

Online Chat Reference

Survey Results from Affiliates of Two Universities

Reference librarians have converted a significant portion of library resources to electronic format and are now beginning to move the reference interview itself to the electronic environment. This study consisted of a survey carried out at two four-year public universities in the South Atlantic region. The survey inquired about university affiliates' awareness of, use of, and interest in reference services, with a particular focus on online chat reference (synchronous digital reference). Survey respondents reported strong prior use of face-to-face reference and a desire to use this service first when pursuing research topics. Awareness and use of the online chat reference service at each institution was comparatively low, but respondents forecasted the service would be among the most heavily used in ten years.

Statistics collected by the Association of Research Libraries indicate that the number of reference queries handled per professional staff member has gone down over the last two years. . . . One can only conjecture as to the reason, but my money is on the Internet.¹

Reference librarians are truly at a crossroads. They have already converted a significant portion of library resources to electronic format and are now contemplating moving the reference interview itself to the electronic environment. Online chat (virtual or synchronous digital) reference software now enables librarians and patrons to communicate in real-time and search together. Many librarians view the move to online chat reference as a way to boost shrinking reference numbers while reaching remote users; others do not believe an effective reference transaction can take place in a virtual environment. While librarians continue to debate, commercial interests have shown, through rapid growth in their numbers of users, that the public is ready for some degree of online reference help. The purpose of this study is to examine university affiliates' awareness of, use of, and interest in online chat reference and to explore chat-reference marketing strategies.

Online Chat Reference: An Untested Innovation

A review of the literature indicates that there are few scientific or experimental studies concerning chat refer-

ence. Francoeur, who recently wrote a state-of-the-field article about online chat reference, put it this way, "There has been little written yet about how to plan, begin, and maintain a chat reference service."² Of the 148 academic libraries now offering online chat reference services, only a handful have performed any preliminary or ongoing survey work to gauge interest in chat reference.³ While the use of chat reference continues to grow, the field of chat reference is still relatively young. At this point, librarians cannot even agree on a common term "for online chat reference—virtual, real-time, synchronous, live chat all coexist."⁴ Although asynchronous digital reference, mainly in the form of e-mail exchanges, has been in existence since the mid-1980s, synchronous chat reference has been around only about five years.⁵ In addition, it has only caught on in academic libraries in the last two to three years.

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Corey M. Johnson is Instruction Librarian at Washington State University in Pullman, Washington. This manuscript is a condensed version of a master's paper for the M.S. in L.S. degree, School of Information and Library Science, University of North Carolina at Chapel Hill (April 2002). Advisor: Barbara M. Wildemuth. *Submitted for review March 7, 2003; revised and accepted for publication November 18, 2003.*

Disadvantages and Advantages of Online Chat Reference

Reference librarians have many concerns about chat reference that affect patron awareness of and interest in this service and the marketing of such services. There is an anxiety among librarians that incorporation of an online chat-reference system may produce an unmanageable onslaught of patronage.⁶ Proponents of chat reference counter that when e-mail reference first came on the scene, everyone feared an onslaught of questions that never materialized. In addition, they claim that it is much better to try to figure out how to accommodate 40 to 50 percent growth than to explain a 10% drop.⁷ Fear of an onslaught clearly runs contrary to active marketing efforts that, in turn, negatively affects patrons' awareness of and interest in the service.

Some librarians are also concerned that chat reference will be less effective in meeting patrons' expectations for quick information. Many authors and studies are indicating that convenience is the patron's number one concern.⁸ Stories have circulated about patrons terminating sessions because of impatience and patrons unwilling to sit in electronic queues.⁹ Users have little tolerance for downtime and expect instant answers.¹⁰ Many reference librarians claim they cannot be as efficient because of the voice, eye contact, and facial expression cues lost in the electronic environment.¹¹ Both the Ready for Reference: Alliance Library System and the Reference and Undergraduate Libraries at the University of Illinois at Urbana-Champaign pilot studies in 2001 indicated that chat-reference interviews are longer on average than transactions at the reference desk.¹² Defenders of chat-reference services point to a study from Bowling Green University concluding that users are accustomed to the glitches and delays of online communication and that they just simply multitask while waiting for replies from librarians.¹³ It is possible to curb the likelihood of patron dissatisfaction by posting the average interview time on the initial-contact Web page. This idea is a part of a best-practices list from the AskA consortium.¹⁴ In addition, Lankes and Shostack have found that rapid response times are not always a patron's top priority.¹⁵ Finally, proponents of chat reference assert that reference service convenience involves more than response times within the reference interaction and that chat reference offers ease of communication across distances and outside regular library hours.¹⁶

Closely related to the length of reference interviews are the contents of the interviews themselves. Opponents of chat reference maintain that reference questions are becoming increasingly more complex and in-depth, a trend incompatible with electronic reference.¹⁷ Many academic libraries give potential chat-reference patrons an explicit statement asking them to only submit short-answer questions. As patrons ask more complex questions, it is likely that patron interest in chat reference will fade. Also, many librarians believe that users with detailed research questions

are poorly served by digital reference.¹⁸ Proponents of chat reference declare that, regardless of the reference service used, all reference interviews are taking longer than ever before and that librarians are consulting an increasingly larger number of quality resources.¹⁹ Proponents also state that, in the long run, patrons will realize that being provided with outstanding service and accurate answers will outweigh any experienced inconvenience.

