

**Mediated Computer Search Services Relative to Instruction Services:  
A Survey of One Health Sciences Library**

**Abstract:** To assess the quality and usefulness of one health sciences library's mediated computer search service, a survey was undertaken to determine satisfaction rates, why users do or do not use the service, and how useful the service is perceived to be in comparison to instructional service. Satisfaction rates were high, with users indicating librarian expertise and time/cost savings as the main reasons for using the service. Non-users indicated that they preferred to do their own searching, and many were unaware of the service. Though a majority of respondents do not currently use the service, surprisingly a majority of respondents placed significant value on the mediated search service in relation to instruction.

## **MEDIATED COMPUTER SEARCH SERVICES RELATIVE TO INSTRUCTION SERVICES: A SURVEY OF ONE HEALTH SCIENCES LIBRARY**

### **INTRODUCTION**

As library resources shrink and user demands change, there is a need to periodically re-evaluate library services and priorities. There is also a need to understand why change is happening and to decide how a library can best respond. Decisions are harder when services represent conflicting library objectives or differing user needs. Mediated computer search services and instructional services are examples of this conflict - whether to do the search for users or to teach users to do their own. At Memorial University's Health Sciences Library, user demand for mediated searches has declined considerably. It was decided to conduct a survey in order to answer the following questions:

- What are the reasons why users either do or don't use the library's "Computer Search Services"?
- If they do use the service, how satisfied are they with it?
- How much searching are users doing themselves?
- From a user's perspective, which service is more useful - teaching users how to do searches themselves (Instruction Services) or doing searches for them (Computer Search Services)?
- Should Computer Search Services be discontinued, modified, or remain the same?

### **BACKGROUND**

Memorial University of Newfoundland, a publicly funded institution, is the only university in the Province of Newfoundland and Labrador. The Health Sciences Library provides support for the research and educational needs of the University's Faculty of Medicine, School of Nursing, and School of Pharmacy. In addition, the library is contracted to provide service to the hospital facilities at the Health Sciences Centre. The library also acts as a resource for

individual health practitioners in the Province. Traditionally, services have been geared more to the academic, rather than the clinical, needs of the users.

One of the library services provided is that of Computer Search Services. This is a fee-based service wherein computerized searches of the professional health journal literature are performed by librarians, using indexes such as Medline, CINAHL, and International Pharmaceutical Abstracts. Users are provided with a list of references on the requested topic giving authors, titles, journal sources, and abstracts (where available)." For the indexes held in-house, the cost is \$15.00 per topic for the first database, plus \$5.00 for each additional database searched. Databases not held in house involve an additional charge, but are rarely requested. There is no differentiation in fee by user, with 2 exceptions: medical residents and distance education students are provided with a free search service.

In 1987/88 demand on Computer Search Services had reached a peak (1754 searches). End-user searching of CD-ROM databases, beginning with Medline, was introduced at the Health Sciences Library in 1988. Following that, the demand on Computer Search Services started to drop as end-user searching started to climb. Remote access became available in January of 1991 for members of Memorial University. Limited remote access was made available for hospital staff in 1998.

In 1998/99, only 164 searches were requested. The majority were from medical residents (31%), faculty (25%), non-Memorial health professionals (18%) and undergraduates (17%). These percentages represent a typical pattern for the last few years.

## **LITERATURE REVIEW**

The literature shows that Memorial's Health Sciences Library is by no means the only library that has experienced a decline in use of mediated search services since the widespread adoption of end-user searching. This decline has raised questions about patterns of use, planning and priorities, redesigning, and marketing. There are also questions about how user

preference, fees, and topic of inquiry affect the use of mediated searching? Health science libraries have taken a leading role in investigating these questions.

Crea (1992) found that users prefer to do their own searches first, and have a mediated search undertaken when there is dissatisfaction with their own results. Users indicated that they were satisfied with their own searches 88% of the time. Seago (1993) specifically surveyed users who do their own searching as well as utilizing librarian mediated searching. Results showed that most of these 'dual action' users prefer mediated searching due to expertise and time constraints, but do most of their own searching due to fees and wait time.

Shirley (1993) found a relationship between fees and the number of searches requested which suggests that dropping fees would lead to an increase in requests for searches. Free searches would increase use of services and provide a positive way of marketing the library. Jankowski (1994) described one library's decision to make mediated searches an essential service with no fees, resulting in the number of searches increasing by 38%.

End user skills can certainly be developed to an acceptable level, but the question remains as to whether this is an effective use of time for health professionals (Veenstra 1992). Holtum (1999) argued that health professionals should utilize the special skills of librarians in the same way that they use the skills of other specialists such as medical technologists.

Despite attempts to keep mediated searching alive, the numbers cannot be ignored. The decrease in search requests has been dramatic since end user searching has become commonplace. Hewett (1997) surveyed other UK libraries to determine what they were offering and what options might be available. In light of the results, their own service was discontinued in favour of referring users to other service providers and to web-based current awareness services.

