ABSTRACT

Escalating journal subscription costs and concurrent library and institutional budget cuts have precipitated the cancellation of journal subscriptions by many research and academic libraries. How does the faculty and research community obtain the information no longer provided for them by their university libraries? Resource sharing among libraries has been a traditional solution to this dilemma, but is not the only solution employed by researchers and faculty. Part of a study conducted at Utah State University (USU) examines the methods faculty and researchers use to obtain access to materials not held by the University Libraries, focusing on identifying unique or unconventional methods of access already in place that might be developed for broader, more efficient use of institutional resources.

Background

The Faculty Research Interests database project grew out of a desire to more carefully direct collection development at the University Libraries to respond more effectively to the ever-changing information needs of the Utah State University community of scholars. The Libraries' collection development process has historically been based primarily on curricular information. Anticipation of new demands concurrent with static or even reduced acquisitions budget allocations prompted the search for a means to delineate and track active research areas across the campus. The University has been designated a Carnegie Foundation Research I institution and, as such, requires maximum support from all facets of the organization.

We determined that the most reasonable approach to this question was to obtain the information through direct contact with faculty members and research adjuncts of the University. A programmed series of specific questions directed to each researcher would provide the information which we could then organize for our use. Storing this information in an electronic relational database would allow flexibility in both anticipated and potential uses of the data gathered. Information would be easily accessible, could be updated annually, and would be available for electronic dissemination.

It is difficult to gather information from university faculty, because such individuals are both perpetually overloaded with work and frequently the target of surveys from a variety of agencies. Because ever-rising costs and the proliferation of journal titles have captured the attention of university faculty and researchers, this awareness was our hook for eliciting the cooperation of our user community.

In order to include all 1000+ faculty members and researchers in the survey, it was necessary to address all academic departments as well as research units and other university affiliates. A questionnaire was constructed to define research interests by free text description and the researcher's own choice of Library of Congress (LC) subject headings that best describe their interests. Each respondents was asked to list five journal titles considered primary in his/her scholarly discipline, and therefore likely to be widely used by
both faculty and students, at least at the graduate level, and five journal titles essential to them personally for work in their particular research area. The respondent was also requested to indicate which of the journals in each category he/she personally subscribed to, and list reasons for the subscription, such as membership in a professional association, personal convenience, and/or absence of the title from the library's collection.

**Figure 1 FRIPS questionnaire entry for journal preferences**

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<tr>
<th>List five Journals most essential to your personal research work:</th>
<th><strong>Reason for Subscribing</strong></th>
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**Indicate by checking the box next to each title if you subscribe, and note why you subscribe (library doesn't have, convenience, etc.).**

The questions developed to characterize journal use patterns suggested other access issues critical to academic libraries at the present time. Additional questions addressed enhanced InterLibrary Services, commercial document delivery services, and awareness and use of electronic journals. Our goal was a fairly well-rounded picture of the journal-related information seeking behavior of the USU research community.

The original Faculty Research Interest Profile Survey (FRIPS) was developed(1) and piloted in 1992/93 and administered through 1994/95, with an overall return rate of 69%. Data input into a customized commercial relational database (Microsoft Access) was completed during 1996, and some follow-up questions identified. A revised update version of the original survey has been designed, and as of January 1997 is being implemented. Annual updates will follow.

The focus of our immediate follow-up questions involved the population of respondents who had indicated in the initial survey that there were journals essential to their own research that were not subscribed to by either the Libraries or the individual responding. We wished to ascertain:

- what other methods of access faculty researchers were using to satisfy their information requirements
- what researchers and faculty might be willing to do personally to broaden access
- if there was a difference in practice between faculty in science and non-science subject disciplines

**Methods**

Because the groundwork had been laid by the initial contact in the form of the FRIPS survey questionnaire, it was thought that the follow-up was concise and focused enough to be easily conducted by a combination of telephone and E-mail approaches. A report was drawn from the electronic relational database (Access) which listed faculty/researchers who had indicated a journal title essential to them to which neither they nor the University Libraries subscribed. A formulaic set of questions was developed for the telephone, and for E-mail where telephone access was unsuccessful; contacts were made by student assistants. Respondents were also asked what resource(s) they used to identify desirable articles in the particular journals to which
they did not actually subscribe. (Insert Figure 2) (Insert Figure 3) A list of prepared answers to possible questions or concerns the faculty members might raise during conversation was provided to the callers. Answers were recorded by hand and subsequently input into a computer spreadsheet (Excel).