The use of online chat reference transcripts is a controversial issue. Privacy concerns cause unease for those skeptical about chat reference. Many patrons fear that transcripts may be used in an invasion of privacy.²⁰ This idea is supported by a recent study citing that nearly one in five chat-reference users did not fill out a personal identification form.²¹ Janes notes that "considerably more data [are] collected regarding an inquirer's personal characteristics than [are] collected about the nature of the inquirer's query itself, and the use to which this personal information is put is not known."²² Librarians themselves are nervous that transcripts will be used unfairly for performance evaluation.²³ Also, there is anecdotal evidence to refute the idea that transcripts can effectively form the content of a database used to answer future questions.²⁴ Advocates of chat reference respond to these ideas by pointing out that simple confidentiality statements should be provided outlining for users if and how the transcripts will be used. The American Library Association has already made available confidentiality guidelines for e-mail reference.²⁵ Concerning the use of transcripts for performance evaluation, many librarians say it is just as likely that transcript analysis could be used to enhance the effectiveness of reference librarians as be used in an unjust manner. Tennant has found that librarians are more apt to feel confident about their ability to perform online reference after having reviewed sample transcripts.²⁶

Finally, many in the library world are leery of chat reference because it seems to be a symbolic approval of the negative aspects of online research. Moving reference services online tends to engender the current fast-food approach to scholarship and the Internet cut-and-paste mentality, which some fear leads to intellectual sloth.²⁷ Supporters of online chat reference stress the enhanced research capabilities created through the electrification of information, and they see librarians online as role models and facilitators of scholarship conducted with integrity.

Marketing Online Chat-Reference Services

While the advantages of online chat reference are many, unless the user population is aware of the service and its benefits, its capabilities will largely sit idle. Many librarians believe that, by-and-large, the library community is off to an unhealthy start concerning marketing of chat reference. Many librarians are putting up barriers against chat reference, some wanting to curtail advertising for fear of becoming

inundated with questions.²⁸ Many experts agree that, as libraries continue to change, marketing will be the key to their success or failure.²⁹ As for-profit information competitors advance in their assault on the traditional domains of libraries, intensive marketing will become more important than ever.³⁰ Lipow suggests an “in your face online reference service;” one that users will not be able to overlook.³¹ Soules urges libraries to be more visible, pro-active, results-oriented, and customer-focused.³² The idea of chat-reference collaborative efforts between libraries (public and academic) and commercial interests has also been suggested.³³

Online chat reference lends itself nicely to a marketing orientation that centers on community connections. Online chat reference has the potential not only to generate goodwill from taxpayers who now have much easier access, but also, in academic settings, to promote long-term relationships with alumni.³⁴ The community connections possible through virtual reference reinforce a library’s primary aim of facilitating life-long learning.³⁵ This is certainly one of the greatest promises of chat reference.

Literature Summary and New Avenues of Research

The incorporation of online chat-reference services at academic libraries is very new and yet some research and informed discussion are already underway. Much of the literature outlines the relative advantages and disadvantages of operating a chat-reference service. Many articles feature information about the types of patrons who are likely to gravitate toward the service and why people will see the service as beneficial. Only small bits of this information are based on awareness and interest data from library users and potential patrons. This study augments current literature and knowledge in the field by surveying university-library users and potential patrons about their awareness of and level of interest in chat reference.

Method

This study consisted of a survey carried out at two four-year public universities in the South Atlantic region. One of the institutions has 20,000–25,000 students and approximately 2,500 faculty members, while the other has 10,000–15,000 students and about 500 faculty members. Two schools were chosen to broaden the population size and to explore whether there were institution-specific characteristics affecting the survey results. The two particular institutions were selected because they had both launched their chat-reference services within the last year. The survey instrument, an e-mail message, consisted of eleven questions inquiring about university affiliates’ awareness of, use of, and interest in reference services, with

a particular focus on online chat reference (appendix). The surveys were distributed in the spring of 2002 to undergraduate students, graduate students, and faculty at each institution. Potential survey recipients were randomly selected from each campus’ directory. Because the students greatly outnumber faculty at each institution and, as a result, a random sample of affiliates would produce too few faculty to provide meaningful information, it was decided that 75% of the surveys would be sent to students and 25% of the surveys would be sent to faculty. The data analysis plan centered on examining the overall response frequencies from each school, assessing relationships between personal attributes and demographics, and evaluating respondent awareness of, use of, and interest in chat reference. Chi-square (χ^2) statistics are reported to indicate where findings are statistically significant across constituent groups. Results that were originally calculated separately for each institution were later combined, as the findings were remarkably similar at both.

