FUTURE OF LIVE ONLINE REFERENCE SERVICE

Most experts agree that soon no one will have to enter a library to gain access to a computer, just as no one needs to leave home to access a telephone, radio, or television. In 1994, 24% of U.S. households had a computer; by 1998 that number was up to 42%. The Internet was used by 3 million people in 1994; that number had skyrocketed to 300 million people by early 2000. (*World Almanac,* 2001, pp. 569-571) If these trends continue, nearly everyone will soon have a computer at home, or have access to one. (Thomsen, p. 261)

When this happens the importance of live online reference will lie not in the computer and its related technology, but in the service provided by the librarians. As library consortium member services manager Elizabeth Thomsen writes, as more people have access to computers elsewhere "there will be less demand for public workstations. Libraries will be able to divert some of the time and energy currently dedicated to the logistics of managing the high demand for public workstations" to teaching and guiding users on Internet resources. (Thomsen, pp. 261-262)

Once the initial excitement about virtual reference subsides, the service should take its place within the library structure as a component of a network of reference services offered to users. Ultimately, reference services should blend approaches depending on the patron community and its needs. Within this changed reference world, reference librarians will need to be flexible and adaptable to accommodate the many ways users seek information.

Integrated Internet resources

The future Internet will combine voice, data, and sound in ways not yet imagined. The interaction among PC browsers and small portable devices, such as MP3 audio players, digital cameras, and handheld PCs, will continue to transform the Internet into a truly multimedia world. To keep up with these developments, libraries will need to upgrade their systems, both internally and externally. For in-house library workstations, upgrading will be virtual transformations, importing upgraded browsers, plug-ins, and sound capabilities through speakers, headphones, or other means. To communicate with patrons remotely, more advanced systems also will be needed, as discussed below.

In the future libraries will need to adjust to a changing generation of users who will want to download songs to their digital sound players, upload pictures from their digital camera, and sync (as in synchronize) their PalmPilots. For many libraries, this future is already here since many current library users expect such services in libraries and are disappointed when those services are lacking.

Improved software

Improved online reference software tools will accompanying changes to Internet access. As discussed earlier, breakthroughs in voice and video technology anticipated in the near future will transform the typing-based chat services into more user-friendly audio and visual environments. As these technologies develop, librarians must work closely with vendors to tailor products to meet library and user needs. Among the hoped-for improvements are products with built-in measurement tools, capabilities for easy transfer among libraries, standard subject heading application, and security and privacy enhancements. The development of such tools will proliferate following the promulgation of NISO standards governing digital reference service.

New tools, products, and services

With improved software, live online reference service should be enhanced by new online tools and products. Online reference service has already inspired at least one new reference tool: an online bibliographic citation tool called CiteRight. This new product allows a patron to produce a correctly formatted bibliographic citation in MLA, APA, and other styles.

CiteRight was created in response to an analysis of virtual reference records that showed that citation questions are the single largest type of inquiry on academic digital reference systems. As more data becomes available from online reference transactions, products like this one will surely follow.

Another service that may transform the online reference landscape will be the release of the next phase of the much-anticipated Collaborative Digital Reference Service (CDRS). This next generation of the Library of Congress/ OCLC online reference project will be called QuestionPoint. The changes to this hosted virtual reference service will include tools for providing local reference services as well as a link to the CDRS network.

QuestionPoint's local components will include AskA and chat functionality, a local knowledge base, and comprehensive reporting and administrative tools and will allow for seamless transfer from local systems into the global network. The system's extensive profile database of participating libraries and knowledge base of completed question and answer transactions will be valuable resources for the future of online reference.

Multilingual reference is another service expected to alter the online reference terrain. LSSI's Referencia en Espanol is a new service that places a Spanish-language icon on a library's Web site. When patrons click this icon, they will be directly connected with a bilingual reference librarian over the Web. Though this service is still in its infancy, plans already exist to offer service in other languages in the future.

The Library of Congress and OCLC also are investigating multilingual reference service. Library of Congress public service collections and program director Diane Kresh reports that the Library of Congress is conducting research on the hot six languages most in demand, with the hopes of offering such service before next year.