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A Historical Overview of Internet Reference Services for Distance Learners

A Historical Overview of Internet Reference Services for Distance Learners

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The advent of library services and collections on the Internet revolutionized reference services to students enrolled in distance learning programs. Prior to the Internet, reference librarians who supported distance learning programs had few methods, and many of them costly, to provide the equivalent library services advocated by the ACRL Guidelines. Through the Internet, these librarians were able to approximate the services and resources that had always been available to students who came into the library. This paper describes the development of reference services on the Internet in a variety of libraries that support distance learners.

Keywords:

Chat reference
Email reference
Digital reference
Virtual reference
Distance learning
Distance education
Off-campus library services

With the proliferation of colleges, universities, and even companies that offer courses and degrees in higher education through the World Wide Web today, it would seem that the concept of teaching students who are away from the home campus arose with the omnipresence of the Internet in our culture. Actually, distance learning in the United States dates back to shortly after the Civil War when correspondence courses originated. However, there is little in the library literature on library services for distance learners prior to 1970. In the 1970s, the establishment of open learning universities in many countries and in the 1980s the growth of distance education programs in traditional colleges and universities both precipitated a substantial growth in the literature about library services in support of distance education (Slade and Kascus 1998, 262).

In the 1970s and 1980s there were several ways in which distance learning library services provided reference assistance. One way was to negotiate contracts or set up memoranda of understanding with local libraries near where their distance students lived. Toll-free telephone and fax lines were another common approach. Students were encouraged to call the 800 number to talk to a dedicated distance learning reference librarian or be connected directly to the reference desk. Some distance learning programs set up branch campus libraries at established centers where several courses were taught. In addition, since library services to distance learning students were not always funded appropriately, a common practice was to simply refer students to local libraries in their home areas and hope for the best.

While some distance learning programs established separate library services to support their off-campus students, most did not. In the third edition of the *Off-Campus Library Services Directory*, 29 of the 161 respondents reported being a separate service dedicated to the needs of the distance students only (Casey and Cachero 1998, 91). The majority of library services supporting distance education maintained a reference department that was asked to balance the needs of traditional-aged, on-campus students who most normally came to the reference desk in person with distance students who were generally working adults in a compressed course who called or faxed in requests for reference assistance. Naturally students in distance learning programs turned to local libraries quite frequently for reference assistance and faculty teaching in distance programs tended to alter course expectations, planning more group projects and offering additional readings in course packs because they perceived that their distance students did not have the access to library services that on-campus students did.

Central Michigan University (CMU) developed Off-Campus Library Services (OCLS) in 1976 to support exclusively the needs of students in its burgeoning five-year old distance learning division. From the beginning, OCLS had reference librarians based in the main campus library in Mt. Pleasant, as well as in major regional offices throughout the U.S. Throughout the 1980s and 1990s, there were two librarians based in the main campus library, two in the Detroit office and two in the Washington, DC office. By 2000 OCLS reorganized the field offices and located one librarian in each of the CMU offices in Detroit, Washington, DC, Kansas City, and Atlanta.

Although there is a small amount of face-to-face reference service in the field offices, the majority of reference work done historically at OCLS was by toll-free telephone. The most common type of reference assistance, which has remained constant throughout the history of OCLS, has been help in finding references to books and articles for research papers. At OCLS, as at many library services that supported distance learning students prior to easy access to the Internet, CMU students were helped with defining a topic and developing a list of controlled vocabulary if they indicated that they preferred to conduct their own research in a local library, or were mailed lists of references to their topics compiled by an OCLS librarian, if that were their preference.

Easy access to the Internet revolutionized libraries but arguably was more welcomed by distance learning librarians than by anyone else. Now their students would truly have equivalent access to many of the same resources that on-campus students did, as stipulated by the *ACRL Guidelines for Distance Learning Library Services* (ACRL 2003). Emphasis was placed on making online databases available to off-campus students. In 1995, the main criterion that the CMU Libraries used to choose an online database vendor was that access would be as easy for the off-campus students as for those on campus.

In the mid 1990s as the concept of the digital library swept higher education, the emphasis seemed to be far more on access to digitized information than on access to information professionals. Our first priority at the beginning of the digital library era was to extend the collections of the library out to our off-campus students.

