

INTERNET USE AND TRAINING IN UNIVERSITY LIBRARIES

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Abstract: University research libraries in the United States and Canada were surveyed to determine their use of a variety of electronic reference tools. An 85% response rate provided us with information about university library use of CD-ROM, remote online, locally loaded databases, and Internet access. The biggest change since our 1991 survey of the same libraries was in their provision of Internet access to users through the library. Follow-up interviews provided more in-depth information on how university libraries are managing Internet access, staff and user training programs, and changes in library staff attitudes or user attitudes since Internet access was introduced. In every case Internet access did not replace any other electronic reference service, but was added to existing services.

1. INTRODUCTION

Academic research libraries are often the first to adopt new technologies for patron use. In a 1991 survey of the libraries that make up the Association of Research Libraries (ARL), we found that almost all offered online intermediary services (97%) and CD-ROMs for patron searches (96%).^{1 2} Slightly less than half of the libraries (45%) offered end-user online searching, while, as of 1991, 37.5% offered locally loaded databases. An additional 48% planned to locally load databases within two years.

At that time, patron access to the Internet was not mentioned by any library as an integral part of reference services. (Some did support remote database access on networked systems such as CARL or MELVYL.) Patron access to a full range of Internet-available resources was not yet a common practice in libraries in 1991.

In 1994 we surveyed the academic members of ARL once again. These libraries continue to offer a variety of electronic reference options in a complex intermix of CD-ROM, remote online, locally loaded, and, now, Internet database access. Not surprisingly, the biggest change in the three years between surveys was the wide-spread support of patron access to Internet resources. Recent reports in the literature support the rapid adoption of Internet access by a variety of libraries.^{3 4 5 6} In follow-up discussions with selected librarians, we explored in more depth how libraries are supporting Internet access, the impact of this new service on reference staff, and how they are incorporating education and training activities.

2. THE SURVEY

Questionnaires were sent to the 113 academic library members of the Association of Research Libraries. (The remaining eight members of ARL are not academic libraries. We did not send surveys this time to the Smithsonian, the Association of College and Research Libraries, ARL itself, the Center for Research Libraries, the Library of Congress, the National Agriculture Library, the National Library of Canada, and the National Library of Medicine.) A total of 96 questionnaires were returned, for a response rate of 85%.

In 1991, 96 of 119 questionnaires were returned, for a response rate of 80.7%. We mailed the earlier survey to all of the ARL members at the time, with a majority of the non-respondents coming from the 8 non-academic libraries. Comparisons between the 1991 and 1994 surveys are meaningful because the libraries who responded in 1991 and 1994 are comparable (and are, indeed, in most cases the same libraries).

3. USE OF ELECTRONIC RESOURCES

All academic research libraries offer a variety of electronic reference options. An increase was found in the percentage of libraries that offer every option. In 1994, 99% offer online intermediary services; all (100%) offer patron access to multiple CD-ROM databases; 74% provide access to locally loaded databases through their OPACs; and 66% offer end user online searching.

Compared with the 1991 figures, libraries clearly are not eliminating any option when they add a new one. In addition to the continued use of options available in 1991, in 1994 77% of the libraries (74 libraries) indicated they are offering patron access to the Internet.

4. INTERNET ACCESS

Access to the Internet in these 74 academic research libraries is equally available to undergraduates, faculty, and graduate students. In addition, most (50 of 74 libraries that offer Internet access or 67.6%) extend Internet access to community users. Access is provided on-site (inhouse) by 56 (75.7%) and on a dial-in basis by 38 (51%).

Libraries support a variety of Internet functions for patrons, as shown in Figure 1. Local gophers are provided by more than half of the libraries, as is telnet access to other libraries and information resources. Other services, such as e-mail and file transfer protocol (ftp) are less commonly supported.

Clearly, user training is considered an important part of providing the service, with 70 of the 80 libraries that responded to this question offering training for on-site users. In addition, 28 of the 80 libraries that answered the question offer training for remote users.