Results

Surveys were sent to 967 people, with 50 surveys returned as undeliverable. The number of completed surveys was 276 (29%). Response rates were very similar for students (27%) and faculty (33%). A basic breakdown of the demographic characteristics of the survey respondents provided key foundational information for interpreting the survey’s results. Of the respondents, 47% (129) were undergraduates, 24% (67) were graduate or professional students, and 29% (80) were faculty members. Concerning the location of respondents’ residences, 22% (61) lived on campus, 38% (105) resided off campus and within five miles of their school, and 40% (110) lived five miles from campus or beyond. More specifically, 59% (47) of faculty members lived more than five miles from campus, 47% (60) of undergraduates lived on campus, and 98% (66) of graduate and professional students lived off campus.

Survey respondents were asked to mark which kinds of reference services they had ever used at their respective institution. The services were broken into four categories: face-to-face, telephone, e-mail, and online chat. Of the respondents, 73% (200) had used face-to-face reference, 28% (77) had used telephone reference, 20% (54) had used e-mail reference, 3% (9) had used online chat reference, and 21% (59) had not used any service.

Of the 276 survey respondents, only 3% (9) reported having used online chat reference, a number too small to reliably identify characteristics of users. Face-to-face reference did not significantly vary between university affiliates as about two-thirds to three-quarters of faculty members, graduate and professional students, and undergraduates all reported having used this reference option. Concerning telephone reference, faculty were more likely to have

utilized the service with 59% (47) having used it, while only 13% (17) of undergraduates and 19% (13) of graduate students had used it ($\chi^2 = 53.734$, with 2 df, $p < 0.001$). Thirty-five percent (28) of faculty, 21% (14) of graduate students, and 9% (12) of undergraduates had used e-mail reference ($\chi^2 = 20.574$, with 2 df, $p < 0.001$) (table 1).

Because online chat reference is a relatively new technology even outside the library context, respondents were also asked whether they had ever chatted online in real-time. Those who had were expected to differ in their use of library technologies as well. The undergraduates had chatted online at a rate of 94% (121), graduate students at a rate of 70% (47), and faculty at 38% (30) ($\chi^2 = 74.460$, with 2 df, $p = 0.000$). Both having used telephone and e-mail reference were related to whether or not a person had ever chatted online. People who had never chatted were more likely to have used telephone reference (47%, or 36) compared to people who had chatted (20%, or 39) ($\chi^2 = 20.924$, with 1 df, $p < 0.001$). Similarly, people who had never chatted were more likely to have used e-mail reference (33%, or 25) compared to people who had chatted (14%, or 27) ($\chi^2 = 13.097$, with 1 df, $p = 0.003$) (table 2).

In an additional question, respondents were placed in a situation where they had decided to get reference help with locating materials for a research project. They were asked which one of the four options for reference service (face-to-face, telephone, e-mail, or online chat reference) they would choose first. Overall, 66% (174) indicated that they would choose face-to-face reference first. E-mail reference was a distant second at 20% (53), and telephone and online chat garnered 9% (24) and 4% (11) respectively.

Concerning three of the four reference services, people's preference for choosing a future service was related to what they had used in the past (face-to-face: $\chi^2 = 18.528$, with 3 df, $p = 0.003$; for telephone: $\chi^2 = 31.579$, with 3 df, $p < 0.001$; for e-mail: $\chi^2 = 13.052$, with 3 df, $p = 0.005$). Those who had actually used face-to-face reference were more likely to have chosen face-to-face as the service of choice for the scenario. The same relationship was true for the use of and preference for telephone and e-mail reference, though face-to-face reference was the most popular service selected in the scenario regardless of what reference services had been used in the past. Of the nine people who reported having used online chat reference, four

chose face-to-face reference in the information-need scenario, two chose telephone reference, two chose e-mail reference, and one chose online chat reference. It is interesting to note that only one of the nine having used online chat reference would choose to use it again in the scenario.