Defining the digital library is an interesting, but somewhat daunting, task. There is no shortage of proposed definitions. One would think there would be some commonly accepted and fairly straightforward standard definition, but there does not appear to be. Rather, there are many. And one common thread among all these definitions is a heavy emphasis on resources and an apparent lack of emphasis on librarians and the services they provide. (Sloan 1998, 118) One would almost get the impression that the service tradition of the physical library will be unnecessary and redundant in the digital library environment. (Sloan 1998, 117)

Digital reference advocates say that patrons don't want to deal with flesh-and-blood librarians. The reality is more complicated than that. The reference people we know are open, discreet, knowledgeable, and committed guides to knowledge in all forms; and it's often the digital equipment our patrons seem to despise. Nevertheless, librarians have to take a run at some form of digital reference, not because it is comparable to face-to-face service, but because we have to keep our oar in the stream and a more inclusive model for reference makes sense. If librarians are players, delivering better quality service and better answers to their local patrons than Web-searching "experts" sitting at their terminals ..., then maybe libraries can cement their place in the postmodern world. (Cameron and McCarty 2001, 9)

For the average person, there seems to be a growing belief that having access to digital resources on a 24/7 basis is enough. Reference librarians are still thought of as sitting behind a desk in a physical library and since information online is easy to find and easy to use, there is little need for them to move out from behind the desk into the digital world. Reference librarians, however, understand that for most lay people, conducting effective research in a digital library is at least as difficult as conducting research in a print-based library and they have been offering Internet reference assistance for years.

The professional literature contains an abundance of articles on various forms of digital reference that often include discussions about the important role it plays in today's libraries and the need for engaging in new technologies. Some of the discussion centers on the difficulties inherent in trying to conduct a reference interview in an electronic environment rather than face-to-face (Abels 1994; Abels 1996; Schilling-Eccles and Harzbecker 1998). Some discussion centers on the types of questions to answer, and how limits should be set up (Fishman 1998, 4). Internet-based reference is an enormous change from the way that academic reference librarians have been operating for most of the history of the profession. For most reference librarians, the ideal way to help a patron is face-to-face, where all of the different aspects that go into successful communication are in evidence. Moving to a different method of communicating with patrons has caused a great deal of trial and discussion in the traditional academic library. However, in the world of distance learning librarianship, the ability to communicate with patrons who were at a distance, in other formats than phone and mail, quickly revolutionized the

reference services in the late 1980s and early 1990s as the Internet became available to the average person.

When the concepts of digital or virtual or Internet reference are discussed, most people tend to think of the most common: email reference, video conferencing reference, and chat reference. There are also some other forms of digital reference that surface in the literature and in discussions. One is Internet reference that is offered through the World Wide Web. In the third edition of the *Off-Campus Library Services Directory* (160-162), 147 of 161 respondents reported using the World Wide Web as a method for providing reference services to off-campus students. Since this coincides exactly with the number who report providing email reference in the same directory, it is reasonable to conclude that the WWW based reference referred to online reference request forms or “Ask-a-Librarian” services. Because the method of communication with those using Web forms is generally email, the discussion of this type of reference service will be rolled into the discussion of email reference to follow.

In addition, in some distance learning library services, access to online databases was considered a form of reference early on. Given that much of the reference assistance to distance learning students before the World Wide Web consisted of mailing custom-tailored bibliographies to students, the idea of making available online databases that students could search themselves was viewed as a type of reference assistance. When CMU began to offer dial-in and telnet access to four databases that were linked to the OPAC in the mid 1990s, the OCLS librarians did consider that we were extending

reference service to our students beyond the hours that we were available. The librarians at Monash University College Gippsland in Australia also considered that a dial-in service to some of the CD-ROM databases in their library in 1991 would extend their reference service beyond the hours they were available and would greatly speed up the response time for students who normally had to wait to receive search results by mail (Van Dyk 1992).

