



2001

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Recommended Citation

Seal, Robert A. "Reference 2001: A Director's Admonitions." *Portal: Libraries and the Academy* 1, no. 2 (2001): 139-150.

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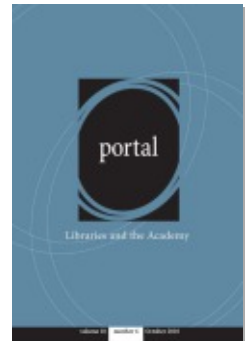
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portal: Libraries and the Academy, Volume 1, Number 2, April
2001, pp. 139-150 (Article)

Published by The Johns Hopkins University Press
DOI: [10.1353/pla.2001.0028](https://doi.org/10.1353/pla.2001.0028)



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Reference 2001: A Director's Admonitions

Robert A. Seal

abstract: Reflections on professional roles and responsibilities are explored, as well as the opportunities and challenges facing academic reference librarians. The information environment has been transformed by technology and the Web, and will continue its exponential change. What's coming? What endures? How will we thrive? Whatever approach we take, it is essential to remember that maintaining the status quo is not good enough to meet the changing needs and expectations of library clientele.

Changes, Challenges, Options, and Goal

At the start of a new decade and century, it is instructive to reflect upon some of the many changes seen in academic librarianship in recent years. No doubt, the greatest of these are a direct result of computer technology, which has had a tremendous impact on library operations over the past thirty years. But a truly significant transformation occurred in the 1990s, as the Internet and World Wide Web began to revolutionize reference service. Librarians and library users now have an incredible array of electronic resources to carry out professional duties and conduct scholarly research. The most notable recent development has been the delivery of electronic full-text materials via the Internet, made possible by the development of HTML and its successors, web browsers, PDF, and other electronic document formats, and powerful server networks. These advances have been particularly important and advantageous for small academic libraries with few staff and limited materials budgets. For librarians everywhere, the good news is how much better one can answer reference questions and meet patrons' needs. The bad news is that the technology advances so quickly. Digital information continues to expand, and there are too many online resources, search engines, and methods of access for any one person to know in depth.

Because of these circumstances, librarians are confronted with a variety of new challenges and barriers to providing quality library service. The expectations of users are very high and sometimes impossible to fulfill. Users need answers quickly, if not

immediately, and all appropriate sources must be consulted. Users' technical expertise varies widely, and academic librarians typically deal with both extremes: users with more computer and Internet expertise than the librarians (some undergraduates) and those who hardly know how to use a mouse (certain professors and non-traditional students). Both groups need help to find and use information successfully, although many students don't know it and some faculty are embarrassed to admit it.

Librarians also contend with current fascination and obsession with the World Wide Web, the undergraduates' research tool of choice. For a variety of reasons, students prefer to use the Internet instead of the library's print collection and electronic resources. Even though librarians and professors may have told them that Web information is frequently out-of-date, untrustworthy, or poorly organized, students believe that it is "good enough" and they rely on it heavily, sometimes exclusively. Similarly, primarily for convenience, students are enamored of electronic full-text. If the library can't provide it, they will surf the 'Net until they find something that seems appropriate.

The nature of the student also presents a different kind of challenge, the growing penchant for twenty-four-hour service. The business world buzzword, "24/7," now applies to many college campus services, including the library's information services. It is not unusual for students start to write papers at 11 p.m. or later, at the time when library staff is closing the building. Fortunately, most academic libraries now provide around-the-clock access to a variety of electronic resources, a real godsend for the 24/7 undergrad. But what if the student needs a real person to help him or her at 2 a.m.? How do we respond to that?

The exponential growth of information and advances in information delivery will continue to challenge us.

The exponential growth of information and advances in information delivery will continue to challenge us. It is extremely difficult to keep up with the library profession, with the increasing numbers of databases and websites, as well as developments in information science and technology. There is simply too much to learn

and know—but users still expect librarians to be experts.

A very different kind of challenge comes from the large chain bookstores, which offer comfortable furniture, classical music, many of the latest books, and coffee bars. Students are drawn to such surroundings instead of the campus library, and academic librarians are scrambling to incorporate such creature comforts into the library, in an effort to bring users back.