The first choice of respondents for a reference service was compared across undergraduate, graduate, and faculty status, the distance they lived from the university, and whether they had ever chatted. The only relationship to generate a significant association was undergraduate, graduate, and faculty status ($\chi^2 = 37.355$, with 6 df, $p < 0.001$). Undergraduates were more likely than the graduate students or faculty to choose face-to-face reference as their first choice. Both undergraduates and graduate students were not nearly as apt to choose telephone reference as faculty members. In addition, both the faculty and the graduate students were more likely to have chosen e-mail compared to the undergraduates (table 3).

After asking respondents about the service they would choose first, the survey asked which of the four reference services they believed would be the most heavily used in ten years. Respondents predicted that e-mail reference would be the most heavily used service. E-mail reference constituted 42% (112) of the responses, online chat reference 36% (94) of the responses, face-to-face reference 19% (50) of the responses, and telephone reference 3% (8) of the responses. Predictions of the most popular service in ten years were associated with undergraduate, graduate, and faculty status ($\chi^2 = 11.950$, with 6 df, $p = 0.063$). Whereas undergraduates and graduate students were equally likely to think e-mail or

Table 1

*Use Of Reference Services by University Position Status
(Number of Respondents/Percentage)*

	Undergraduate student	Graduate or prof. student	Faculty member	Total
Face-to-face reference				
Yes	88/68.8%	49/73.1%	63/78.8%	200/72.7%
No	40/31.3%	18/26.9%	17/21.3%	75/27.3%
Telephone reference				
Yes	17/13.3%	13/19.4%	47/58.8%	77/28.0%
No	111/86.7%	54/80.6%	33/41.3%	198/72.0%
E-mail reference				
Yes	12/9.4%	14/20.9%	28/35.0%	54/19.6%
No	116/90.6%	53/79.1%	52/65.0%	221/80.4%
Online chat reference				
Yes	2/1.6%	3/4.5%	4/5.0%	9/3.3%
No	126/98.4%	64/95.5%	76/95.0%	266/96.7%
Used None				
Yes	35/27.3%	15/22.4%	9/11.3%	59/21.5%
No	93/72.7%	52/77.6%	71/88.8%	216/78.6%

chat would be the most important reference service of the future, the faculty clearly saw e-mail as being more popular than chat (57%, or 41 for e-mail compared to 22%, or 16 for chat) (table 4).

There was a strong relationship between which service people chose in the research scenario and which they selected as the paramount service in ten years ($\chi^2 = 48.375$, with 9 df, $p < 0.001$). The people who selected face-to-face as their first option in the research scenario were more likely to think face-to-face reference services will be the premier service in ten years compared to those who personally selected any other reference services first. Those who selected online chat in the research scenario, though there were few of them, were more likely than others to think online chat would be the most popular service in ten years.

Table 2

*Use of Reference Services by Online Chat Experience
(Number/Percentage)*

	Those who have chatted online	Those who have not chatted online	Total
Face-to-face reference	137/69.5%	62/81.6%	199/72.9%
Telephone reference	39/19.8%	36/47.4%	75/27.5%
E-mail reference	27/13.7%	25/32.9%	52/19.1%
Online chat reference	6/3.1%	3/4.0%	9/3.3%

Table 3

*First Choice for Reference Help with a Research Project
by University Position Status (Number/Percentage)*

	Undergraduate student	Graduate or prof. student	Faculty member	Total
Face-to-face reference	96/76.8%	43/65.2%	35/49.3%	174/66.4%
Telephone reference	3/2.4%	3/4.6%	18/25.4%	24/9.2%
E-mail reference	20/16.0%	16/24.2%	17/23.9%	53/20.2%
Online chat reference	6/4.8%	4/6.1%	1/1.4%	11/4.2%

Table 4

*Service Predicted to Be Most Heavily Used in Ten Years
by University Position Status (Number/Percentage)*

	Undergraduate student	Graduate or prof. student	Faculty member	Total
Face-to-face reference	23/18.1%	15/23.1%	12/16.7%	50/18.9%
Telephone reference	4/3.2%	1/1.5%	3/4.2%	8/3.0%
E-mail reference	46/36.2%	25/38.5%	41/56.9%	112/42.4%
Online chat reference	54/42.5%	24/36.9%	16/22.2%	94/35.6%

Because chat-reference services are so new, it was of particular interest whether respondents were aware that their academic institution offered online chat reference before they took the survey. Respondents were aware at a rate of 15% (41). Those respondents who answered in the affirmative were asked a follow-up question inquiring about the source of their knowledge. Twenty-seven percent (11) reported the library Web site as the source; 10% (4) named a friend, relative, or peer; 7% (3) reported an electronic discussion list or e-mail announcement; 34% (14) reported a library instruction class; and 22% (9) marked "other" on their surveys. It is important to delineate the sources contained in the "other" category because it received the third largest tally. Sources cited here were based on information from nine people. Five of the nine cited classroom-related sources: one faculty member learned from his or her students while in class, and four students mentioned the classes where they became aware of their institution's online chat-reference service. The remaining sources from the other category included newsletter announcements and printed cards in campus computer labs.