Although libraries that do not offer Internet access in the library were asked to skip the training questions, some did not. We interpret this to mean that even some of the libraries that do not allow patron access to the Internet in the library offer Internet training classes within the library. This is not surprising since the Internet is widely used for reference work even when patron

access is not supported. Almost 89% (85 of the 96 libraries) use the Internet for reference work.

We also asked about the type of training offered for on-site users. (See Figure 2). Most libraries that offer training use more than one training method, with an almost equal split between printed guides (49 of 70 libraries or 70%), one-on-one instruction (75.7%), group instruction as part of regular library instruction (68.6%), and group instruction in special Internet classes (68.6%).

Only 28 libraries offer training for remote users, again employing a variety of instructional means including printed guides (18 of 28 libraries or 64%), one-on-one instruction, e.g. by telephone (15 libraries or 53.6%), through e-mail or online (10 libraries or 35.7%), and group instruction in special Internet classes (13 libraries or 46%). (See Figure 3.)

Interestingly, no libraries reported using computer assisted instruction or videos for their Internet training of on-site or remote users.

5. COMMENTS FROM LIBRARIANS

As a follow-up to the factual questionnaire, librarians who indicated a willingness to be interviewed were asked to respond to eight additional questions sent to their e-mail address. These were a mix of factual and attitudinal questions and are impressions or indicators of how Internet access is impacting some academic libraries.

Question 1: In your library, how many terminals/workstations offer Internet access? Are they mostly clustered together or decentralized? Increasingly, libraries are moving toward Internet access capability on all OPAC terminals, especially if a gopher is supported. Some are not to that point yet, but typically begin Internet access in a cluster of networked workstations in the reference areas or in a supervised lab setting.

The number of workstations varied from 2 to over 100 in the libraries we surveyed and typically combined reference clusters with scattered workstations throughout the libraries. Several libraries mentioned they offered World Wide Web access via Mosaic on selected centralized workstations, while gopher access is offered on terminals scattered throughout the library.

Question 2: What are your clients using the Internet for? Few libraries keep track of actual use, although they may direct how Internet will be used by providing options on their local gopher or Web Homepage. One librarian commented that there is "no discernible trend. Both local and gateway resources" are used and several mentioned that the Internet is used for "everything".

Availability of e-mail on library workstations can be a problem. One librarian commented, "The vast majority [of users] at any given time use the Internet for e-mail. In fact, this has become a serious problem for those users who wish to use workstations for research purposes." Another stated "as a matter of policy, we do not allow users to access e-mail from library terminals, as the terminals are in such high demand for access to library resources. There is a computer lab in the main library which those of us in the main library can refer people to for things such as e-mail."

Some libraries solve this problem by blocking e-mail access or by directing Internet access through menu choices. "Because we point to our own server, we see very little fun and games. Gopher and Mosaic clients are secure, and we do not offer FTP or mail." "At the reference cluster, we are trying to eliminate fun and games, especially e-mail! We are using a Windows based menu for our 'electronic reference desk'. We have access to FirstSearch via our CWIS; access to library catalogs, WWW, and also our networked CD-ROM products."

Many of these libraries are working toward this integrated electronic reference desk concept. Increasingly, libraries are using an opening menu to direct users to external database services such as FirstSearch or UnCover; to locally loaded or CD-ROM databases; to the OPAC; to a campus wide information service; and to selected Internet sites. In some libraries "it is not apparent to the user that they are in fact using the Internet. These choices have been listed on menus along with the libraries' CD-ROM network."

The importance of World Wide Web and gopher access was stressed by many librarians. "The Web is where the resources for the next three years will appear and it is important to be positioned to take advantage of that development." Library gophers and Web homepages are popular ways to help direct users to sources and to bring the service of the reference librarian to the user.

Question 3: Has the introduction of Internet changed the way your users do research? Has it changed the way users interact with the reference staff? Have user demands increased? changed? Although most librarians have no data on whether Internet access has changed the way people do research, some commented that they believe there has been no substantive change yet, "but it has changed the way we communicate and exchange information."