Librarians have two options: 1) ignore the reality of the 21st century environment and keep doing things in traditional, comfortable ways, or 2) take risks, look for new ways to provide service, and work with burgeoning technology to achieve reference service goals. If we are to survive and serve our users, there is no choice but to follow the latter path. Librarians cannot, for instance, limit their knowledge and activity to their own library, nor to the traditional tenets of our profession. To effectively serve our constituencies, we must tap into not only the World Wide Web but also business and technical periodicals, colleagues outside academe, and continuing education in management and technology. As a profession, we must accept the fact that the library is



no longer the only choice when it comes to providing access to information. The students know this and many for-profit information providers are counting on it.

Within the library, librarians must focus on organizing online resources for intuitive and easy access, show users how to use the Web effectively to locate information, and implement innovative programs—while keeping up with rapid changes coming from all directions. Most importantly, we must never forget that the basic objective of academic library reference is to help and teach students and faculty to find, to evaluate, and to use information to carry out their studies, teaching, and research. We must keep this goal in mind at all times, avoiding the temptation to rely too much on technology and concentrate too little on people.

Reference Service in Transition

Computers, online data, and the Web have transformed reference service. Scores of powerful databases, online catalogs with tables of contents of books and URLs linking to websites, thousands of full-text electronic journals, and sophisticated search engines help track down elusive information. Because students and faculty rely increasingly on technology to do their research, many academic libraries are answering fewer reference questions than before. When users do approach the reference desk, however, it now takes more time to respond—to explain how to select and use databases, to search the web, to print out results, and to troubleshoot problems. Librarians actually are spending more time with clients, and interacting with them in more complex ways. This not only requires new skills and training, but also underscores the importance of our role in today's academic enterprise.

It is obvious that contemporary reference librarians must be able to use and to integrate effectively a wide variety of print and online resources. In particular, we must be expert in using electronic databases and the Internet if we are to understand and respond to the needs the scholarly community. Not many years ago, we fulfilled our role as information professionals primarily by using printed reference works and serials. These tools are still valid and useful components of the research process; however, many undergraduates intentionally disregard or are unintentionally ignorant of print resources. They believe that they no longer need the reference or general collections, because they can find whatever they need on the Internet. In some cases, the printed reference collection is not even on their radar screen.

Undergraduate Services: The Same, Only Different

At many of our institutions, undergraduate homework assignments are much the same as they've always been—typically to write a short paper on topic X—and the student's basic reference question remains: "Where can I find something [as quickly and with as little effort as possible] on this subject?" Because there are so many resources available that contain citations to or full-text of articles and books, the answer to this question is no longer as simple as it once was. The temptation for the reference librarian is to offer too much, making the process overly complicated. Further, librarians are sorely mistaken if they think they can convince most undergraduates to do a thorough job of research for a thousand word paper.

Another situation that hasn't changed is, "Why do an assignment early if you can wait until the last minute?" [Librarians never did this when they were students.] This pattern of behavior is even more prevalent today, when students know that they can dial up the library from their dorm rooms at any time, just hours before the papers are due. Whether or not they wait until the last minute, the bottom line for most undergraduates is that they will do the minimal work possible to find the minimum number of resources required for their assignments. They want almost anything and they want it quickly. It doesn't matter that it may not be the best or most reliable source. To satisfy this need, they may go to the library's home page—but, more likely, they turn to a favorite search engine to find something potentially relevant. As a result, reliable, organized resources are often bypassed in favor of the first hits found on the World Wide Web. And we should not blame the students for their affinities. Online reference sources are marvels, more powerful and much easier to use than print-based reference tools. Web search engines are getting better every day. Although their thoroughness and reliability still leave something to be desired, they satisfy undergraduates' habitual need for convenience and speed.

An interesting fact is that, although many students now come to college with good computer skills and a high degree of comfort with technology, their proficiency does not translate into research skill. In fact, the opposite is true. Using the Web gives students the sense that they have the world's knowledge at their fingertips, but it does nothing to develop critical thinking ability, which is essential for effective research. In spite of

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their technical expertise, incoming students are inexperienced and impatient, with little or no idea how to where to begin with research. Now more than ever, reference work must be teaching-oriented. The aim, as it was when *Reader's Guide* and the card catalog were the tools, is to show students how to do research on their own—now in a virtual world. Answering reference questions in this environment takes time

and patience, but the potential payoff is significant. For instance, it is worthwhile to explain that the library's commercial online databases (organized, filtered, and reliable) are often the best starting points for research. Besides explaining how to use databases that the library pays for, it is also important to educate students about finding and evaluating information on the Web. The reference librarian's goal should be to teach students to evaluate and be critical of whatever sources they choose to use.

