Adapting to changing user expectations

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Results of user surveys indicate that science and technology library user needs differ from those of humanists and social scientists and are changing rapidly. Science and technology libraries are taking the lead in adapting the public services model accordingly. Science and technology library users are most interested in easy-to-use access tools and library Web sites that enable them to find information on their own as well as easy access to materials from home and office. Their expectations are based on the speed of access provided by the Web and through search engines like Google. As fewer users come to the library, librarians are responding by going to the users. The role of subject librarians is changing from staffing a reference desk and buying materials to that of "field librarian," a traveling librarian who spends time with researchers in labs and offices, helping users to install client software and to learn how to make best use of library electronic resources.

We know that library users are dependent on computers to retrieve, store, and manage information in ways that we could not have predicted even ten years ago. Grade school students are learning to use PowerPoint for presentations; many have their own computers at home. Their older siblings come to college expecting to continue to multitask, to communicate instantly with their friends in real time by telephone and computer and to satisfy all their information needs through Google. Graduate students and many faculty are products of the computer age as well. They are not as accustomed to using print information as their senior colleagues were. In fact, for most science and technology researchers, information that is not on the Web and consequently not immediately available might as well not exist.

The gap between library services and users appears to be growing. As the rate of technological change increases, librarians are faced with the need to rethink their services and how to best provide them. At the same time, funding for libraries is decreasing or, in the best of circumstances, staying the same. In the US, library staff report that they are feeling overburdened by being asked to do more with less: less funding, less staff and consequently less time. To identify the most effectively use of these shrinking resources to support their users, libraries are developing better and more precise tools to measure user satisfaction. In addition to data from surveys, we have observations from staff that fewer people are coming to their libraries and that there is less activity at reference and circulation counters and more activity around electronic document delivery, electronic reserves, email and electronic reference.

LibQUAL+^{TM} (see www.libqual.org) is a Web-based survey instrument designed to help libraries assess their services, developed under the auspices of the Association of Research Libraries and Texas A&M University. The survey measures the affect of service, the need for library as place, desire for access to information and sense of personal control on the part of patrons.

Cornell University Library participated in LibQUAL+[TM] from 2001-2003. In 2003, the survey measured for the first time use of library-provided Web-based sites against use of other Web-based sites, such as Yahoo.[1] Seventy-three percent of the Cornell respondents indicated daily use of non-library sites while thirty-two percent indicated daily use of library-provided Web-based sites. More than twice as many people made daily use of non-library Web sites than of library-provided Web sites. While there are obvious problems with this simple reporting, for example it is possible that some respondents were not aware they were using a library-provided site, it seems that almost three quarters of the academic population is searching the Web daily. Another twenty one percent of respondents indicated weekly searching. This indicates the degree to which faculty, staff, and students have become dependent on the Web for information.

In 2003, twenty seven percent of the respondents reported that they used resources on library premises daily, down from thirty five percent in 2001. While the question can be interpreted in several ways it does indicate that considerable fewer people are using physical libraries.

LibQUL+[TM]'s core survey questions are designed to measure the affect of service, the need for library as place, desire for access to information and desired degree of personal control on the part of patrons. For all respondents in all subjects the most desired service the library should provide was "making electronic resources accessible from home or office." Science and technology faculty, graduate students and undergraduates in the sciences were in agreement that they also wanted easy to use access tools to allow them to find information on their own, convenient service hours, and the print or electronic journal collections required for their work. While science and technology undergraduates wanted community space for group learning and group study, faculty and graduate students preferred a library Web site that would enable them to locate information on their own.

Many respondents took the opportunity to comment on the library and services. Most reported satisfaction with interactions with staff, there was strong dissatisfaction with the catalog and the difficulty of accessing resources from off –campus. One respondent praised the staff and their skills at 'hunting down obscure papers." He also suggested that perhaps "this [skill] could be incorporated into some kind of powerful, all-inclusive search engine in the gateway." Indeed, the librarian search engine, without the librarian, seems to be the desire of many respondents. The desire for services from staff consistently ranked lower than the desire for personal control.

Over the past four years (1999-2000 through 2002-2003) the number of reference questions at Cornell University Library has decreased remarkably. In the Engineering Library there has been a thirteen percent reduction, in the Mathematics Library a fifty-three percent reduction, and in the Physical Sciences Library a fifty-six percent reduction. Reference librarians provide anecdotal reports that the nature of questions has changed; that there are fewer basic questions and those that are asked are more interesting and challenging.

In December 2001, the Engineering, Mathematics, and Physical Sciences Libraries at Cornell piloted a desktop article delivery project called Scan and Deliver. In the three-week period when the service was free, the three libraries responded to 351 requests for articles. In order to control the number of requests Scan and Deliver was implemented as a fee-based service Recently, Cornell University Library has

implemented a book delivery service that has become very popular among faculty and graduate students. Of course other libraries are providing these kinds of services as well. The popularity of document and book delivery services supports the sense that researchers no longer want to go to the library; the preference is that library materials come to them.

These kinds of data and information indicate that in order to carry out the mission of libraries, indeed to survive, we need to be thinking from the users' point of view. Libraries are not yet designed to respond to the way students and researcher now work. Even Web-based electronic catalogs do not provide the searching flexibility of commercial search engines. The restrictions of the catalog are tolerated now only in relation to the degree of need. With most searching taking place on the open Web and the searching of library-provided catalogs and databases taking place outside the physical library, we need to adjust our approach to users and user education.

In 1896 Alexander Graham Bell wrote "A library that is not available outside of business hours is of as little value as gold horded in a vault and withdrawn from circulation." (letter to Mabel Hubbard Bell, 17 November 1896) At that time being available outside of business hours meant providing physical access, usually through keys, when the library was not staffed. In today's environment it can mean providing electronic access to materials and information around the clock. It can also mean empowering users to find information on their own, through carefully developed Web sites that can be accessed from home or office.

