

Corey M. Johnson. Online Chat Reference: The Awareness of, Use of, Interest in, and Marketing of This New Reference Service Technology. A Master's Paper for the M.S. in L.S. degree. April, 2002. 75 pages. Advisor: Barbara M. Wildemuth.

Reference librarians have converted a significant portion of library resources to electronic format and now they must contemplate moving the reference interview itself to the electronic environment. This study consisted of survey and interview components carried out at the University of North Carolina at Chapel Hill and the University of North Carolina at Greensboro. The survey inquired about university affiliates' awareness of, use of, and interest in reference services, with a particular focus on online chat reference. Three librarians were interviewed, who provided information about the development and marketing of the online chat reference service at their respective institutions. Survey respondents reported strong prior usage 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.

Headings:

College and university libraries -- Reference services

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ONLINE CHAT REFERENCE:
THE AWARENESS OF, USE OF,
INTEREST IN, AND MARKETING OF
THIS NEW REFERENCE SERVICE TECHNOLOGY

by
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Introduction

“Statistics collected by the Association of Research Libraries indicate that the number of reference queries handled per professional staff members has gone down over the last two years... One can only conjecture as to the reason, but my money is on the Internet.” (Coffman & McGlamery, 2000, p.66). Reference librarians are truly at a crossroads, they have already converted a significant portion of library resources to electronic format and now they must contemplate moving the reference interview itself to the electronic environment. Online chat (virtual) 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 the librarians continue to debate, commercial interests have already shown through exponential 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 explore the marketing strategies of university libraries. The specific research questions of this study are: Are university affiliates aware of, using, and interested in chat reference, and how are the libraries on these campuses marketing their chat reference services? It is hypothesized that there will be little awareness of and yet a great interest in chat reference. In addition, it seems likely that marketing activities will play a vital role in the overall health and success of the online chat reference services.

Literature Review

Introduction

Online chat reference is rapidly becoming a heavily discussed topic in the library world. This literature review will include a summary of the forms and characteristics of this discussion. Online chat reference services in commercial and non-commercial environments will be addressed, along with the relative disadvantages and advantages of using this technology. Finally, current trends in the marketing of chat reference services will be analyzed and new avenues of research proposed.

General Status of Online Chat Reference

A review of the literature indicates that there are few scientific or experimental studies concerning chat reference. 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.” (2001, p.198). Eisenberg and McClure, in their opening speech at the 2nd Annual Digital Reference Conference, said that there is a great need for research in this area and that there are “evaluation questions that really need some attention here” (2000). Most of the articles written to date are experiential and explanatory in nature with titles like, “Academic Libraries Test Web-Based Reference” (Kenney, 2001) and “Virtual Reference, A Hot New Idea for Extending Services to Remote Users” (Ronan, 2000).

Since September 2001, Dig-Ref, one of the two listservs for chat (digital) reference, has been informally monitored for threads concerning patron interest in and marketing of virtual reference. There has been no direct discussion about patron interest,

and while the issue of marketing has been raised numerous times, there was a muted level of enthusiasm for marketing and some people declared that their institution did not do any marketing. Of the 148 academic libraries now offering online chat reference services, only a handful have been discovered to have performed any preliminary or ongoing survey work to gauge interest in chat reference (Francoeur, 2001).

While the usage of chat reference continues to grow, the chat reference field is still very young. Currently, only one in 1000 reference questions are received electronically (Lankes, 2000). While asynchronous digital reference, mainly in the form of email exchanges, has been in existence for about eight years, synchronous chat reference has been around only half that time (Francoeur, 2001). In addition, it has only caught on in academic libraries in the last two years. At the present time, about 45% of academic libraries and 13% of public libraries are offering some kind of electronic reference service (Janes, in press). As of April 2001, 272 libraries in the U.S. had chat reference services (Francoeur, 2001). Providing more focus, Tenopir reports that about 20-29% of Association of Research Libraries offer chat reference (2001).

The potential for chat reference to grow as a reference service is outstanding because more Americans are online and more are using the Internet for communication. The number of U.S. households online is increasing rapidly with about 2/3 presently online, up from 44% in 1999 (Duboff & Spaeth, 2000). The Census Bureau News reports that email is the most common Internet application at home, used by 88% of adults and 73% of children who are online (Newburger, Public Information Office, Census Bureau, 2001). Online chatting has also taken off as an important cousin to email. More than 80 million chatters now send over 760 million messages per day (Gray, 2000).

Online Chat Reference: Non-Commercial and Commercial

An overview of virtual reference in both the non-commercial and commercial worlds speaks volumes about patron interest in chat reference and the potential for marketing of such services. In the non-commercial environment, most agree that traditional library reference services have shown a decline in the past ten years (Gray, 2000; Tenopir, 2001). Individual academic libraries have reported some of the evidence. Rutgers has seen double digit declines in the recent past (Wilson, 2000). Nationwide, comprehensive studies have pointed to the trend. Lankes (2000) and Coffman and McGlamery (2000) all describe current face-to-face reference drops of roughly 10% for academic and public libraries. Most agree that this decline is the result of end-user databases, the widespread availability of personal computers, and the exploding growth of information accessible on the web (Francoeur, 2001). People are using electronic tools outside the library to find the information they need.