Satisfying Graduate and Faculty Clientele

Faculty and graduate students also rely heavily on the Web, albeit not exclusively. Because they are required to do comprehensive research, they also use traditional sources, such as printed reference works, periodicals, government documents, and archives. They understand the need to use both electronic and print resources. They use the library



website to find scholarly articles, search bibliographic databases, locate brief information such as a bibliographic citation or an address, and to search other libraries' online catalogs. They continue to use print reference resources to locate more elusive, older information or foreign language materials. Academic libraries must continue to provide these user groups with many research options, all of which reference librarians must be able to use, recommend, and explain.

Time is often a critical factor for graduate students and professors. These clients already have complex schedules, including teaching, research, writing, exams, committee work, and office hours, and they may be under the additional pressure of deadlines for publication or external funding requests. Even more than undergraduates, they often need items immediately, and rely on reference staff to deliver. Armed with computers and reference books, librarians can usually help meet their needs—although not always quickly or easily. The situation can be especially frustrating if users have little familiarity with the library's collections and online resources, or don't want to learn how to find something on their own.

Empowering Users

When it became available twenty-five years ago, academic librarians embraced online database searching. At the same time, they understood online searching to be too complicated for users, and feared that if the patrons did their own searches the results would be unsatisfactory. Further, because of the expense of online searching (charged by the minute and per citation), there were costs to consider. In those days, librarians typically went online after an interview with the user—and after preparation using database thesauri. Although getting good results took both time and skill, online searching was conducted in this manner, and functioned quite well, for about a decade.

Little by little, automated systems and databases became easier to use, costs declined, and the library's clientele became more knowledgeable. When databases appeared on CD-ROM, librarians began, gradually and reluctantly, to allow students and the professors to do their own searches. However, the library party line continued: Users' searches aren't very good because they really don't know what they are doing.

These days, students and faculty do almost 100 percent of their own searching and librarians no longer worry (too much) about the quality of the results. What has changed is the role of the librarian, who has moved from interviewer and searcher to teacher and facilitator. Now reference staffs focus on teaching, preparing guides to searching, creating web pages with links to electronic resources, and evaluating and negotiating prices for online products. Most importantly, librarians sit beside students and help them choose the appropriate online resources for their assignments.

Library Instruction

A continuing, central role for reference librarians is teaching patrons how to search for information in library collections. In the not-too-distant past, this activity focused on using the card catalog to find books, and printed indices to track down journal articles. Instruction sessions often consisted of uninspiring lectures, accompanied by printed

flyers, bibliographies, and guides. For the most part, students were bored—and even the instruction librarians were sometimes less than enthusiastic.

Computers, online resources, and the Web have altered dramatically the nature of bibliographic instruction. Now we teach searching in both real and virtual collections. Sessions are less scripted, and laptops and video projectors are employed to demonstrate the use of library collections and computerized reference tools. Happily, students are much more interested and willing to learn because they love the Web. They approach any hands-on session willingly, even enthusiastically. Instead of handouts, librarians are now developing electronic pathfinders, guides, and tutorials, which students access via library web pages and can consult at any time of day or night. The advantage for librarians is that the material can be updated easily, and enhanced with graphics and hot links.

The downside of technological progress, as stated earlier, is that the rapidly growing number of databases and full-text resources make it difficult for librarians to be experts and, therefore, to demonstrate varied online resources effectively in brief instruction classes. Further, the databases themselves are in flux and techniques for their use must be continually revised. As a result, rather than showing students all possible search options and keystrokes, librarians now approach bibliographic instruction by teaching general themes, search concepts, and strategies that can be applied to any number of online databases. No matter what the strategy, however, librarians should seek creative ways to inform, educate, and motivate students.

Library instruction can be a “Catch-22” situation for reference staff. If extensive and intensive teaching is the goal, librarians must balance that against the value of spending time at the reference desk, working with patrons, answering questions, and teaching research skills one-on-one. However, highly successful library instruction can reduce the need for basic reference service, or at least create a situation in which student assistants can provide routine help to their peers, allowing professional staff to focus on more complex questions.