## **METHODOLOGY**

Approximately 1500 surveys were distributed in early May of 1999. Surveys were distributed to all Medicine/Nursing/Pharmacy faculty, General Hospital department heads and managers, and staff of the Cancer Centre. All health students currently on site (medicine, nursing, and pharmacy) were targeted as well as nursing students registered via distance education. However, since nursing and pharmacy students were in the midst of finishing their terms, a large response was not expected from these groups. Surveys were also sent to non-Memorial individuals who had requested searches any time over the past 3 years. Surveys were anonymous, and could be returned by mail or fax by a specified deadline.

Incentives to improve response rate included:

- A cover letter, describing the purpose of the survey and defining the service.
- A colour-coded form offering one free computer search on a limited time basis. This generated 26 computer search requests.
- Return postage was included with the survey packages where appropriate.
- An old book return bin was set up as a special drop box outside the library entrance, providing an excellent visual reminder to return forms.

## **RESULTS AND ANALYSIS**

One hundred and ninety-six surveys were returned for an overall response rate of 13%. Of these, five were discarded as unusable, leaving a total of 191 surveys for analysis.

Respondents were asked to identify their primary affiliation and user group. The majority of responses were from the Faculty of Medicine (76%), with the next largest group being from the School of Nursing (11%). The General Hospital response rate was disappointing, with only 6 responses, which constituted a 4% response rate.

Of the total 191 surveys analyzed, 39 (20%) were from current users of the service, 21 (11%) were from lapsed users, and the majority (131 or 69%) were from users who had never

used the service. The small numbers of respondents limited the ability to run statistical tests of correlation or significance between different affiliations or user groups, as well as between users and non-users of service. Therefore, descriptive statistics were used for the analysis.

### **Responses Of Current Users**

Current users were defined as those having used Computer Search Services in the past 12 months, and totalled 39 respondents. The number of respondents within the various user groups and affiliations were often too small for comparison or conclusions. When numbers allowed comparison, the responses were similar.

Concerning the amount of use of the service over the past 12 months, twenty-eight respondents (72%) choose "1-5 times". Five respondents indicated that they had used the service "6-10 times", and 6 indicated "over 10 times".

The purpose for searches essentially fell into three frequency ranges: "Conducting research", "Teaching" and "Patient/clinical care" were each selected by over 35% of the respondents, while "Continuing education" and "Course assignments" and were each selected by roughly 25% of respondents. The remaining choices ("Administration", "Preparing grants", "Preparing thesis", and "Other") were each selected by less than 15% of the respondents. Given that there were more faculty and medical residents responding than others, the high number of responses for teaching, research, and patient care are not surprising. However it was somewhat surprising that "Grant applications" was selected so infrequently (7.7%).

Reasons for using the service were similarly spread into wide ranges (Table 1). The top two reasons chosen were "Expertise of search librarian"(70%) and "Time savings/cost effective" (62%), which were encouraging results. A lack of access to the databases was indicated by 32% (12) of the respondents. This was interesting to note, as the databases are available to everyone from within the library. In addition, seven of those twelve respondents were eligible for remote as well as in-house access.

On a six-point scale, 91% (35) of the 39 current users were either satisfied or very satisfied with how the service met their overall need/purpose. Three were somewhat satisfied, and one user was very dissatisfied. Each of the nine more specific questions regarding user satisfaction resulted in similar responses, with four questions having results between 85% and 90% on the satisfied or very satisfied scale, four between 80% and 84%, and one (Attitude of other library staff) at 76%. Greater dissatisfaction with the cost of the service had been anticipated, but was not born out by the results (82% were satisfied or very satisfied).

As shown in Table 2, 85% of current users of Computer Search Services also did their own searches (36% more than 10 times). A small percentage of users (15%) appear to be using the service rather than doing their own searches.

The last survey question was an attempt to determine the user's perception of the relative value of helping users to do searches themselves (Instruction Services) compared to doing searches for the user (Computer Search Services). When asked to choose the most useful service, 45% of current users selected "Both equally", followed by 42% who selected "Search services".

### **Responses Of Non-Users (Lapsed Plus Never)**

Non-users represented 152 (80%) of total respondents. This included "Lapsed users" (21), defined as those not having used Computer Search Services over the past 12 months, and those who have never used the service (131). The reasons for non-use (multiple choices allowed) between those who had lapsed and those who had never used the service were compared and found to be similar.

Where multiple choices were allowed, the top 5 reasons indicated for all non-users were "Prefer to do own" (49%), "Didn't know about the service" (30%), "Cost of service" (25%), "No need for service" (22%), and "Other" (16%). When asked to choose the "Most important" reason for non-use, the proportions changed somewhat, but the top five reasons remained

consistent. It was anticipated that cost would be more frequently chosen than shown in the results. Initially the percentage for "No need for service" also was surprising, although closer analysis revealed that the majority of these respondents were university staff or undergraduates. Staff responsibilities and the variation in course requirements may explain their lack of need for searches.