Librarians differ in their beliefs about whether this trend is a cause for alarm. Some librarians do not view the decline in reference numbers as negative. They believe that web pages, including the library's web site, are now answering most of the ready reference questions. They welcome this type of decline in reference contact numbers because the patron gets his/her answer and the librarian is now freed to tackle more extensive research questions (Tenopir, 2001). Librarians in this ideological camp are often unwilling to be active participants in marketing new virtual reference systems because they do not see their value. Other librarians see virtual reference as a way to capture the business of remote users and recapture the business of local web-savvy clients. They are concerned about a drop in the overall client base, especially when

funding and administrative assessment of quality are chiefly tied to counting the numbers of patrons served (Lipow, 1999).

In contrast to declining reference numbers in the traditional library setting, chat reference in the commercial world is taking off. *AskJeeves*, a reference service that does not even provide live help, receives about 2 to 3 million questions per day (Coffman & McGlamery, 2000; Oder, 2001). On December 2, 1999, *Webhelp* was launched. This company provides online chat reference and gets about 5 million hits per day (Coffman & McGlamery, 2000). Overall, the growth rate for these services is about 20% per year (Coffman & Saxton, 1999). Librarians are always asking about which areas they should or should not compete with for-profit ventures. While some collection development areas (such as offering videos or audiotapes) have been very controversial, basic research help is now at stake with chat reference (Le Beau, 1999). Besant and Sharp (2000) argue that libraries need to compete now more than ever before because the competition for satisfying information needs is getting more intense.

There are many other reasons why many librarians think that competing with the commercial world is necessary and why they believe librarians can be competitive. Studies have shown that people prefer some human interaction in finding information, whether it is during an e-commerce transaction (McGlamery & Coffman, 2000) or during academic research (Young & Von Seggern, 2001). Kuhlthau (1993) also wrote of the importance of human intermediaries in satisfying information needs. The vast majority of commercial information services on the web do not offer any human help and when they do it is usually only includes human indexing (e.g. About.com) (Lipow, 1999). A notable exception to the non-human rule is Webhelp. Webhelp provides a chat reference

service for which it charges customers \$10 per month. Their information wizards are only paid \$9 an hour and receive only a few weeks of training (Oder, 2001). Libraries feature highly trained professionals and no user fees. It is interesting to note one main concern people continue to have about the Internet is the security of money transactions online (McGlamery & Coffman, 2000). Fortunately, libraries avoid this pitfall, and libraries are not tied to financial interests that may bias the information customers receive (Coffman & McGlamery, 2000). Libraries provide the most unfettered answers because they do not always ultimately choose profit first (Schneider, 2000). Several librarians have conducted informal studies illustrating the inferior quality of answers provided from commercial chat reference services (Oder, 2001). It is widely believed that even though these commercial companies provide lower quality service, they garner much more attention because of aggressive marketing strategies and name recognition. Clearly, because libraries provide a higher quality service, they could benefit from an expanded focus on marketing.

Disadvantages of Online Chat Reference

Reference librarians have many concerns about chat reference that have implications for patron awareness of and interest in such services, 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 (McGlamery & Coffman, 2000). Much of this new traffic might likely come from non-campus affiliates. Sloan (2001), in a study of an Illinois virtual reference project, discovered that about 2/3 of the users of chat reference were not campus affiliates. Proponents of chat reference

say that fears about being overwhelmed with questions can be addressed by starting with restrictions on the eligible user population or by telling non-affiliates that their questions are not given top priority (Gray 2000, Coffman & McGlamery 2000). They also remind opponents of chat reference that when email reference first came on the scene, everyone feared an onslaught of questions, which never materialized. In addition, they claim that it is much better to try to figure out how to accommodate 40 to 50% growth than to explain a 10% drop (Coffman & McGlamery, 2000). This fear clearly runs contrary to active marketing efforts, which in turn negatively affects patrons' awareness of and interest in the service.

Closely related to the problem of being swamped with questions are staffing issues. A lack of extra staffing hours to operate chat reference services has upset some reference librarians. To many librarians, chat reference is just one more service they must monitor while at the reference desk. Studies are finding that chat reference is most popular from late afternoon to late evening (Sloan, 2001) and users have higher expectations for 24/7 access (Tenopir & Ennis, 2001). This change in demand peaks could prompt unwanted shifts in working hours. Finally, there is one study claiming that a networked reference service based on a call center model could reduce staff requirements by up to 40% (Coffman & Saxton, 1999). It is a classic case where automation leads to the need for fewer employees. Opponents of online chat reference have contradicting views on whether the presence of the service will create the need for more or less employees. In either case, a disgruntled staff creates an atmosphere in conducive to positive marketing.

Opponents of online chat reference say that its associated technology is unreliable and hard to learn. It can often be hampered by computer problems and the slowness of connections (Oder, 2001). Chat reference software has also created database licensing problems for such academic institutions as the University of North Texas and the NOLA Regional Library System in Ohio (Oder, 2001). Proponents of online chat reference counter that some librarians need to simply conquer their apprehension about technology (Tenopir & Ennis, 1998). They also purport that many of the current technology problems are a result of the heavy use of commercial call center technology in libraries (McGlamery & Coffman, 2000). Once library-specific online chat reference software is more widely available, many problems will be alleviated. Finally, everyone knows that computer systems go down and that bugs and glitches are common. This has not crippled the explosion in computer use, nor will it halt the use of online chat reference.