Information Literacy

In the late 1990s, bibliographic instruction underwent a transformation as librarians looked at the subject more philosophically in order to make it more meaningful, more effective, and more closely aligned with academic programs. The resulting concept, information literacy, defines library instruction's ultimate goal as producing college graduates who will be able to locate, evaluate, and utilize information in their chosen professions. Developing information literacy skills is especially important for students in disciplines where the ability to find relevant, accurate information quickly is critical to success—for example, in business, journalism, or engineering. The new role of the instruction librarian, however, is to educate all users to thrive in an information-rich, connected world—to be information literate citizens. Common ways of approaching this objective are to conduct a formal class for credit, perhaps an hour or two each week, or short informal sessions adapted to the curriculum. Whatever the approach to instruction, the information literacy movement is stimulating reference departments to reevaluate, redesign, and rethink methods and goals of instruction for the benefit of the student.



Coaching Faculty and Students

An important but sometimes neglected part of bibliographic instruction is helping faculty prepare useful and meaningful library assignments for their students. Far too often, library research projects are poorly designed or conceived. Many require that all students use the same printed sources; others are simply too difficult and time-consuming for both students and librarians. The Web has facilitated two new types of poor library assignments: those in which the student may not use the Internet at all, and those that require only the Internet be used. Both scenarios waste time and, worse, result in little learning or retention. One response to such dilemmas is for librarians to present faculty workshops on how to conceptualize and assign relevant library projects. Teaching faculty who take advantage of such opportunities benefit greatly, as do their students. The biggest challenge, however, is convincing the instructors to take part.

Both faculty and students also need to understand the difference between accessing the reliable, comprehensive databases for which libraries pay thousands of dollars, and the myriad sources available on the Web that may or may not be dependable. When a professor tells a class, “Don’t use the

Web for this research assignment,” some students take this literally and avoid using the select electronic resources on the library’s home page. Librarians must regularly explain to students and faculty the nature and value of online resources, through biblio-graphic instruction sessions, library newsletters, and one-on-one.

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New Responsibilities

Librarians often feel that they now must be Superman or Wonder Woman—that is, expert in a multitude of areas apart from carrying out the traditional reference responsibilities of 1) answering questions, 2) teaching classes, 3) doing bibliographic searching, and 4) creating guides to the library’s services and collections. As I pointed out earlier, these roles have been expanded, changed, or even eliminated by the computer and the World Wide Web.

Micro- and Macro-Managing Information Technology

The reference librarian must be computer literate and capable. In 2001, this means much more than word processing and doing online searches. It means troubleshooting minor hardware problems, being proficient with operating systems, and using a wide variety of software packages including databases, spreadsheets, and web page creation software. Reference librarians are also “printer wranglers”—filling paper trays, clearing paper jams, checking cable connections, directing jobs to the proper printer, changing ink cartridges, and so on. This mundane work is time consuming and not exactly professional. Nevertheless, good service depends on it.

Because we must often recommend which equipment to purchase for the department, reference librarians must also be knowledgeable about various types of computers, CPUs, printers, monitors, scanners, etc. This requires reading computer journals, subscribing to listservs, visiting web sites, and developing working relationships with computer center personnel—besides using the equipment on a daily basis.

In addition to understanding hardware and software issues, reference librarians need to have a solid knowledge of the Internet and World Wide Web. This involves familiarity and skill with using search engines, particularly the ability to select the most appropriate search engine to answer a given question. It may also mean designing or updating web pages, and selecting online ready reference resources such as dictionaries, thesauri, directories, and bibliographies to provide twenty-four hour self-service reference help for users at home or in dormitories.

The utility and effectiveness of reference websites are an important consideration. Reference librarians should focus on making web pages easy to use, especially for the novice. Such activity frequently involves working with systems staff to redesign user interfaces and create online help. Online help might be anything from interactive tutorials to scope notes for databases, or providing direct email to reference librarian for assistance. To facilitate access to the most critical sources, library web pages should be logically arranged, simple to use—even customizable by users. Reference librarians have a great deal to contribute to library web page design because their knowledge of the resources and, more importantly, of what problems students and faculty have in using them. Participating in the challenging work of library web page design is absolutely essential if the patrons are to be well served.

Acquiring Electronic Information

Another core duty of the 21st century reference librarian is testing new database products and full-text sources. This work includes making arrangements for onsite vendor demonstrations or database trials, planning and teaching staff training sessions, and carefully studying databases in both CD-ROM and online format to discern and evaluate differences, advantages, and disadvantages. Reference librarians must review all aspects and characteristics of each new product, determine how easy it is to use, and look for limitations and problems of access and use.