That 30% of the respondents didn't know about the service (including four residents and ten faculty members) was considered a telling point, as was the fact that two additional respondents (both faculty members) thought that the service had been discontinued.

Regarding which service was more useful, 43% of non-users felt that both Computer Search Services (do it for them) and Instruction Services (help them do their own) were equally useful, 37% felt that instruction was more useful, and 7% felt that Computer Search Services was more useful (Table 4).

Interestingly, only fifteen people felt that neither was useful compared to 32 people who said they had no need for searches, although there were many "Missing" responses to this question. More interesting is that nine people who are not using Computer Search Services considered it as the "Most useful service". Of the respondents who chose "Prefer to do their own searches" as their most important reason for non-use, 63% also chose Instruction Services as the "Most useful service".

### **All Respondents**

Of the total respondents (Table 5), 42% performed their own searches 10 times or more in the past 12 months, and 26% performed one to five searches.

It was of interest to determine whether respondents were using someone other than Computer Search Services to provide them with searches. Seventy-four percent do not. Twenty-three percent used others "1-5 times" in the past 12 months. Twenty-four of these thirty-



nine respondents were faculty members, and it is known from experience that this user group sometimes use research assistants or secretaries to perform their searches.

All respondents were asked to indicate which service was most useful to them personally, doing searches for them (which was equated with Computer Search Services) or helping them to do their own (Instruction Services). Forty-four percent of all respondents felt that both were equally useful, 32% felt that Instruction was more useful, and 16% felt that Computer Search Services was more useful (Table 6).

It was expected that, given the growing number of end-users, Instruction Services would be more highly favoured. This was found to be true, as over 75% of all respondents chose either instruction or both as the most useful service.

It was also expected that, given the decline in use of Computer Search Services, few people would find the service useful. However 59% of respondents indicated that they thought the service useful, despite only 31% indicating that they had ever used the service (current plus lapsed), and only 20% indicating usage in the past twelve months. This raised the question as to why they are not making more use of the service or why they value a service they do not use.

Twenty-four percent of the respondents made comments. Four broad themes were drawn from them:

1. Attitudes towards staff and the service are generally positive
2. Although libraries tend to separate services into two separate components, searching and article delivery, there is an expectation among respondents that articles should be selected and delivered as part of Computer Search Services
3. There is a need of increased awareness of the service, both of the existence of the service and the specifics of what is involved, and
4. There is a need for off-hours/evening instruction sessions.

## **SUMMARY AND CONCLUSIONS**

Overall user satisfaction with Computer Search Services is high with 85% of current users indicating they are satisfied or very satisfied (from amongst 6 levels of satisfaction). Current users choose Computer Search Services for their search needs mainly due to librarian expertise and time savings/cost effectiveness. However, they did not use the service frequently - 72% used it less than 5 times in the past year.

There is room for improvement in relation to user satisfaction with the number and relevance of citations. Further research needs to be completed to determine whether users are getting too many or too few, and how relevance is determined by them. In addition, some comments from the survey indicated that selection and delivery of articles would be welcome.

Of those who do not use the service, 49% stated that they preferred to do their own searches. Further research is needed to determine if this preference is related to cost or speed or relevance. There could be many other reasons why people prefer to do their own searches, such as flexibility and serendipity of being involved with material, or pressure from messages that say one "should" do their own searches. The question of whether this preference is a passing phase or a permanent fixture is worth investigating over time.

One of the more interesting outcomes of the survey was that 59% of all respondents indicated that Computer Search Services was a useful service - this despite the fact that only 20% had used the service in the past year, and only another 11% had ever used the service. Though the phrasing of the question stated "for you personally", respondents may have been indicating that they felt the service was useful to others, as suggested through some of the comments. Or perhaps there is a sense among the non-users that the service might be of value in the future - 30% of the respondents were unaware of the service prior to the survey. Could it be that the pendulum is poised for a swing back toward mediated searching?

In conclusion, the results of the survey imply that the current users are satisfied with the service, and that the service is perceived as useful. Eighty-five percent of Computer Search Services users also do their own searching, indicating that the question of doing one's own

searches or using a search service need not be an either/or proposition. As such, there is a continuing place for both Computer Search Services and Instructional Services to work in tandem in the Health Sciences Library's environment.

This conclusion was put forward to library administration, along with several recommendations including:

1. undertake new promotional initiatives which include marketing the service as complementary to end-user searching.
2. offer searching as a core, free service to faculty and clinical staff for a one year trial period (though the survey did not reveal cost to be a major deterrent, a free service may encourage people to take advantage of librarian expertise).
3. revise the Computer Search Services form to include expected number of citations and type of citations e.g. 20 most recent articles, review articles only, etc.
4. provide a fee-based, value-added service, whereby librarians choose 3-5 articles from the search and copies of these articles are provided along with the complete list of citations.

As users have expressed a belief in the usefulness of Computer Search Services, it is incumbent upon the Health Sciences Library to attempt to encourage and facilitate its use. The results of these efforts will determine the allocation of resources to these two services.

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