Email reference is probably the oldest continuous method of conducting reference on the Internet and is fairly universal today. In 1998, 147 of 161 respondents to the third edition of the *Off-Campus Library Services Directory* (158-160) reported using email as a method for providing reference services to off-campus students. This was a significant increase over those who reported using email for any service in the second edition of the same directory, where 27 of the 176 respondents reported supplying materials by email (Jacob 1993, 178) and 59 reported receiving requests for service or materials this way (Jacob 1993, 189).

One of the earliest examples in the literature of a library extending digital reference service to distance learning students is found at Indiana University (IU). In February 1987, a library service was launched through the Academic Information Environment, maintained by the IU computing center, which included reference services. Full time faculty and graduate students were given accounts to access the system (Copler 1989; Bristow and Buechley 1995).

The University of Alaska Fairbanks, which served students at five extended campuses and seven rural education centers throughout the state, started a library service for its distance students in 1989. By 1991, they were offering library service through email (Smith and West, 1991).

In the late 1990s, some states began developing library services to support distance learners statewide. One was the Kentucky Virtual Library (KYVL), which was developed in 1999 to support the Kentucky Virtual University, whose mandate was to promote distance learning in Kentucky. Reference service was available to distance learners by telephone and by email every day. “A large part of the service is handled completely electronically, e-mail to e-mail ...” (Moore, Knight, and Kinnersley 2001, 33). Reference librarians at KYVL developed a series of answers to frequently asked questions that they have in templates to send out electronically whenever needed.

In 1997, the state of Florida established the Florida Distance Learning Reference and Referral Center (RRC) at the Tampa Campus of the University of South Florida. Until state funding ceased in 2001 and the RRC was forced to disband, the librarians supported distance learners taking courses at any public institution of higher education in the state of Florida. Email reference was part of the repertoire from the beginning as well as technical knowledge of the Web sites of the public college and university libraries in Florida (Ault and Viggiano 2000).

OCLS began to use email for reference in 1993. The majority of CMU distance learning classes have historically been taught in compressed format in classroom locations, often in remote areas, in the U.S., Canada, and Mexico. One of the hallmarks of OCLS has been the guarantee that every graduate student and most undergraduate students would meet a reference librarian at least once during the course of a program when the regional librarian would come to class to teach library instruction methods during the required research class. Many of the classes were taught on military installations where students had email access earlier than the general population. Feedback received from students during library instruction classes was that they would like to receive database searches and other reference responses by email. Having recently concluded a study to determine the feasibility of sending databases searches by fax and deciding that most students did not yet have access to fax machines powerful enough to easily receive the amount of data we normally sent, we concluded that email might be a better way to send search results quickly.

As a result of the student feedback, OCLS created a departmental email account in 1993 that was publicized to off-campus students and faculty. Those students who had email access readily accepted the option to receive search results through email rather than mail. In addition to speeding up the time it took for students to receive research results, there was an additional benefit. OCLS librarians began to notice that in the cases of more difficult searches, they were able to refine their search parameters by emailing students several search strategies and some sample search results in order to get a clearer idea of what a student truly needed but had not been able to communicate effectively

during the reference interview over the telephone. In some ways, email reference was able to mimic in-person reference better than telephone reference was. By having the ability to send some possibilities for a student to choose from, the librarian was working through the search process with a student in a similar way to helping a student navigate a search through a database in the reference department.

In 1996, OCLS created a Web site with links to services and databases for the distance learning students. Included on the Web site was an “Ask an OCLS Librarian” button. It was originally named this way because the OCLS Web site was an adjunct to the university library Web site and we were making every effort to distinguish the OCLS service from the University library “Ask a Librarian” service. Initially when students filled out a web form they designated the CMU center where they were registered to take classes. Each of the centers was coded to fall into one of the three regional offices that housed OCLS librarians: campus library, Detroit, and Washington, DC. An email request derived from the form was sent to the email addresses of both librarians in the regional office that provided reference services to students taking classes at the given CMU center. Whichever of the two librarians was scheduled to be “on the reference phone” also answered the email questions that came in during that same shift.

Although email reference and web forms don’t always provide the best way to conduct a reference interview with a student, the OCLS librarians were generally satisfied that the format of the web form prompted students to ask their questions very succinctly. Students were informed that once the form was submitted they could expect

to receive an answer by email or a call from a librarian to clarify the question within 24 hours during the work week. The librarians found that they could answer most questions without having to call students. For their part, the students appeared to be very satisfied that they were able to ask for reference assistance at a time convenient for them and know that they would generally receive an answer quickly without having to take time out of their work days to speak to a librarian.