Perhaps the greatest new responsibility in the past half-decade is the need to pay close attention to the business side of reference librarianship. First and foremost, this involves protecting the library's and the users' interests as we negotiate database contracts. Instead of merely purchasing a database and using it, as we did with printed indices, we must review the database licensing agreement carefully before making a decision. In this regard, we must look for potential problems related to restrictions on access, use, and reuse of data and full-text. If contract provisions are unacceptable, librarians must consult with library administration and the institution's legal staff in an effort to propose different language to the vendor. Finally, reference librarians must also keep track of use statistics, monitor costs, and reject little-used or superseded products. We must work with consortia partners in selecting databases for group



purchase and in negotiating group discounts. In short, some of our resource selection tasks are now dramatically different from those of the 1970s, 1980s, and early 1990s.

Building Collegial Relationships

Outside of the reference department, librarians now work closely with colleagues in technical services, especially in cataloging, to enhance access to electronic resources. With much of the retrospective conversion of print resources completed, many libraries are turning their attention to placing nontraditional resources in their online catalogs. Databases, electronic journals, websites, and ebooks must be cataloged for effective retrieval. As in the case of building a better web interface and creating online help, reference librarians can play a valuable role. Working with catalogers, we can provide insight into how library patrons use the online catalog, how they interpret what they find, and what kinds of problems they encounter. Having quality bibliographic access to all library materials is an absolute necessity in 2001, and we can help catalogers achieve that important goal through collaboration, focusing staff, and user input.

Reference librarians are interacting with academic colleagues in new ways, too. Besides helping with research or suggesting improvements for library assignments, many librarians are working with faculty on information literacy and curriculum development projects. Many librarian-professor collaborations have developed study guides and class presentations, especially in disciplines where research skills are critical to student success. In such cases, the librarian is a valued partner in writing curriculum, identifying resources, and teaching parts of the course. Because librarians are taking more active roles in teaching, faculty are becoming increasingly aware of the significant contributions that reference librarians make as a part of the university's educational mission.

Reference librarians may also work with faculty to create new forms of scholarly communication, to enhance access to knowledge, and to facilitate faculty research and scholarship. The librarian's research skills, knowledge of print and electronic resources, ability to search and use the Internet in meaningful ways, facility with creating web pages, and understanding of copyright and intellectual property issues—all position reference librarians to contribute to the university's success in a variety of ways, while enhancing their own status in the institution.

Networking and Information Delivery

Finally, we are also taking on new responsibilities in the areas of interlibrary loan and document delivery, thanks to increasing availability of full-text resources. Reference work traditionally has included helping users to obtain books, journal articles, microforms or other materials through interlibrary loan. In 2001, this work involves not only interlibrary loan, but also full-text electronic resources and a whole range of document delivery issues. Years ago, the interlibrary loan process could be lengthy, especially if an item were esoteric. Fortunately, the computer has also revolutionized interlibrary loan, making it easier to provide users with what they need, in relatively short amounts of time.

Reference librarians may supervise or participate in ILL, verify citations, determine the location of material, and even help the user fill out the request form. In some cases, librarians also attempt to determine if there is an alternative to interlibrary loan, for example, if a full-text article available via the library's home page or on the World Wide Web.

When reference librarians are involved in or supervise interlibrary loan, they occupy both a virtual and a consortial world. The library director often asks these librarians to represent the library in resource sharing discussions, planning, and making decisions at the local, state, national, and international level. Consortial agreements have a positive impact on interlibrary loan and thus on service to users, especially faculty and graduate students. Interlibrary cooperation often involves priority processing among network members, messenger service for rapid delivery of books and microforms, waiving of fees, and other benefits. Some library cooperatives now offer patron-initiated service, streamlining procedures and reducing staff workload. Document scanning and delivery systems utilizing the Internet (for example, Ariel and Prospero) have hastened turnaround time and improved document image quality. Reference librarians are involved in all these aspects of interlibrary loan and much more. The effort demands strong organizational skills, commitment to service, and a willingness to work cooperatively. Beneficial consortia relationships can bring problems, too, primarily when a library belongs to more than one group, as most libraries do. If three consortia all require priority processing, which consortium's requests will receive the highest priority? Just keeping rules, regulations, and guidelines straight for several interlibrary loan networks can be challenging.