Respondents predicted the level of human help needed to conduct research in the future through their choice between two sentences describing the future. The first sentence was: "As technology makes more information accessible, people will need *less* human help in doing research for their papers and projects." The second sentence was: "As technology makes more information available, people will need *more* human help in doing research for their papers and projects."

These two value-laden statements required respondents to choose one of two competing and distinctive outcomes for the future. Sixty-nine percent (188) of the total number of survey respondents predicted a future of increased information accessibility requiring less human help, while 31% (86) forecasted a future where people will need more human help as a result of greater information availability.

At the end of the survey, people were invited to offer any comments. Forty-eight people or 17% of the total survey pool made comments. The comments became primarily a venue where people provided their overall assessment of the value of online chat reference. Many people gave online chat reference positive strokes. Several people described the

service as having great promise and potential, especially for young, computer-savvy undergraduates. A few mentioned its benefits concerning time and distance. One person wrote that it saves time and travel, another noted how it could be used in a pinch after a long period of procrastination, and another said she would start using the service because she lives four hours from campus.

There were also a number of comments that illustrated people's skepticism about chat reference. People expressed doubts about whether or not the service would catch on, and three noted it would only be useful for short-answer questions, not focused research pursuits. The preference for face-to-face reference expressed in the multiple-choice portion of the survey continued in the comment section. Five people mentioned face-to-face reference as the most helpful service. One person stated that many people do not have computers; another wrote that face-to-face reference is the best for complex questions; and one requested that chat reference not ever replace face-to-face reference. In addition, in-person reference was favored because so many communication cues are lost in online communication.

Beyond comments directly about online chat reference itself, several people made more general comments indicating a less-than-bright future for reference services as a whole. A couple of people asserted that with hard work one will be successful—and that it is important to “find out for yourself,” not seek the aid of reference librarians. Two people cast a gray cloud on online chat itself. One said that chatting was only for social communication and another noted that this communication medium breeds confusion.

Comparison of the Two Universities

When focusing on the basic demographic attributes of respondent pools from the larger university (20,000–25,000 students) and the smaller university (10,000–15,000 students), there were two primary divergences. The first difference, though it is not statistically significant, concerns the percentages of undergraduate students, graduate students, and faculty members from each school. The smaller-university sample had a lower proportion of undergraduate and graduate students and, consequently, a higher proportion of faculty members ($\chi^2 = 3.155$, with 2 df, $p = 0.206$). The second area of notable difference was the distance respondents lived from campus. When compared to the larger university, the smaller-university respondent pool had less students living on or near campus, and more living beyond a five-mile radius surrounding the school ($\chi^2 = 30.693$, with 2 df, $p = 0.000$). The two most distinguishing differences between the two schools in an otherwise very similar set of findings were that the smaller-university respondent group had more faculty members and generally lived farther from campus.

Although the demographic variations of the last paragraph were notable, they did not create an appreciable difference in the outcomes of any of the opinion-oriented questions of this study. In fact, the widest disparity between any two frequencies concerning opinion-oriented questions from the two schools was only ten percentage points. The compositional differences simply help to explain the minor variations.

Some examples will aid in illustrating this point. Seventy-seven percent (117) of the respondents at the larger university reported having chatted before while the correspondent statistic from the smaller university was 67% (81). This variation can be explained by the fact that the smaller-university pool contained a greater proportion of faculty members who were less likely to have chatted than students at both schools. Telephone and e-mail reference were used at slightly higher rates at the smaller university. These trends can be attributed to the idea that the smaller-university sample had more faculty members than the larger-university sample and faculty members have a strong preference for telephone and e-mail reference compared to undergraduate and graduate students. The differences described in these examples were not large and none was statistically significant.

The list of remarkable similarities between the results at the two schools includes all other questions. Concerning people's awareness of the online chat-reference service offered at their institutions, the larger university came in at 13% (20) and the smaller university at 17% (21). Concerning the question about the need for more or less human help in the future, the larger university registered 65% (100) saying less and the smaller university had 73% (88) saying less. Finally, there was great similarity in answers to the question about which reference service would be most popular in ten years. Both respondent pools selected e-mail reference first (larger university = 44%, or 65; smaller university = 40%, or 47), online chat reference selected second (larger university = 34%, or 50; smaller university = 38%, or 44), face-to-face reference third (larger university = 20%, or 29; smaller university = 18%, or 21), and telephone reference fourth (larger university = 2%, or 3; smaller university = 4%, or 5). The closeness of the results from both schools promotes the idea that these findings are externally valid to other medium and large public universities with recent additions of chat-reference services to their libraries.