Questions posed to reference staff (and the way they are posed) have changed, as librarians do a lot more interaction with faculty and students through e-mail. Users are demanding more information about Internet itself, including questions about availability of resources, specific sites, and connection problems. "User demands always increase. We are expected to know what is on the Internet, both gopher and Web. We are also expected to be experts in data transfer, conversion, and compression."

Many libraries are aggressively setting the library up as the place on campus to get Internet questions answered. "People here want to know more about the Internet. They have heard and the library has established itself as having the folks in the know."

Question 4: Do you have a formal Internet training program for staff? All staff? Who does the training? How and by whom is the program organized? The libraries we queried take different approaches to staff training. Some do not designate any one person or department responsible for staff training on a continuing basis. They may occasionally send a few staff members for training from their regional network or consortia or from their campus computing center. Still others assume certain motivated staff members will learn on their own. They then rely on these key staff members to pass on their knowledge informally to other staff.

Several libraries are working on improving more formal staff training, recognizing that "much more training" should be done, "especially if we're going to introduce" more new services. One library commented "for the staff we offer extensive training, usually in half hour-45 minute

blocks, always repeated at different times so everyone can make it. Staff are also welcome to come to public electronic workshops."

Formal training classes for staff are the responsibility of reference departments in some libraries, of the systems office in others. Some libraries have a dedicated "Training Librarian" or "Staff Development Officer" who is responsible for organizing and coordinating staff Internet training.

Another approach is to establish an "Internet Training Team" to run staff workshops and to train other staff members who will in turn become trainers. A library that has taken this approach reports "we have opened our training to library staff in general, with some departments mandating the training, others sending those whom they want to act as trainers in their department, and others just interested in knowing more, not necessarily for their work."

Yet, not all of those libraries that offer or plan to offer formal classes for staff are convinced of a continued need. Some are relying more on one-on-one training by fellow staff members after trying formal classes. One commented, "with the advent of more and more easy-to-use Internet search tools, we are less convinced that 'formal' training will be terribly important in the near future."

Question 5: Do you have an Internet training program for users? Is Internet training integrated into "regular" library instruction? Who does Internet instruction for users? What kind of training is most effective? What kind of training do users seem to want? As found in the questionnaire, training of users is an important part of Internet access in almost all academic libraries, although many are just beginning to instruct users. Training almost always includes informal one-on-one instruction as a part of reference services. It often also includes formal classes, either dedicated to Internet access or as a part of regular library instruction (or both).

Many libraries now offer dedicated Internet training classes in cooperation with their academic computing center. (In some institutions the computing center led the way with Internet training, in others the library led.) Electronic classrooms that allow hands-on training are recognized as the ideal by many, although most are still just using displays in front of a class. Libraries that offer dedicated Internet training classes have found that they must break the sessions into small chunks, each with a specific topic (e.g., classes in Mosaic, FTP, Listserv, etc.).

Other libraries integrate Internet training into course-related classes. "Using Internet is part of most, if not all, library instruction presentations. Staff at all reference and departmental library service points are expected to be able to cover the basics in working with the public. Formal instruction is done by librarians."

Question 6: Have you noticed any change (emotional, attitudinal, or cultural) among the reference/public service staff and the users of your library since the introduction of Internet? Almost all librarians commented about the heightened public awareness of Internet due to the flood of information in the popular press and broadcast media. Most report an overall positive reaction from users, although there is a wide range in the levels of understanding. More chose to comment on the impact on staff.

Since Internet access is an additional service that the reference staff must understand and support, it is not surprising that it places additional stress on staff. Access through the library causes "excitement sometimes; stress all of the time! It is quite difficult to find that perfect blend of electronic and printed resources and help."

Obviously not every staff member reacts the same, "some are taking to this like ducks to water and others are not." All feel the need to keep up with rapid changes. "There is a great deal of change constantly occurring, such that we are often one step ahead (sometimes one step behind) users. There's not as much of a sense of mastery over all of the resources. The necessary change in attitude that has occurred is a willingness to learn new things, accept change (expect change too), and a greater amount of working in cooperation with each other and relying on each other's knowledge."