Privacy issues are a central concern of those skeptical about chat reference. Many patrons fear that transcripts may be used in an invasion of privacy (Francoeur, 2001; Koyama, 1999). This idea is supported by a recent study citing that nearly one in five chat reference users did not fill out an affiliate form (Kibbee, Ward, & Ma, 2002). Librarians themselves are also nervous that transcripts will be used unfairly for performance evaluation (Koyama, 1999). Advocates of chat reference respond to these ideas by pointing out that simple confidentiality statements should be provided that outline for users if and how the transcripts will be used. The American Library Association has already made available confidentiality guidelines for email reference (Gray, 2000). Concerning the usage 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.

It can be argued that online chat reference will be ineffective because it is not conducive to providing the speedy answers demanded by today's academic library patrons. Many authors and studies are indicating that convenience is the patron's number one concern (Wilson, 2000; Francoeur, 2001; Young & Von Seggern, 2001). Stories are already being circulated about patrons terminating sessions because of impatience and patrons unwilling to sit in electronic queues (Francoeur, 2001). Unlike in-person or phone reference, patrons often do not know the librarian is working while they wait. One author claims that there is pressure to provide the needed information immediately and this is often just not possible (Broughton, 2001). Many reference librarians claim they cannot be as efficient because of the voice, eye contact, and facial expression cues lost in the electronic environment (Straw, 2000). 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 indicate that chat reference interviews are, longer on average, than transactions at the reference desk (Sloan, 2001; Kibbee, Ward, & Ma, 2002). Sloan (2001) found that the average length of a chat reference session was about 15 minutes and that about one-quarter were over 20 minutes. 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 (Broughton, 2001). It is also 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 (Kasowitz, Bennett, & Lankes, 2000).

Closely related to the length of reference interviews are the contents of the interview itself. Opponents of chat reference maintain that reference questions are becoming increasingly more complex and in-depth, a trend incompatible with electronic reference (Oder 2001; Tenopir, 2001). A large percentage of 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. 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 large number of quality resources (Tenopir & Ennis, 1998). Proponents also state that, in the long run, patrons will realize that being provided outstanding service and accurate answers will outweigh simple convenience.

Some librarians wonder why they should invest time in learning chat reference when quality audio/video conferencing is around the corner (Eichler & Halperin, 2000). "...we regard text-based chat service as an interim technology. With the advance of broadband communications, a real-time audio/video exchange rather than one that is text-based seems inevitable in a few years" (Eichler & Halperin, 2000, p. 66). The University of Michigan recently conducted a successful test of audio/visual conferencing between librarians and students in local dorms (Tennant, 1999). Advocates of chat reference stress that, if libraries do not get on board now with chat reference, when real time conferencing goes online they will be so far behind that commercial companies will have completely taken over (Lipow, 1999). Audio/video conferencing was not used for the

University of Illinois at Urbana-Champaign pilot studies in 2001 because of extensive software and equipment requirements (Kibbe, Ward, & Ma, 2002). It is likely that it will be a considerable amount of time before real-time conferencing is a possibility for libraries.

Chat reference lends itself well to the creation of reference service consortiums. Many consortiums have been formed in the recent past with chat reference as the communications backbone. As of April 2001, Francoeur (2001) reported that 77% of libraries offering chat reference belonged to one of eight reference consortia. Many librarians think that these consortia will mean a loss of local control and that remote users from different institutions will not be served well (Tennant, 1999). They also believe that consortia will usher in standardization that will stifle individual styles (Koyama, 1999). The results of the recent pilot study at the University of Illinois at Urbana-Champaign show that a high percentage of submitted questions were school specific (Kibbe, Ward, & Ma, 2002). Institution specific questions are not compatible with consortia.

Many in the library world are leery of chat reference because it seems to be a symbolical 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 leads to intellectual sloth (Carlson, 2001). Supporters of virtual reference stress the enhanced research capabilities created through the electrification of information and see librarians online as role models and facilitators of scholarship conducted with integrity.

Advantages of Online Chat Reference

Librarians need to be mindful of the powerful characteristics of chat reference as they work to increase awareness of and interest in these services. Chat reference provides people with a way to get help instantly, across distances, and at convenient times (Lankes, 2000). Users have little tolerance for downtime and expect instant answers and online chat reference is a service that can deliver (Lankes, 2000; Tenopir & Ennis, 2001). Convenience has become customers' paramount consideration in the pursuit of information, creating a strong prediction of success for online chat reference (Wilson 2000; Francoeur, 2001; Young & Von Seggern, 2001). Chat reference fits well in a world where people are increasingly seeking information from home (Lankes, 2000) and within the academic setting, increasing numbers of professors are declaring a preference for retrieving information from their offices (Tenopir & Ennis, 1998).