**FIGURE 2: Sample E-mail question about journal access**

Dr. ________
I'm ________ from the Science & Technology Library. A while back you completed a survey for us in which you indicated the following journals are essential to your work:

- Hydrogeology Journal
- J. Contaminant Hydrology

Our library does not subscribe to these journals. We are examining how people obtain access to essential journals which we do not own. It would help us if you could let us know how you get access to these titles (through your own subscription, reprints, interlibrary loan, etc.).

Thank you very much.

__________ ______________

**FIGURE 3: Sample telephone question about journal access**

This is ______________ from the SciTech Library with a question regarding your response to a journal use survey that we conducted last year. On the questionnaire, you indicated that the following journal(s) is(are) essential to your work:

- Journal of Management Information Systems: JMIS
- Small Grops Research

USU Libraries do(es) not subscribe to this (these) journals. If you do not subscribe personally, how do you get access to them? For instance, does your department subscribe?

Results According to the results of the original FRIPS survey, 114 faculty and researchers named 167 journal titles as essential to their research that were not personally subscribed to, nor held by USU University Libraries. Upon recontacting the individuals by telephone and E-mail, it was found that 36 of these faculty members actually did have personal subscriptions to 49 of the titles of concern. In addition, seven departments had departmental subscriptions to 12 of the essential titles.

Other sources of access reported were: visiting other libraries personally, sending graduate students to other libraries in the region to copy needed articles, InterLibrary Services/document delivery, reprints, colleagues' or spouses' subscriptions, the Internet, yearbook or conference proceedings, personal contact with the author of the article, purchase from a service or retail source, and theft from unspecified sources.

**FIGURE 4: Reported Sources of Needed Journals**
The Colleges of Agriculture and Humanities, Arts and Social Sciences (HASS) were selected for immediate contact. The remaining colleges are being polled as part of the regular update. Out of 55 faculty members in the two colleges contacted, who owned personal subscriptions to journal titles not held by USU Libraries, only five (less than 10%) indicated that they would not be willing to share their subscriptions with others. Among those who indicated a willingness to share (better than 90%), only eight (16%) placed restrictions on with whom they would be willing to share. Both of these groups included representatives of science and non-science disciplines. Some respondents were willing to share only within their department or college, with other faculty members, or with graduate students but not undergraduates. The great majority, however, expressed willingness to share personal subscriptions without restriction. Some concern about the logistics of high sharing use was indicated, but it appeared that such high use was not expected for most titles.

Previous instances of loss through loan were mentioned by a few faculty members. Several indicated a preference for donating their personal subscriptions to the libraries for ease of access and security, shifting the responsibility to the libraries. Current issues would then be the only ones for which use criteria would need to be negotiated. Concerns raised regarding sharing included: possible loss of journal issues, the time and effort needed to keep track of loaned issues, the incompleteness of title runs, and loss of privacy in the lender’s office. A number of individuals subscribed to journal titles also held by the libraries, and therefore felt there was no need for subscription sharing.

As the inquiry process developed, a secondary dialog evolved which included consideration of how researchers became aware of articles necessary to their work published in journals to which they did not have access on campus. Their sources were predictable ones, such as citations in other articles, indices and abstracts in a given field, word of mouth, and, more recently, the Internet. A useful sidelight was a reflection of how many individuals were using the Current Contents database made available to them in their offices by the USU Libraries.

Using data from the original FRIPS survey, it was possible to compare the number of locally unavailable essential journal titles in the science disciplines with those in other fields of study. Four science and technology colleges (Science; Engineering; Agriculture; Natural Resources) reported thirteen departments
listing essential titles to which there were neither personal nor library subscriptions. The departments of Animal, Dairy, and Veterinary Science (15), Biology (10), Computer Science (9), and Mathematics and Statistics (9) reported the greatest numbers of unavailable titles. Nineteen departments in the four remaining colleges (Humanities, Arts and Social Sciences; Education; Business; Family Life) reported the absence of essential journals. The greatest concentrations of missing titles were found in English (11), Sociology, Social Work and Anthropology (10), Human Environments (8), and Psychology (6). These figures present a picture of relatively balanced representation of science and non-science disciplines in the USU Libraries. This witnesses against commonly held tenets that either science titles are so costly that they are supported at the expense of non-science titles, or that humanities and social sciences titles are unduly underrepresented in academic research libraries.