In 2000, OCLS reorganized and moved a librarian position from the Detroit and Washington offices to new offices in Atlanta and Kansas City. In addition, we centralized reference. Rather than calling librarians in the regional offices for reference assistance as they had historically, students were instructed to call the central 800 number in the OCLS office in the CMU library. Calls were then forwarded to the office of the librarian on reference duty. At the same time, an email reference account was created that could be accessed by all of the librarians. That email address was given out to students as one form of accessing reference assistance. In addition the web form was reprogrammed to send all email requests to the new reference email address. In turn, librarians began sending all answers to reference requests out through the reference email address. This had two major benefits: librarians could access searches sent by other librarians if they were following up on a question and email reference requests no longer sat unattended in a particular librarian's personal email account while he or she was out of the office.

In the mid to late 1990s some libraries began experimenting with reference assistance using video conferencing equipment. This was not a very successful means of providing assistance to distance learning students because the majority of students were accessing the Internet from home or work computers with slow dial-in capabilities. However, there are some accounts of libraries that used video conferencing technology with students at branches or centers. Emory University Libraries experimented with reference and instruction using video conferencing in 1995. The Centre for Business Information, which supported the Executive and Evening MBA classes at an off-campus site, set up equipment at that site. Librarians were available for ready reference, in-depth consultation, and training on databases. Users did not adapt to the system as readily as expected, partly because marketing was not strong and partly because there was a perceived lack of support from the administration (Pagell 1996).

In 1999, the Dean of Libraries at CMU offered to buy video conferencing equipment for both OCLS and the university library reference services department. After much discussion, OCLS decided against trying a method that required specific equipment of our students. Another thing that shaped our decision was the experience of the OCLS web master who had been using video conferencing technology to take part in meetings on campus from her office in Detroit. She found the quality of the experience to be so distracting that she went back to conferencing into the meetings by telephone. We thought that if the most technologically advanced of the OCLS librarians had difficulty with video conferencing, we would have many challenges trying to provide reference by that method.

Chat first began to appear in the distance learning library world in the mid 1990s although it became a more common method of providing reference assistance from 2000 on. One of the first accounts in the literature of a chat reference service to support distance learners appears in 1995. The librarians at Embry-Riddle Aeronautical University added a new Internet reference service to their established email reference service. They began to “sit in” on CompuServe forums set up for the university’s correspondence students. This allowed the reference librarians to answer reference questions that came up during the chat sessions and to build relationships with the students who continued to ask for reference assistance by phone or email after the forums (Young 1995).

During the 1997-98 academic year, librarians at Austin Community College (ACC) built two fully functioning computer classrooms, one in Austin and the other in rural Fredericksburg, Texas where ACC students were enrolled in a vocational Nursing program. The VTEL equipment allowed for conferencing through compressed audio and video over network and telephone lines. Among the services available was text chat with a reference librarian in Austin. The librarians also had scanners attached to their workstations so were able to scan appropriate print items that answered the students’ reference questions and to send them through to a printer in the computer lab in Fredericksburg (Tinnin, Buckstead, and Richardson 1998).

By 2000, chat software was being designed to meet the needs of library reference and instruction services. Some of the products on the market, such as LSSI and 24/7 software, offered both the ability to chat and to co-browse. Librarians could maintain a conversation with a student by chatting while simultaneously sending web pages to the student or taking control of the student's web browser and guiding him or her through the research process. This format allowed for a reference interview almost as good as one a librarian could conduct in person and was extremely well-received by distance learning library services.