Question 7: What do you see as being the greatest benefit of Internet access for librarians and for users? What's been the biggest problem? Overwhelmingly, the greatest benefit these librarians see is access to information resources of all types from a variety of locations. This is especially important to small libraries or those in isolated places. Other benefits include "rapid dissemination of professional information through e-mail" and a sense of "empowerment" by staff and users.

Problems are more varied. Many respondents mentioned problems that have to do with either the accessibility or quality of the information itself. The "biggest problem is helping users (and ourselves) discover useful information to solve specific problems and answer specific queries, quickly and easily." "A possible problem in the future is the use of Internet to present information in a fashion that is slick but superficial." Lack of organization of materials, questionable reliability, and inconsistent (and changing) access means are all a part of this.

Some of the problems stem from misunderstandings due to media overstatements about free access to the world of information. "A problem right now is that hype in regard to Internet has led many people to believe that hitherto expensive and valuable datafiles are now available free, when in fact they are still fee-based and/or restricted to local clientele."

Other problems include the need for better training of staff, too few staff members, lack of money for more workstations, lack of good and reliable client software, and not enough programming expertise.

Question 8: Any advice you would give to an academic library/librarian about offering Internet access in the public service area to users? Libraries that are just beginning or just thinking about offering patron access to Internet can benefit from the advice of these early adopters. Some of the advice reemphasizes the need for good training of users.

Variety of training is recommended, including "classes, demos, hands-on, handouts, etc." "Help our users to learn the best ways to explore the Internet using the best tools. Avoid tedious training laden with too many instructions." As with all things, different users will learn at different paces, so be prepared to vary your approach. "Some users will take to it immediately; others will only use it if you can show them how it can help them specifically."

Effective user training relies on well-prepared staff. Much advice focuses on how important it is for library staff to keep up and feel in control. "Be prepared to field questions that will challenge your expertise. The Internet environment is so dynamic that you have to scramble to keep informed. Printed Internet guides help, but outdate quickly."

Staff preparation is a mixture of knowledge, attitude, and proceeding at a controlled pace. "Be prepared--have as many staff trained and enthusiastic as you can possibly muster. Use the net to create your own information dissemination vehicle. Create demand for service so you can to some extent control the pace of developments." It also is a time to forge new alliances--with the computing center or other academic departments, for example.

Perhaps the best advice came from those who advise their fellow librarians to not worry too much about what is just the latest new technology in a long line of new technologies in reference.

"Be ready for change, and prepare yourself to learn. Be curious and try things out. Practice everyday." And the most laidback of all, "throw it out there, and support it. Nothing to worry about."

5. ACKNOWLEDGEMENTS

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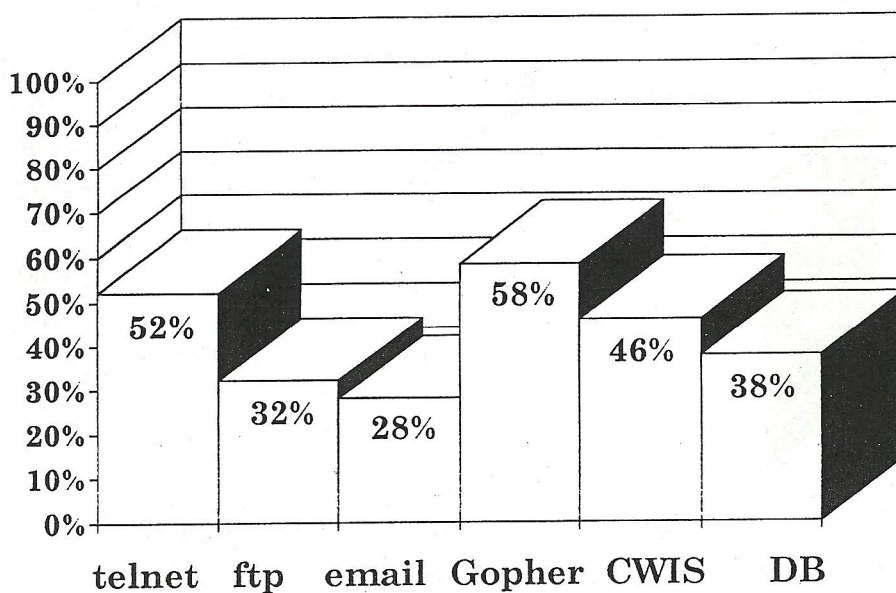


FIGURE 1

“What types of Internet access do you offer to your patrons?”