Studies have shed light on the central reasons why people do not seek face-to-face reference assistance. People are nervous about approaching the reference desk because they often feel embarrassed, not wanting to ask what they may perceive to be a dumb question (Gray 2000; Tenopir & Ennis, 1998). Many also avoid the desk because asking a question runs contrary to the idea of being self-sufficient and getting stuck is a personal failure (Lipow, 1999). Chat reference provides users with a mode for asking questions that does not put one on display and open to feeling embarrassed or incompetent.

On a more practical level, people do not go to the reference desk to seek assistance because they do not want to give up their computer or seat, lose their search, or put their personal items at risk for theft (Lipow, 1999; McGlamery & Coffman, 2000; Francoeur, 2001). Some patrons also feel that they will not be able to replicate the

problem they are having on the computer at the reference desk (Lipow, 1999). Two great advantages of chat reference are the elimination of the need to give up a computer or seat in order to get help and the ability of the librarian to view a patron's problematic circumstance through the patron's computer.

Online chat reference affords reference librarians opportunities to meet the research needs of new types of patrons (Francoeur, 2001). People who are shy or individualistic may be attracted to chat reference (Lankes, 2000; Straw, 2000). It may also work for people who are egalitarian, those who like working on their own, and those who enjoy greater equality in the way that users and reference librarians interact (Wilson, 2000). Many are apprehensive about the captive nature of an in-person interview (Wilson, 2000; Koyama, 1999); with chat reference, one can end the communication transaction more easily than face-to-face. People are increasingly distrustful of experts and will comparison shop for information (Koyama, 1999). Chat reference affords customers efficiencies that allow them to effectively assess competing information sources.

There are many other specific groups who will benefit from chat reference. For academic libraries, chat reference will be a way to address the expectations of today's college students, young adults with the perception that everything is online and that possess a preference for doing research outside the library (Tenopir & Ennis, 1998; Gray, 2000). The user culture has changed and libraries need to adjust accordingly (Wilson, 2000). Further, Wilson states that the Internet culture has changed user behavior so much that no effort to reassert traditional reference practices will work. In addition to the benefits to young adults in general, chat reference helps eliminate physical barriers for the elderly and physically disabled (Straw, 2000). Johnston and Grusin found that

nonnative speakers like chat reference because their writing and reading skills are often better than their speaking skills (Gray, 2000).

There are many reasons that librarians are attracted to chat reference. Librarians are often categorized as shy and retiring types of people. To the degree that there is truth in this common characterization, many librarians will be comfortable with the more anonymous and distanced nature of chat reference (Lankes, 2000; Soules, 2001). The incorporation of chat reference services likely could mean salary increases for librarians. The Library Systems and Services (LSSI) reference center librarians start at \$60,000 per year (Schneider, 2000). It is predicted that an option to work from home (telecommuting) will follow the increased prominence of chat reference (Eichler & Halperin, 2000; Tenopir, 2001). Some librarians feel an advantage of chat reference is that it greatly decreases a librarian's capacity to subtly make judgments based on the appearance or mannerisms of a patron (Oder, 2001). Finally, many view online librarianship as enjoyable and challenging (Janes, in press). Librarians are finding satisfaction in the process of fine-tuning their interview skills in order to be effective on the web (Wilson, 2000). Reference librarians are reporting an increased fulfillment with their jobs that parallels the increase in library technology (Tenopir & Ennis, 1998). This trend is not surprising as advances in technology, including chat reference, aid librarians in providing better service to their customers.

Online chat reference boasts many features that enhance reference service. One such feature is the availability of transcripts. It is not only very helpful for patrons to receive electronic copies of the transaction, but librarians themselves can make good use of the transcripts also. The transcripts can be used to keep accurate usage statistics,

without librarians needing to spend time putting tick marks in boxes or creating usage reports (Soules, 2001; Broughton, 2001). Transcripts also aid librarians in going beyond simple bean counting to examining the quality of the interaction and the answers provided (Soules, 2001). As libraries move from a collection-building model of operation to one of information access, the importance of measuring the level of quality in a reference service has greatly increased. Finally, transcripts can be indexed and an answer bank made ready to help librarians with future queries. The Internet Public Library uses this kind of system successfully (Tennant, 1999). Question and answer sets can also be used to create FAQ pages for a library's web site. For many commercial companies, the creation of a question-answer bank has been a long-term cost saver (McGlamery & Coffman, 2000). Libraries can expect the same kinds of results.

In addition to transcript access, online chat reference software packages offer many other features of significant advantage to reference librarians and patrons. Librarians have a series of scripts or canned responses that can quickly be accessed and sent to patrons to provide key information in common circumstances (McGlamery & Coffman, 2000; Ronan 2000). Mastery of the use of these responses will assist librarians in decreasing the average amount of time per reference interview. Another feature is called escorted browsing or co-browsing. This element of chat reference software allows patrons to push web pages to librarians and librarians to push pages to patrons (Francoeur, 2001). In this way, problems can be replicated for the librarians and solutions can be demonstrated for patrons. Sharing is another powerful trait of chat reference packages (Francoeur, 2001). Sharing allows the librarian or patron to fill out

forms while the other observes. This is an especially important tool for providing instruction on how to query electronic indexes and databases.