Conclusions and Recommendations

The 21st century library world is an exciting place for reference librarians. Challenges, frustrations, and problems vie with tremendous satisfaction and service. With computers and the Web, proper training, and hard work, librarians can help and teach users of the

With computers and the Web, proper training, and hard work, librarians can help and teach users of the academic library in ways that were unimaginable just a few decades ago.

academic library in ways that were unimaginable just a few decades ago. Not surprisingly, we are finding that we must constantly reinvent ourselves if we are to survive and prosper in this new environment. We must be flexible, enthusiastic, energetic, and willing to learn and to change. We need creativity, imagination, and a positive attitude. We have to be computer experts, excellent

communicators, and able supervisors. In larger reference departments, some of the numerous duties described above are distributed among many people, but in a small or medium-sized university library, one or two persons shoulder the load.

Discovering and meeting users' information needs remains foremost in every reference librarian's mind, and—despite the Web and ever more-sophisticated search engines, exploding numbers of online databases and full-text, and increasingly computer-



savvy college students—reference librarians are still needed. Search engines cannot be substituted for a trained reference librarian, who can teach, filter, encourage, and recommend. As such, the reference librarian's role will continue to expand in scope and importance, as it will also continue to change.

What, then, can a librarian do to ensure outstanding service in the reference room in the year 2001 and beyond? There are, of course, many answers to this question depending upon the local situation and resources. Below are a few specific ideas to keep reference departments up-to-date and responsive. The reader may add other recommendations. Whatever approach to reference service you take, it is essential to remember that status quo is not good enough to meet the changing expectations, needs, and demands of library clientele.

1. Reference librarians should teach users how to be good web searchers. A Yahoo! or AltaVista search that returns 10,000 websites is not a good search. Librarians must show students how to formulate sound searches, both basic and advanced, and teach them how to select the most appropriate search engine for the question at hand.
2. Reference web pages should be more useful, with less emphasis on graphics and more emphasis on organization and access. Databases and full-text materials should be easy to locate and utilize by novices. The number of sites linked should be managed. Libraries should implement MyLibrary or similar software to allow users to tailor local web resources to their own needs.
3. Librarians should know the patrons better in order to serve them better. Regular user studies must be undertaken to develop profiles and identify needs. Staff should take the time to talk to students and faculty, never assuming that the library knows what they want and need. Most of all, suggestions and complaints must be followed up. Listening with no action will lead to negative attitudes, a perception of nonresponsiveness, even cynicism—exactly the opposite of what the library is striving to achieve.
4. Reference service should be promoted to the campus community, regularly and aggressively. The department should develop a marketing strategy and advocate library resources and services across campus. Librarians should make presentations at faculty senate and student government meetings and other venues. The academic library has a great product that should be promoted.
5. The library should seek ways to add value to traditional library services. Risks must be taken as new methods of responding to the users' needs are tried. Examples of innovative services are links to stacks maps from the online catalog, twenty-four hour reference (virtual or real), online tutorials and video tours, email reference, electronic reference books, and so on.
6. Reference librarians must keep pace with changes in technology and developments in electronic library resources. The library must work in tandem with academic colleagues, especially the technology experts at the campus computer center, to effect change. Otherwise, the library will be left behind.

7. With increasing demands placed on librarians' time, both at and away from the reference desk, innovative ways to provide reference desk service must be sought. For example, well-trained student assistants, backed up by librarians, can handle routine reference work, especially during lunch hours, late nights, and weekends. Students are more comfortable approaching peers with questions, and libraries should take advantage of this fact to improve both service and image. However, thorough training and ready back-up are essential for success.
8. The reference desk must become less of a barrier. In fact, the reference desk could be made very small or even eliminated, or users could be invited to come around to the staff side of the counter. But, if there is a reference desk, librarians must also get up and out from behind it and be with the users. Librarians should go to the computers in the reference area and ask the students if they need help. In short, reference staff must be more proactive.
9. Reference librarians should visit academic departments regularly, bringing faculty up-to-date on library services and collections, and offering to help the faculty in their research. Where library systems are centralized with few or no branches, librarians are more accessible and visible to their constituencies if they can arrange to work a few hours a week from offices in their academic departments.
10. Finally, library reference staff should enthusiastically accept change and have fun. Academic library reference work can be challenging, satisfying, and exciting. If we approach it with enthusiasm and innovation, the winners are the users.

The author is the University Librarian at Texas Christian University in Fort Worth, Texas.