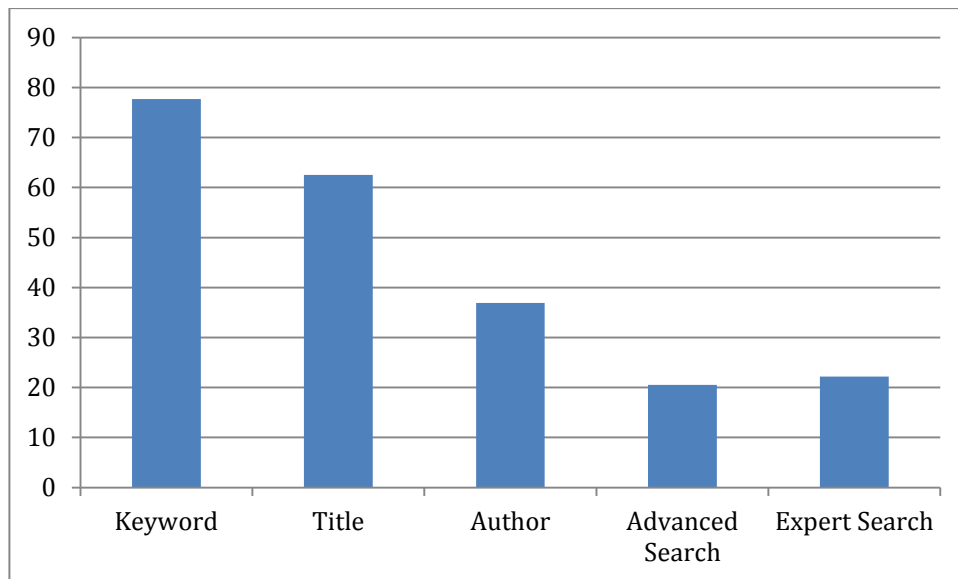


Figure 6: Search techniques

The vertical axis shows the percentage of users who often used Simple search techniques (using Keywords, Titles and Authors), advanced search techniques (using search limitations) and expert search techniques (using operators).

The interviewers explained that they liked something easy to use and quick to get results; therefore they preferred simple techniques. Furthermore, they felt that if they could not find information needed from the simple search, they would not find from the others either. Therefore they did not want to change their habit unless it was obvious that the other interfaces were more useful and convenient for them.

Frequency of online database usage

The statistical data from the User Reports showed that the totals of searches and sessions increased yearly (see the table below).

	Total in 2009	Total in 2010	Increase from 2009	Total in 2011	Increase from 2010
Searches	47,150	62,387	32%	79,317	27%
Sessions	28,605	35,394	24%	44,958	27%

However, these numbers of searches and sessions are quite low in comparison with the amount of subscribers who had registered for using online databases and of course much lower in comparison with the amount of all users from VNU-HCM.

The data analysis from the questionnaires showed that 25.2% of the responders often searched the online databases, 50.4% only did it occasionally, 17.1% did it rarely and 7.3% had never gotten accessed to the databases although they all had been registered for ID and password.

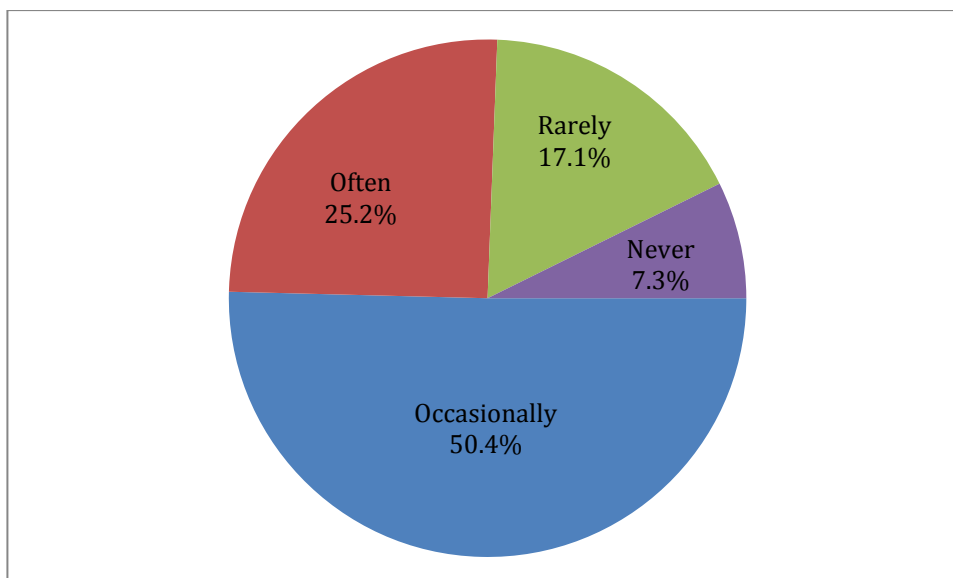


Figure 7: The frequency of online database usage

The survey results showed that most users only occasionally used the databases provided by the Library. This chart shows the percentage of users who occasionally, often, rarely or never used the online database search.