Consortia are a central and advantageous application of online chat reference. Consortia supply important opportunities for specialization, as libraries or particular librarians are funneled questions, which match their areas of expertise (McGlamery & Coffman 2000; Gray 2000). As users continue to demand reference assistance outside the typical workday, consortia that cross time zones will be key in meeting these demands (McGlamery & Coffman, 2000). McGlamery and Coffman (2000) believe that chat reference holds the potential to forge closer relationships between central and branch libraries. Diane Kresh is a representative of the largest online chat reference consortial venture in the world, the Collaborative Digital Reference Service (CDRS). She paints a very bright future for chat reference consortia as she states that it is time “to reestablish libraries as the epicenter of knowledge in their communities” and that, as large consortia, “libraries can be all things to all people” (2001, p.46).

Online distance learning is a new and rapidly growing way to take educational courses. The University of North Texas recently reported that, while its overall use of electronic reference has been light, it is popular with distance learners. Francoeur (2001) writes that one of the chief reasons for adopting a chat reference service at his library was to plan for the expanding numbers of distance learning students. Many people in the library science field have recently noted how chat reference has a natural fit with distance education (Oder, 2001; Francoeur, 2001). Current chat reference software often contains a whiteboarding feature. This component enables a librarian to broadcast information online to a group (Francoeur, 2001). In the near future, it is very likely that librarians

will be providing instruction to groups of distance learners. As distance learning and lifelong learning grow, using chat reference will help librarians build long-term relationships. Librarians will likely become on-demand personal information assistants and become key players in the world of adult education (Schneider, 2000).

Marketing Online Chat Reference Services

The advantages of online chat reference are many. However, until the user population is aware of the service and its outstanding benefits, its capabilities will largely sit idle. Many experts agree that, as libraries continue to change, marketing will be the key to success or failure (Soules, 2001). As for-profit information competitors advance in their assault on the traditional domains of libraries, intensive marketing will become more important than ever (Soules, 2001). Many librarians agree that this concentrated wave of marketing should be focused on user services. A recent survey of librarians found that they think reference services and collections should be given the most promotion, and that new technology should be given a high priority (Norman, 1995). It is also important to note that marketing can work as well on employees as it does on customers. It can often produce an elevated morale in the workplace (Le Beau, 1999).

If librarians are to become effective marketers, they must overcome a past record fraught with many failures. White sums up the situation by claiming that librarians do not market and never have (Soules, 2001). Besant and Sharp (2000) generally characterize librarians as “inept marketers”. Very few libraries undertake any kind of formal marketing planning and, when they do, it usually only involves brief bursts of promotion (Besant & Sharp, 2000).

Many librarians believe that, by-and-large, the library community is off to an unhealthy start concerning marketing and chat reference. The cautious and timid approach demonstrated by many is being reflected in the marketing of chat reference. Some librarians are putting up barriers against chat reference (Lipow, 1999). Janes (in press) reports that many librarians believe they are hiding and providing confusing chat reference services. A major study of digital reference from the late 1990s revealed that 7 out of the 10 major digital reference services placed restrictions on the types of questions they would accept. Most only acknowledge brief, factual questions (Gray, 2000). The problem with this type of policy is that reference questions are increasingly becoming more complex. The University of Illinois at Urbana-Champaign pilot study provides another example of this harmful and contradictory policy issue. The written documentation from the study claims that chat reference will be a key to supporting the library's extensive digital resources, but this claim is contradicted when they only allowed short answer questions and did not put links to the service from the databases for fear of an onslaught of questions (Kibbee, Ward, & Ma, 2002). Many librarians believe it is not congruent with effective marketing practice to institute policies that restrict users in communication areas with high potential for activity.

There are a number of steps marketing advocates believe librarians could employ that would bolster library marketing, in general, and aid in overcoming the current marketing woes concerning chat reference. One key idea is to engage in marketing research. Duboff and Spaeth (2000) argue that marketing research holds the gatekeeper's key to success. Libraries need to identify their various customer segments and tailor their marketing activities accordingly (Le Beau, 1999). In addition, studying the

characteristics of non-customers should be a chief concern. Online chat reference is a powerful tool because it is basically an outreach program for non-users (Le Beau, 1999). Branding has become an increasingly important component of effective marketing, one which librarians will need to activate. Sloan sharpens the focus on branding by promoting the idea that chat reference link buttons must be highly visible and free of jargon (Francoeur, 2001). Finally, these specific steps need to be undergirded by a more basic orientation toward aggressive marketing. Lipow suggests an “in your face online reference service”; one that users will not be able to overlook (Francoeur, 2001, p. 196). Soules (2001) urges libraries to be more visible, pro-active, results-oriented, and customer-focused.

Many librarians are opposed to a more central concentration on marketing. They claim it is not the library’s mission to compete with for-profits. They feel that libraries are unique and vital in the sense that they provide free access to information. It is important to maintain a clear distinction from commercial information peddlers, and adopting their style of marketing will jeopardize this sense of separation. Libraries have traditionally had a reputation for being a trusted source for information (Oder, 2001). It is feared that too much marketing may tarnish this image. Lawyers are cited as a prime example where a move to advertising created image problems (Le Beau, 1999). Opponents of aggressive marketing also claim that it is not worth the effort when products and services change so quickly, and older faculty and graduate students do not pay much attention anyway (Tenopir & Ennis, 1998).