The desire for personal control is at least partially met by easy access to Web resources. While users want speed and convenience librarians know there is a trade-off between personal control and quality of results. Our challenge is to gain or to maintain users' confidence in our value to their work.

As the numbers of graduate students and faculty coming to the library decreases, the role of librarians must necessarily change from that of staffing a reference desk to a more proactive one of "field librarian" in which the librarian goes to the patrons in their offices and labs, develops both formal and informal training opportunities around the researchers' needs, and becomes a partner in the research process. Librarians need to know how to help researchers access databases, electronic journals, and Web sites relevant to their subject areas. Often this means knowing about proxy servers, VPN software, cookies, and other computer configurations. If the librarian herself is not knowledgeable about this she needs to be able to refer the patron and follow up to be sure problems are solved quickly. The librarian as computer expert is important to developing the respect of the user.

Subject Librarians at the University at Buffalo, State University of New York (UB) have developed a successful outreach program where they spend part of their time on-site in departments. The amount of time varies by department and semester, but is regularly scheduled slot. Ben Wagner, Physics and Chemistry Library at UB who spends time in the Physics Department, recently talked about his outreach activities in a visit to Cornell University Library. Among his recommendations were finding a good high traffic location, being patient and developing a marketing strategy. He commented that the interest demonstrated by the librarian in holding departmental office hours goes along way in developing better library-department relationships.

Cornell University is completing a new engineering building that dominates the Engineering Quad. A grand atrium in the building will lead to several other buildings on the quad, sheltering students and faculty from the sometimes harsh upstate New York weather as they move around the area. During the planning process there was no desire on the part of the college administration to include a library or a satellite collection in the building, but as the building nears completion, the Engineering Librarian is actively engaged with administrators in identifying a spot that can be regularly occupied by a librarian with a laptop. There are a number of alcoves in the final atrium design that will provide group study space on a first-come first served basis. We will claim one of those. We will have to develop a bright, eye-catching sign to attract attention but we will be there, where the users are, to help them learn about Web and library research.

As librarians spend more time outside the library we also need to adapt our concept of the physical library to the needs of those users who still come to libraries. It seems that currently most academic science and technology library visitors are undergraduates searching for quiet space, either to relax or to study, and also for group study space that includes facilities to develop and practice multimedia presentations. Of course, they also are looking for computers on which they can read and compose email, but we have to remember that is part of their learning and studying process.

Libraries and computer labs are becoming less distinct from each other. At Cornell, most libraries circulate laptops and/or provide workstations with the basic Microsoft Office package. Those computers are almost always in use. The computers that are configured for limited library-related use stay empty more often. In fact, we tell the story of students who prefer to email reference staff, or the chat reference service from a few feet away rather than give up their seat at a workstation. For undergraduates the distinctions among the Web, email, and library resources are blurred and unimportant, as is the difference between a library and a computer lab. Undergraduates, along with graduate students and an increasing number of faculty, see the computer as the tool for all information retrieval.

As libraries renovate and remodel, librarians are using the opportunity to review and revise their services to include more computer support, often at the expense of access to print materials. At the Kansas City meeting in 2001, IATUL attendees had the opportunity to visit the new Kansas State Engineering Library, one that was designed in cooperation with the engineering college to provide access to computers and computerized information but not to accommodate on-site print materials. At Cornell, the Engineering Library accepted administrative responsibility for the College of Engineering teaching labs in 1999. That area has operated in parallel with the library but with separate staff over the past 5 years. It has become the most heavily used service of the library. As part of a renovation to be completed this summer an additional computer lab as well as some of the functionality of the teaching lab will be integrated into the Engineering Library. The director of the teaching lab will become responsible for public computing in the library and take responsibility for all computing projects. This is a joint project with the College of Engineering.

As the pressure on subject librarians increases to spend more time outside the library and to provide more computer-related support, the role of other library staff necessarily changes. Access services staff, traditionally focused on circulation and

shelving activities, now spend more time on document delivery services and sometimes answering basic reference questions, particularly those of undergraduates. They too might be asked to provide basic computer support, at least within the newly configured library.

In order to make space for computers and group study areas less space will be given to other services such as print collections and reference services. There is increasing interest in the concept of a unified service desk that combines the functionalities of circulation, reserve and reference desks. At a unified service desk patrons will essentially have "one-stop shopping" where they will be able to ask any question without having to categorize it.

The idea of a unified service desk in some ways takes us back to the smaller departmental libraries staffed by one or two people who provide any of the range of services needed by patrons. Access services staff will be trained to answer basic reference questions as well as to carry out their other responsibilities. During busy times a reference or subject librarian might also be assigned to the desk All library staff will have to be empowered to make decisions at the point of contact. The subject librarian will also be expected to spend time in departments, to be teaching classes and to be participating in outreach activities. Since most researchers will not be coming to the library the librarians will need to go to the researchers. Departments continue to need the expertise of subject librarians to support their research and to serve as their advocates. Librarians will have to sell themselves to researchers as knowledgeable people who can be trusted to represent them in what is becoming a very confusing world of information.

Does all this change mean that the role of the library will be reduced in academic settings? Certainly, library activities are changing fast and will be different from what they are now. Library buildings will have to be more attractive and computerized to encourage patrons to come to them. But the expertise that librarians provide should continue to be highly valued. If we can demonstrate that we know the expectations of our users and are able to respond to them we will continue to be trusted members of the academy.

[1] Three questions were asked: "How often do you use resources on library premises?" "How often do you access library resources through a library Web page?" "How often do you use Yahoo^{TM}, Google^{TM}, or non-library gateways for information?"