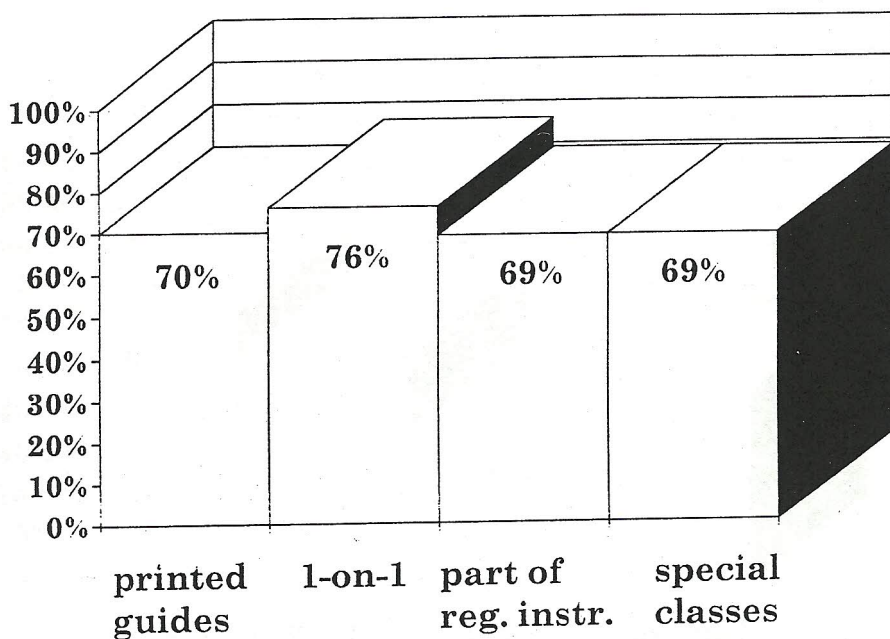


FIGURE 2

Types of Internet training offered to on-site users

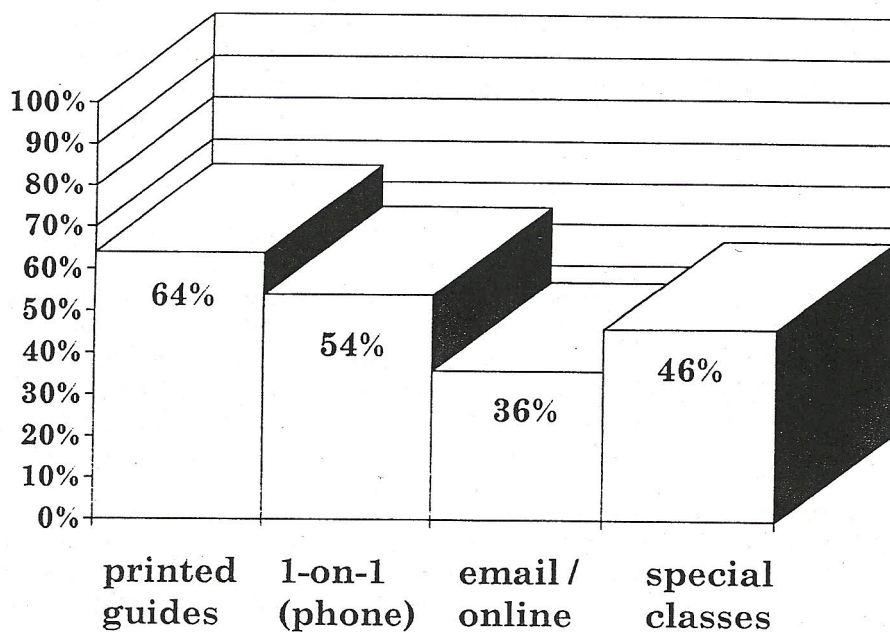


FIGURE 3

Types of Internet training offered to remote users