In the recent past, relational marketing has revolutionized how businesses interact with customers. Many librarians feel inclusion of this model in an overall marketing

strategy could reap great benefits. Relational marketing involves learning more about the customer (usually through some kind of electronic means) in order to provide better and more personalized service (Leonard, 1995). At its core, it is about the ability to transform customers into clients; long-term retention is a paramount goal (Leonard, 1995; Besant & Sharp, 2000). A clear vehicle for this type of marketing is online chat reference. In fact, Le Beau (1999) predicts that personalized services could be the hallmark of chat reference. Chat reference affords librarians the capability to gather more information about their patrons, and, users can be reached in a more personal way (Wilson 2000; Soules, 2001).

The incorporation of online chat reference services enables libraries to enhance their marketing programs. Librarians may place linking icons for their service on every online page they offer. This “roving icon reference” system is very significant because it allows librarians to meet patrons at their point of need. Many chat reference software packages automatically distribute customer satisfaction surveys, which can invaluablely inform marketing strategy. Transcript analysis is another key tool of library marketing programs. The chat reference transcripts can be studied to provide a clearer understanding of how customers perceive a business (Carpenter, 2001).

A major advantage of online chat reference is its inherent favor toward a marketing orientation that centers on community connections. Chat reference helps librarians explore outside the academic world (Soules, 2001). The potential for more intimate interactions with other organizations is great (Coffman & Saxton, 1999). Two studies have shown chat reference transactions from non-university affiliates at significant levels (Tenopir & Ennis, 2001). In an Illinois chat reference study, Sloan

(2001) found that 2/3 of the users were not university affiliates. Online chat reference has the potential to generate good will from taxpayers who now have much easier access (Gray, 2000) and to promote long-term relationships with alumni. The community connections possible through virtual reference reinforce a library's primary aim of facilitating life-long learning (Schneider, 2000; Le Beau, 1999). 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 offers insights concerning chat reference in commercial versus non-commercial settings, and more generally, outlines many of 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 patrons and/or potential patrons. This study augments and supplements current literature and knowledge in the field by surveying university library patrons and potential patrons about their level of interest in chat reference. It also examines the ways two academic libraries are marketing their chat reference services and how patrons became aware of the services.

Methodology

Brief Summary

This study consisted of survey and interview components, carried out at the University of North Carolina at Chapel Hill and the University of North Carolina at Greensboro. The survey consisted of some dozen questions inquiring about university affiliates' awareness of, use of, and interest in reference services, with a particular focus on online chat reference (see Appendices A, B). The surveys were distributed in email format to approximately 480 randomly selected affiliates (undergraduate students, graduate students, and faculty) at each institution. The data analysis plan centered around examining the overall response frequencies from each school and looking for associations between personal attributes and demographics, and awareness of, use of, and interest in chat reference. Interviews were conducted with two librarians at UNC-CH and one librarian at UNCG. The interviews provided background information about the development of the chat reference service at each institution and information about chat reference marketing strategies, past, present, and future (see Appendix C).

Operational Definitions

There are many constructs of this study that necessitate explanation. The settings associated with this research are academic institutions, specifically, the University of North Carolina at Chapel Hill (UNC-CH) and the University of North Carolina at Greensboro (UNCG). UNC-CH is a tier-one research university and a member of the Association of Research Libraries. Over 24,000 students and 2400 faculty are served through over twenty libraries. At UNCG, about 550 faculty members facilitate the

learning of over 13,000 students. The library acquired its one-millionth volume in 2001, and is known as a leader in enhancing library services through the incorporation of technology. UNC-CH and UNCG were selected as the central locations for data collection because of their variation in student population numbers, proximity to the researcher, and similar stages in the introduction of chat reference services. UNCG tested its service throughout the spring and summer terms of 2001 and officially began offering chat reference to its patrons in fall of 2001. UNC-CH launched its chat reference service through the Health Sciences Library in the summer of 2001, and the main Academic Affairs Library had a start-up date at the end of September 2001.

The university affiliates referred to in this study's research question included the following groups of people: undergraduate students, graduate students, and university faculty. The subjects were chosen randomly using each university's campus directory as the vehicle for obtaining contact information. The major component of the study centers on surveying university affiliates and their connection with and orientation toward library reference services (see Appendices A, B). Employment of surveying as a central tool for this study reflects the idea that, surveys are effective tools for measuring attitudes and orientations in a large populations (Babbie, 2001).

Beyond the institutions and subjects of this study, there are other components of the research question that require description. The phrases "aware of" and "interested in" refer to information to be gathered from the survey of university affiliates. The wording "aware of" refers to the survey respondent's prior knowledge of the existence of his/her institution's chat reference service. If respondents were aware, they were additionally asked where they learned about the service. The wording "interested in" refers to the

survey respondent's desire to utilize the service. "Interested in" was measured through a survey question that placed the respondent in a scenario where s/he was choosing between the various options of reference help. It was also reflected in a question that asked about the times of day the patron would use chat reference. Finally, interest was indirectly gauged through two questions asking about the future prominence of online chat reference.