Discussion

One of the most notable trends this study has exposed is the solid popularity of in-person reference. The vast majority of surveyed university affiliates had used it, and similar numbers chose it as their first option if seeking reference assistance in a hypothetical scenario. In fact, in both

instances, the percentage of people selecting face-to-face reference was roughly triple that of the next most selected service. Further, it was the undergraduates (presumed to be technologically savvy) who were the most likely to choose face-to-face reference. Part of this use result can be explained by the fact that in-person reference is the oldest service and thus there is a greater likelihood that affiliates may have used the service at least once in their tenure at their university. However, this does not diminish the overall dominance of face-to-face reference.

It is evident that the marketing of chat reference should mirror and accentuate its similarities to face-to-face reference. This may also mean that until real-time audio and video conferencing is readily available, other technologically advanced forms of reference service will pale in comparison to in-person reference. Face-to-face reference's strong popularity in both use and in the hypothetical scenario points to people's preference for a service with which they are familiar. Librarians involved in the marketing of chat-reference services need to realize that their patrons—even the technology-savvy undergraduates—are not going to immediately flock to online chat reference. It is also important to remember that it may take time to see if online chat reference will be a success; people need exposure to the service over a longer period of time before any comprehensive judgments can be made.

The results for e-mail reference were surprising. Faculty members were the heaviest users of e-mail reference with nearly twice the participation of graduate students and four times the participation rate of undergraduate students. Part of this phenomenon can be explained by the fact that faculty members have, by and large, been at the university longer and therefore are more likely to have used e-mail reference at least once. However, it is also important to understand that, when given a choice of a service in the information-need scenario, technology-literate undergraduates were the least likely to choose e-mail reference. It is plausible that because faculty are generally working on more long-term projects and have more time to wait for replies, they place more e-mail requests.

It is fascinating that, while overall e-mail was given mediocre marks both in prior use and in the hypothetical scenario, it got nearly half of the votes as the most popular service in ten years. It is hard to know what people think will change in order to advance the popularity of e-mail reference. Perhaps they think people will engage in more distance education in the future, thus opting to bridge the miles with e-mail. This is not likely, though, because distance from the library was not a key predictive factor concerning any of the questions on the survey. Perhaps people are just struck by society's general vision that the future means more high-tech tools and greater use of them at the expense of those of lower art. If this were the case, though, it is surprising that people did not choose chat reference first. It is likely that chat reference, which finished an average of six percentage points behind e-mail reference, did so

because people just are not familiar enough with it. In fact, people who have not chatted before overwhelmingly think e-mail will be the flagship reference service in ten years, while those who have chatted think so to a lesser degree, with more of the latter group predicting the dominance of online chat reference.

This study exposed some disappointing news about the current state of online chat reference. Only about one in ten people were aware of their chat-reference service before taking the survey and only 9 of the 276 respondents had actually used the service. It is also troubling that just one of those nine people indicated that they would use it again as a first option in the information-need scenario. This observation indicates that people's initial experiences with online chat reference may not have been a success. People who have chatted (in other contexts) tended to not see its role in the reference setting. Many may only associate chatting online with informal, social communication. This is not surprising as the connotation of the word "chat" indicates casual conversation. Librarians need to be cognizant of this connotation in their advertising. It is also clear that beyond marketing, librarians also must equally concentrate on providing a high quality chat-reference service in order to retain first-time users.

The encouraging news for chat-reference advocates is that just 8% (20) of the survey takers said they would never use online chat reference, and more than one-third (94) of the survey respondents believed it would be a leading service in ten years. They are truly predicting a revolution in the way reference services are provided. There is little doubt that chat reference has the potential to grow in its use. It is partly in the hands of marketers to make the academic community's visions for the future become reality.

There are also interesting implications for the future when more than a two-thirds majority (188) of the respondents predicted people would need less human help with research projects in the future. About 80% (104) of the undergraduates forecasted less human help needed, whereas both faculty and graduate students were split nearly evenly on the subject. It is hard to know if the undergraduate perspective represents a generational shift in the way the future is viewed or if these same people will change their minds as they move to graduate-level studies and beyond. It is reasonable to say that professors and graduate students engage in more complex and advanced research than undergraduates. Differences in research sophistication may be a key factor in understanding why undergraduates felt the future would be one requiring less human help with research. In any case, librarians must keep in mind that undergraduates make up the vast majority of their clientele.