These figures revealed that online databases were not considered as an important information resource for the majority users at VNU-HCM. This fact can be explained by the difficulties presented below as well as by the habit of using outside resources of many lectures as presented earlier. However, there is a bulk of factors affecting information seeking behaviors. These factors include psychology aspects (Heinström, 2003; Nahl, 2001), demographic, role-related or interpersonal variables as well as environmental and source characteristics (Wilson, 2000). Therefore, to fully understand the factors that prevent users from employing the online databases, a more in depth study should be conducted.

Difficulties in using online databases

There were three main difficulties that users encountered when using databases: poor skills in database search, English language and low speed of online transmission.

As mentioned above, users have learned to search by various ways. However, many of them believed that they did not have the skills in the online databases searching. This belief is due to the fact that these users did not often use the databases, therefore they forgot what they learned. Without frequently practicing the users do not develop skills. Consequently, they always find it is difficult to do online database searching.

Besides, English language was another barrier to scare the users away from using the online databases. Without having a good English proficiency, users had the difficulty in determining appropriate search terms for their search. Furthermore, because of this handicap they could not recognize the useful details in the user interface or understand the functions or options of the search interfaces. Therefore often they skipped the important operations or used only simple search technique and were ready to give up right after the failure of first search tentative. In addition, almost materials in online database are in English. Without appropriate proficiency the users would spend a lot of time for browsing and reading. This deterred them from using the online databases.

Lastly, the low speed and instability of the online transmission were also discouraging for online database using. Obviously, the difficulties in browsing and reading discourage the users keeping using databases.

User's expectations from the library support

Finally, the findings from the data analysis allowed determining users' main expectations from the library support. Upgrading infrastructures is the first expectation. The library should increase the speed of data transmission and change anew its computers. The new facility makes the using databases an indispensable convenience and will attract users.

Increasing the amount of databases is the second expectation. The users expect that the library subscribes more databases and provides more full-text accesses. They considered that providing bibliography information and abstracts is just a promise and does not satisfy their needs, therefore is not worth of their efforts of searching the online databases. As a result, they are dispirited in using databases.

Improving the communication between the library and users is the third expectation. The majority of users wanted to receive information, guidelines, and announcements from the Library via their emails. This is the best communication means to make them know and update them of the progress of the online databases in particular and library resources in general. In addition, there were many comments that the library needs to increase its visibility by providing information of its services to the users by different ways, particularly by emails.

4. Conclusions

This study provides identifications of users searching behavior in using online databases at VNU-HCM. It is recognized that the amount of online database usage is increasing yearly; however, it is still low in comparison with the total of VNU-HCM information users. The users do search for their research works and study rather than for their teaching or for updating their professional knowledge. Often they look for journal articles and theses rather than e-books. Key words or subjects are used the most when users do searching. Reading the guidance from the library websites or from the databases is mostly used.

Most of the users are not skillful in searching databases. English language and the low speed of online transmission also are the biggest barriers preventing users from employing online database. Upgrading infrastructure, increasing the amount of databases and improving the communications between the library and users are the three main users' expectations from the library support.

Understanding users information behaviors and providing services that meet users' needs are the library endless tasks. As mentioned earlier, further studies should be continuously conducted to fully understand prevents of using online databases at VNU-HCM. However, based on the findings from this study, the Library immediately put efforts to better serve their users and improve their activities.

With a small budget, the Central Library has had difficulty to buy many databases. Therefore to optimize the use of the budget, the Library regularly analyzes the data from the User Reports and frequently conducts quick surveys to identify the amount of usage of each subscribed database. These results help it make decision on whether to continue an existing subscription or replace it by a new database that may be more relevant to user's needs.

Another priority of the Library is to increase the speed of transmission of the Internet. Currently, users can access to the Internet by computers in the Lab with the average speed of 260 kbps and by wireless with the average speed of 836kbps. The Library works with the leadership of VNU-HCM for further upgrading the transmission of the Internet and at the same time is planning to hire experts in the networking management and to train its staff. Also, due to its small budget, Library cannot often buy new computers; therefore, the Library staff encourage users use their laptops and assist them (e.g., providing tips for cleaning viruses, for Internet access by wireless, etc.).

To help users acquire better search skills and to encourage them to use more and more online databases, the Library strives to put further efforts on the training and promotion to make users aware of the availability of online databases and the Library diverse services.

In addition to the available database guidance, the Library will provide the list of e-journal titles on its website with the link to the journals, as well as e-journals and e-books notified on OPAC.

In addition to the regular training activities, the Library will provide special and on-demand training services. One of the particular activities the Library can do is to contact the departments of the member universities in VNU-HCM to propose its services. These services constituted a challenge to the library staff since so far the Library has not had subject librarians who have knowledge on a particular discipline. However, by working with the faculty members who are experts in the fields to acquire necessary knowledge, library staff can design training sessions for students from each department. Also, the Library will create activities to promote online sources to lecturers for their own benefits and to pass on to their students.

Finally, email system will be more utilized. The Library staff will create email alerts for new or changes of online sources. They will also use emails to keep the users updated with new information, guidelines and announcements from the Library and to answer promptly to the user's requests.

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