Online chat reference and marketing are two final constructs meriting operational definition. Chat reference is defined as a service that allows librarians and patrons to communicate online in real-time. Chat reference is known by many other names including virtual reference, online chat reference, digital reference, live real-time reference, electronic reference, and "ask-a-librarian" (Kibbee, Ward, & Ma, 2002). Chat reference permits librarians to send web pages to patrons, browse and search with patrons, and send the patrons complete transcripts of the reference interview (Francoeur, 2001). Virtual reference is often used to describe asynchronous (email reference) electronic communication, but this study focuses on synchronous (real-time chat) reference. Marketing encompasses all of the activities associated with identifying customer wants and needs; making strategic decisions about product, place, promotion, and price; and satisfying the customer. In addition to the study participants that responded to the survey, two librarians from UNC-CH and one from UNCG were interviewed. The interviews explored the development of the online chat reference service at their institutions with a special focus on historical, present, and future marketing strategies.

Study Procedures

Prior to distribution, the survey and interview instruments were tested for face validity. Two librarians from UNC-CH and the entire UNCG reference department staff examined the instruments and offered suggestions for alteration. After several revisions, the final survey was complete and ready for distribution at both schools. Except for one background demographics question (asking UNC-CH affiliates about their association with the school's health sciences programs), the survey circulated at both institutions was identical. The survey and its cover letter were emailed to the recipients, both in the body of the message. Those study participants completing the survey replied to the researcher's message, filled out the survey, and finally, sent it back.

The survey included many key components. The first third of the questions asked respondents to provide some basic characteristics about themselves. These characteristics included one's university position status (undergraduate student, graduate or professional student, or faculty member), the distance from campus of one's home, whether or not one had ever chatted online, and which reference services one had ever used at his/her institution. Respondents were then asked their opinion on a number of chat reference related issues. They were presented with a future information need and asked to declare one of four reference services they would most likely use. They were also asked which one of four reference services will be the most heavily used in ten years. The questions continued by asking respondents if they had prior knowledge of the chat reference service at their institution and, if so, how they became aware. Next, respondents were asked if they felt that people would need more or less human assistance in the future with their papers and projects. Finally, respondents were asked to declare

the time of day they would be most likely to use chat reference and which of a slate of chat reference features would be of most benefit (see Appendices A, B).

Two distinct populations were studied. The two populations consisted of all faculty and student affiliates from each of the two academic institutions. Galtung's Cell Size Method was used to determine the sample size (Clark, 1984). This sample size determination tool calls for the construction of the most complex arrangement of variable relationships in the study. The largest contingency (cross-tabulation) table for this study included a set of four variable values by another set of four. This meant that the total number of cells was sixteen. Minimum sample size was calculated by multiplying the total number of cells times ten. Therefore a minimum of 160 surveys were needed from each university in order to obtain a minimum sample size. Roughly 480 surveys were sent out at each institution, three times the minimum number needed. It was anticipated that about one third of the surveys would be completed and returned.

Potential survey recipients were randomly selected from each campus' directory. At each institution the ratio of students to faculty is a little over nine to one. In order to sample at a ratio close to the actual while allowing for the possibility of significant results concerning the faculty, it was decided that 75% of the surveys (360) would be sent to students and 25% of the surveys (120) would be sent to faculty. It is also important to note that, in each directory, faculty and staff are listed together. When a staff member was randomly selected, the next faculty member moving forward alphabetically was the survey recipient.

Distribution of the surveys took place in two waves at each university. The basic timeframes characterizing the dissemination and collection of the surveys was mid to late

February 2002 for UNC-CH and early April 2002 for UNCG. At each school, the first wave of emailed surveys was followed one week later by a second wave of surveys sent to those not responding to the first invitation. Recipients were enticed to participate in the study by being offered a chance to win one of three \$75 gift certificates to their school's bookstore.

The interviews for this study were conducted from a pre-crafted slate of interview questions (see Appendix C). Two officials from UNC-CH and one from UNCG participated in one-hour interviews as part of this study. Each interview consisted of approximately 15 questions, which were roughly grouped into three sections. The first part focused on describing the historical development of the service. The second section centered on the library's past, present, and future marketing strategies related to online chat reference. In the third segment, the interviewee was asked to comment on the positives and negatives of online chat reference as characterized in the literature. Each of the three interviewees' names is being kept confidential and they are simply referred to as library officials throughout.

Data Analysis Plan

Analysis of the data included exploration of many key relationships. Chi-Square tests were run to determine the statistical significance of the association between the subjects' personal attributes (school of affiliation and student/faculty status) and their awareness of, use of, and interest in chat reference services. Of particular interest was whether there is an association between awareness of, use of, and/or interest in chat reference and particular marketing strategies. It was also a goal to investigate a possible

relationship between an awareness of, use of, and/or interest in online chat reference and a subject's traveling distance to campus. A final aim was to determine the existence of a relationship between the subject's personal attributes (school of affiliation and faculty/student status) and his/her view about the future of chat reference. All of the data in the survey is nominal or ordinal and thus cross-tabulations were created and the Chi-Square test was used as the measure of statistical significance.