Many case studies of distance learning library services using chat for reference started to appear in the literature in 2000. The Florida RRC was offering reference assistance using chat software in 2000 (Ault & Viggiano, 2000). North Carolina State University conducted a chat reference pilot, in which off-site students were included, in 2000 and implemented a full service in January 2001 (Anderson, Boyer, & Ciccone 2000). Maricopa Community College extended chat reference services in a pilot study to its distance learning students in 2001 (Witten 2002). A chat reference trial was conducted with off-campus students in the School of Nursing at LaTrobe University in Australia in 2002 (Porter 2003). Steven F. Austin State University in Texas set up a chat trial in 2003 for its distance education students (McDonald and Turnage 2003). Southeastern Louisiana University (SLU), which has been a member of a chat consortium since 2002, conducted an innovative chat reference pilot in 2003. SLU librarians set up dedicated reference chat sessions with Nursing students in their distance education program. The dedicated sessions were with groups formed by the professor to work on

projects together. The reference librarians provided reference assistance to the students as they were conducting research on their group projects (Guillot and Starr 2004).

At CMU, the OCLS librarians began discussing offering a chat reference service in late 2000. In 2001, in conjunction with the university library reference services department, OCLS purchased LSSI chat software. In the spring of 2002, OCLS librarians began to add chat reference sessions to the reference schedule on a limited basis. It was common to have no reference requests come in during a shift on chat reference. Because OCLS and the university library reference services department had shared the cost of the subscription to LSSI, we divided the week between the two services. The reference services department was getting a somewhat higher response from the on-campus students to the service but not one that was strong enough to continue to justify the drain on time of the librarians who had added chat reference shifts to all of their other duties. With the divided schedule, it was impossible to set up a consistent service that students could find every day at the same time.

In 2003, the OCLS and reference librarians met in a conference call to discuss ways to innovate the service in order to encourage higher use. For the first time since the establishment of OCLS in 1976, the reference librarians in both units decided to consider all CMU students one large group for the purposes of chat reference. Since all students using chat reference were remote, the differences in assisting them would be far less obvious than with traditional reference assistance to students on either side of the line. A regular schedule was set up for chat reference assistance and librarians from both

reference services and OCLS were scheduled for chat reference sessions that were advertised to all CMU library users.

During the 2003-2004 academic year, chat reference was available for 24 hours per week. Of the approximately 400 sessions that were logged as true reference sessions rather than practices during the year, less than 1/3 were from distance learning students. At the end of the academic year, the library decided to suspend chat reference until a stronger financial climate at CMU would allow for more staff to dedicate to the service or until the library is able to participate in a chat consortium.

Although chat has many characteristics that make it preferable to other avenues of reference assistance to distance learning students, it is not without its challenges. If a student comes into the chat session on a slow modem, the session can be impossibly slow or crash. If the librarian spends too much time looking for an answer to a student's question, the students have been known to leave because they are not sure if they have been abandoned or disconnected. Finally, chat reference is almost universally an add-on service. Reference librarians do not generally give up telephone reference or email reference to start offering chat reference. Normally they add another service into an already busy schedule and risk making mistakes and burning out.

As anyone knows, who has seen reference tools change rapidly from the card catalog and print indexes to the sophisticated web search engines of today, a better technology to provide reference assistance on the Internet is always "just around the

corner.” Steve Coffman, who has been a leader in the field of virtual reference, discussed in a 2001 article two technologies that are currently available but perhaps not as widespread or as sophisticated as we might need for universal acceptance right now. One is VoIP or Voice over Internet Protocol. “VoIP ... will allow the librarian and patron to hold a voice conversation on the same line they are using for the Web connection—meaning they will be able to browse the Web and talk back and forth at the same time, just as if they were on the phone” (Coffman 2001, 23). The other is the knowledge base. A good example of this, which is available now, is QuestionPoint, developed by OCLC and the Library of Congress. “QuestionPoint uses best-match routing from the Global Reference Network to find the institution best able to answer a question and builds and maintains a global Knowledge Base of previously asked and answered reference questions” (OCLC, 2004).

Separate library services for distance learners, such as CMU’s Off-Campus Library Services, are perhaps models of a bygone era. With the proliferation of the World Wide Web and the continued addition of web-based reference services, there is less and less to distinguish the working adult in a compressed class or online class, who needs reference assistance at 2:00 a.m. from the student in the dorm, five-minutes walk from the library, who prefers to work on his own p.c. and also needs reference assistance at 2:00 a.m. It will be interesting to experience the ways in which reference librarians will continue to add the human interface to the virtual library and extend our service to our remote users wherever they are.

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