Technology can empower people to be independent and can provide more efficient and effective ways to communicate. In order to build people's interest in and awareness of chat reference, librarians must be ready to confront a belief that asserts little, if any, human help is needed at all. In the future, people may indeed need less human help

in finding any information to meet a need. However, it may be quite a different story if one is seeking precisely relevant, high-quality information. Acquisition of this brand of information is still very likely to require human help. Librarians must make these information-quality distinctions in their promotions of chat-reference services. Librarians can help one find the best information available, and they are often only one click away.

Undergraduate and graduate students are split evenly in their backing of e-mail or chat reference as the most popular service in ten years (undergraduate/e-mail = 36%, or 46; undergraduate/chat = 43%, or 54; graduate/e-mail = 38%, or 25; graduate/chat = 37%, or 24). Marketing tactics should sell each service based on the unique reference need circumstances for which it is best suited. The faculty at both schools, on the other hand, strongly predict e-mail over chat reference (e-mail = 57%, or 41; chat = 22%, or 16) as the most heavily used service in ten years. Because faculty members largely trail students in their use of online chat, it is evident that having some prerequisite experience with online chat is important to supporting it as a viable reference option. A library promoting chat reference should sponsor short faculty seminars on the service in order to encourage faculty members to get familiar with online chat.

The sources of people's knowledge about their chat-reference services speak to strategies for marketing such services. First, no single source of knowledge presented in the multiple-choice question garnered more than 34%, meaning that there was a diverse set of ways people learned about their chat-reference service. This result should be a catalyst, pushing librarian marketers to activate multiple outlets of advertising and promotion. Even though the sources of knowledge were diverse, a key conclusion is to be made by focusing on one source. When combining the library bibliographic section (7%, 3) with the "other" category (34%, 14), one realizes that roughly 50% of the sources of knowledge were classroom-based. Clearly, the classroom is and should continue to be a central venue for promotion of this reference service. Respondents' comments at the end of their surveys contain valuable perspectives that can be used to inform the marketing of online chat reference. Librarians will need to be sure their advertising and promotion reflect the idea that online chat can be used for academic and scholarly communication as well as to address complex research questions. It is equally important that the marketing mix advocate the overall idea that seeking reference help is not a sign of inadequacy or failure, but that it is an intelligent tactic in pursuit of the highest quality research. Librarians should also be mindful that no amount of marketing will matter if people do not become repeat users of the service. The service must effectively meet people's needs.

Librarians need to face realities. Reference numbers are declining, many think people will need less human reference assistance in the future, and commercial interests are

siphoning off customers.³⁶ It is time to quit worrying about an onslaught and start working to create one. Librarians need to offer an online chat-reference service that is efficient and effective. In addition, it needs to be marketed with a competitive flare. Chat reference is new and has potential; it should be promoted accordingly.

Conclusion

There are a number of weaknesses concerning this study. Even though all terms were defined, there were a few indications through the analysis of the data that there was confusion among the respondents. Of the nine people who reported having used chat reference, three claimed to have never before chatted online. There were a few comments from the surveys that point to puzzlement about online chat reference. One person noted that clinicians do research using Medline, and chat reference does not fit with this tactic. The person evidently missed the idea that chat reference is used to help people more effectively search databases like Medline. Perhaps the person thought chat reference was some kind of database.

Another weakness of the study is its lack of a complete look at the customer base for chat reference. Sloan reported that many people using chat reference during his study were not university affiliates.³⁷ One promise of chat reference is to bring in more outside patrons; these people need to be surveyed concerning their level of interest to get a complete picture of the possible success of chat reference in all kinds of library settings. In addition, citizen use of public library virtual reference desks or multiple library virtual reference consortiums must be considered. A central weakness of the study is that, because so few people were aware of or have used the online chat-reference service, it is difficult to draw conclusions surrounding the nature of its use. Two people who provided comments at the end of the survey expressed apprehension about evaluating a service they had never used and, before reading the survey, of which they were unaware.

Even with its weaknesses, the results of this survey can open many avenues of inquiry. Advocates of chat reference claim that it reaches new audiences. It would be fruitful to determine if chat-reference patronage is coming from new library users. It would also be interesting to see if distance-education students are attracted to the service and if those who are shy or independent are those gravitating toward the service. Because online chat reference holds the potential to compete with commercial interests, it seems vital to look into relational marketing. It is important to gauge at what level patrons would advocate or tolerate giving personal information to receive personalized service. Future research should also explore the idea that reference questions are getting increasingly complex at the same time many libraries are restricting their chat-reference questions to those with

short answers. It is essential to examine whether these opposing trends will stifle the potential for online chat-reference services. Finally, once more chat-reference consortia (groups made up of combinations of public, academic, and special libraries) are operating, it will be important to study the patronage of such collaborative systems.