It is interesting to note that in nine departments (Forest Resources; Rangeland Resources; Electrical and Computer Engineering; Music; Art; History; Health, Physical Education and Recreation; Accounting; and Special Collections) the only journals deemed essential yet not owned by the library were actually obtained via personal subscriptions.

**Recommendations**

There are a number of points suggesting potential means of broadening access to professional journals within a campus community without the expenditure of funds for purchase of new subscriptions by the libraries. In some cases, all that would be required would be the formalizing of resource sharing already taking place on a restricted scale. The amazingly large percentage of faculty willing to share would indicate that this should be well worth facilitating.

A centralized list of journal titles and their subscribers could be provided on the Libraries' WWW home page, together with the volumes available and any restrictions the owner might place on use of the journals. Most journals used in research and not owned by the libraries would have a restricted audience, due to specialization of focus.

Journal titles which faculty members might be interested in donating to the libraries can generate some complications, depending upon such factors as whether or not the issues are ones that have been in the possession of the individual for a considerable length of time, and whether runs are complete. Some publishers may attempt to place restrictions on donations of current publications. It would be up to the libraries to monitor compliance with any existing restrictions and to determine where it might be fruitful to fill out partial runs.

Another possible source of journal titles that would require great delicacy in exploration are those titles purchased with grant monies. Depending upon the source of funding, some grant recipients may be required to account in detail for all materials purchased with granted funds, while others group publications with hardware or general supplies, where they are lost to public record. When equipment purchased with grant funds is stipulated to be the property of the institution, in this instance the university, a case could be made for subscriptions purchased in this way becoming part of the libraries’ collection. Although this is theoretically feasible, practice on most campuses is to overlook personal control of such materials. Titles such as these, often esoteric in nature, could merely be recorded in the same way as regular personal subscriptions, to be shared on a limited basis while remaining in the possession of the purchasing party.

**Discussion**
Response both to phone and to E-mail was almost entirely positive. Faculty members were pleased that, in fact, their original surveys had been read and analyzed, and were being expanded upon for additional use. The Libraries' credibility appeared to be enhanced by a demonstration that we were actually paying attention to their statements of information needs, as reflected in their prioritized journals lists. (Insert Figure 5)

FIGURE 5: Sample E-mail response

Hi Molly!
Whenever I go to a conference or give a talk at another institution I check out the library and if the library has Survey Methodology I look for any articles relevant to my work (census adjustment strategies). Also, one of my co-authors reads the journal regularly and lets me know if there are any interesting articles in the journal. (I can then get the articles directly from the authors or my friend). This is a roundabout way of doing things and it was a little frustrating when I was most active in the census adjustment debate a few years ago.

Thanks for your interest!

Cheers,
______________

The follow-up also revealed some weaknesses in the effectiveness of our communications with the respondents. Many faculty members entertained misconceptions about the intentions of both the original survey and our follow-up interviews. A large percentage of the individuals contacted thought that the original survey would result in the library cutting titles which were not frequently cited as being essential or primary to researchers and faculty. Conversely, it was thought that the follow-up would result in the libraries adding the desired essential titles to their collections. We used this opportunity for clarification of the policies of the Libraries, and emphasized that no journal titles had been cut since the survey, nor any titles added. Although they were emphatic about the importance of having access to all the titles listed as essential to their work, most faculty and researchers accepted the reality that the library was not currently in a position to commit to new serials subscriptions.

The Future

The FRIPS project has provided the library with an excellent opportunity to better understand the journal use behavior of the USU faculty and research community. The major investment in the project, both in terms of money and time, has been the development of the survey and update and the construction of the database used to analyze the survey results. With these mechanisms now in place, it is expected that the survey will be updated on a regular basis.

With funding always an uncertainty, it is imperative that libraries be active in exploring new ways to increase the resources available to their users. The survey offers one means of monitoring, and potentially maximizing, the informal resource sharing already in existence on the USU campus.

The FRIPS project also offers the exciting opportunity to track the changing importance and use of Internet resources, particularly electronic journals, by the campus faculty and researchers. The original survey indicated that the USU research community has not been relying heavily on these resources. The current
update is intended to highlight expected increases in use of electronic resources. As the availability of journals through the Internet increases, the library will be able to monitor those considered most valuable, and move to extend awareness of the existence of these sources across campus.

The results of the FRIPS project discussed in this paper are only a subset of the tremendous amount of available data. By gaining a better understanding of the research interests and journal use of the USU faculty and researchers, the Libraries hope to maximize the resources available and provide better service to the campus community.

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