The numbers of libraries offering chat-reference services is growing rapidly; the two universities in this study have joined the trend. Chat reference promises new opportunities to provide a convenient and comprehensive reference service, but many question its potential effectiveness. The purpose of this study was to explore university affiliates' awareness of, use of, and interest in chat reference, and how marketing techniques can be used to affect the levels of awareness and interest. It is expected that the results of this survey will be useful to libraries considering whether their user population is amenable to chat reference, and to libraries looking for ideas on how to market such services. In light of the small amount of research in this area, this study will help librarians begin to understand their patrons' views of this new reference service technology. ■

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Appendix: Cover Letter and Questionnaire

Fill out this five-minute survey, earn a chance to win one of three \$75 bookstore gift certificates, and help a student with his research!

You have been selected randomly from XXXXX affiliates to participate in a research study evaluating faculty and student awareness of, use of, and interest in virtual reference. Online chat reference allows librarians and library users to communicate and search together in real-time. The results of this survey will help libraries make service-selection and marketing decisions.

If you would like to participate, please reply to this message, complete the survey below, and send your finished survey. Responses received will be treated confidentially. Names and contact information will only be used to award the gift certificates. All surveys will be destroyed upon completion of the study (May 2002).

This study has been approved by XXXXX Institutional Review Board. If you have any questions about this project, you may contact Corey M. Johnson at XXXXX, or Dr. XXXXX at XXXXX. For additional information regarding human research participation, you may contact Dr. XXXX at XXXXX.

Thank you for your support of educational research.

Corey M. Johnson
Library Science Graduate Student
XXXXXX

Library Reference Survey

Procedure:

1. reply to this message (click reply)
2. scroll down and use Xs to fill out the survey
3. click send to submit your survey

1. Which ONE of the following best describes you?

- Undergraduate Student
 Graduate/Professional Student
 University Faculty

2. Where do you live (mark one)?

- On campus
 Within five miles of campus
 Five miles away from campus or beyond

3. Have you ever chatted online in real-time? (for example, used AOL Instant Messenger or Netscape IRC)

- Yes
 No

4. Which of the following library reference services have you used at XXXXX? (mark all that apply)

- Face-to-Face Consultation (worked with a reference librarian at the reference desk or made an appointment with a reference librarian)

- Telephone Consultation (called the reference desk and spoke with a reference librarian)
 E-mail Reference (e-mailed your question to a reference librarian and received a reply)
 Online Chat Reference (chatted with a reference librarian online about your question)
 None

5. If you decided to get reference help with locating materials for a research project, which ONE of the following options for assistance would you most likely choose first?

- Face-to-Face Consultation
 Telephone Consultation
 E-mail Reference
 Online Chat Reference

6. Which ONE of the following campus reference services do you believe will be the most heavily used service in ten years?

- Face-to-Face Consultation
 Telephone Consultation
 E-mail Reference
 Online Chat Reference

7. Before you took this survey, were you aware that your campus library offered Online Chat Reference?

- Yes (If Yes, go on to 8.)
 No (If No, go on to 9.)

8. If you were aware of Online Chat Reference at XXXXX, where did you learn about it?

- Found it on the library Web site
 Heard about it from a friend/relative/peer
 Heard about it through an electronic discussion list/e-mail announcement
 Heard about it through a library instruction class
 Other—Please Specify:

9. Which ONE of the following do you think best describes the future?

- As technology makes more information accessible, people will need LESS human help in doing research for their papers and projects.
 As technology makes more information available, people will need MORE human help in doing research for their papers and projects.

10. During which ONE of the following time slots would you most likely use Online Chat Reference?

- midnight-8 A.M.
 8 A.M.-noon
 noon-5 P.M.
 5 P.M.-9 P.M.
 9 P.M.-midnight
 Never

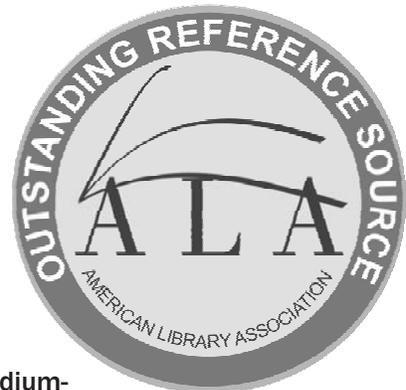
11. Which ONE feature of Online Chat Reference do you think would be of most use to you?

- _____ Escorted Browsing—librarian and user can search together while viewing the same information on the screen.
- _____ Sharing—the librarian can fill out forms and search boxes with the user
- _____ Transcript Reception—at the end of the chat session, the user receives a transcript of the entire session, including Web pages and the text of the transaction

_____ Voice-over IP—the user can speak over a telephone with the librarian at the same time they work together online (without needing two phone lines or needing to pay long distance telephone charges)

Comments: _____

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