Results and Findings

UNC-CH - Survey

At the University of North Carolina at Chapel Hill, surveys were sent to 485 people, with 17 surveys returned as undeliverable. 154 completed surveys (32%) were returned. A basic breakdown of the demographic characteristics of the survey respondents provides key foundational information for interpreting the survey's results. From the group of 154 survey takers, 49% were undergraduates, 26% were graduate or professional students, and 25% were faculty members. Overall, 30% of the survey takers were associated with the Health Affairs programs at UNC-CH, leaving 70% associated with Academic Affairs programs. It is important to note that only 8% of the undergraduates completing the survey were affiliated with the Health Affairs programs on campus, while 50% of the graduate/professional students and faculty have such an affiliation. The distinction between people affiliated with the Health Affairs programs versus Academic Affairs was made because at UNC-CH there is a separate Health Sciences Library, which serves Health Affairs affiliates. The main Academic Affairs Library has operated separately but closely with the Health Sciences Library in regards to

online chat reference. Concerning the location of respondents' residences, 27% live on campus, 47% reside off campus and within five miles of UNC-CH, and 25% live five miles from campus or beyond. More specifically, 50% of the faculty live more than five miles from campus, about one half of undergraduates live on campus, and 98% of graduate/professional students live off campus.

Each survey taker was asked to mark which kinds of reference services they had ever used at UNC-CH. The services were broken into four categories: face-to-face, telephone, email, and online chat. 75% of the people had used face-to-face, 27% had used telephone reference, 18% had used email reference, 3% had used online chat reference, and 20% had not used any service (see Table 1).

Table 1. UNC-CH - 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	56 / 73.7%	31 / 77.5%	29 / 76.3%	116 / 75.3%
No	20 / 26.3%	9 / 22.5%	9 / 23.7%	38 / 24.7%
Telephone reference				
Yes	11 / 14.5%	7 / 17.5%	23 / 60.5%	41 / 26.6%
No	65 / 85.5%	33 / 82.5%	15 / 39.5%	113 / 73.4%
Email reference				
Yes	6 / 7.9%	8 / 20.0%	13 / 34.2%	27 / 17.5%
No	70 / 92.1%	32 / 80.0%	25 / 65.8%	127 / 82.5%
Online chat reference				
Yes	1 / 1.3%	2 / 5.0%	1 / 2.6%	4 / 2.6%
No	75 / 98.7%	38 / 95.0%	37 / 97.4%	150 / 97.4%
Used None				
Yes	17 / 22.4%	9 / 22.5%	4 / 10.5%	30 / 19.5%
No	59 / 77.6%	31 / 77.5%	34 / 89.5%	124 / 80.5%

In addition to face-to-face reference, each of the other three reference services was compared to the survey taker's university position status (undergraduate, graduate students, or faculty). There was no remarkable relationship between respondent affiliation and having used online chat reference or having used no services. Of the 154

survey takers, only 4 reported having used online chat reference, a number too small to create significant associations. Concerning telephone reference, faculty were more likely to have used the service with 61% having used it, while only 15% of undergraduates and 18% of graduate students have used it ($\chi^2 = 29.805$, with 2 df, $p = 0.000$). Thirty-four percent of faculty, 20% of graduate students, and 8% of undergraduates have used email reference ($\chi^2 = 12.361$, with 2 df, $p = 0.002$).

There were two significant relationships concerning the associations between reference services and the distance from campus of one's residence. The further away people lived from campus, the more likely they were to have used telephone reference. Forty-six percent of those living 5 miles or more away from campus, 23% of those living within 5 miles of campus, and 14% living on campus have used telephone reference ($\chi^2 = 11.303$, with 2 df, $p = 0.004$). The same pattern was true for email reference. The further away one lived from campus, the more likely they were to use email reference. Twenty-six percent of those living 5 miles or more away from campus, 21% of those living within 5 miles of campus, and 5% of those living on campus have used email reference ($\chi^2 = 6.970$, with 2 df, $p = 0.031$).

Respondents were also asked whether they had ever chatted online in real-time. The undergraduates provided an affirmative answer to this question at a rate of 99%, graduate students at a rate of 70%, and faculty at 38% ($\chi^2 = 52.464$, with 2 df, $p = 0.000$). Both having used telephone and email reference were related to whether or not a person had chatted online. People who had never chatted were more likely to have used telephone reference (47%) compared to people who had chatted (20%) ($\chi^2 = 10.833$, with 1 df, $p = 0.001$). In regards to the use of email reference services and having ever

chatted, it was found that 36% of people who have never chatted have used email reference, but only 11% of people who have chatted have used email reference ($\chi^2 = 12.198$, with 1 df, $p = 0.000$). People who have never chatted are more likely to have used email reference. Finally, a cross-tabulation table was created between having used online chat reference and having ever chatted. Clearly there should be a 100% match between those who have used the service and those who have ever chatted online, because one chats online while using the service. It was very suspicious to discover that of the four people who reported to have used online chat reference, three claim to have never chatted. Perhaps they believed that chat only includes online communication for social or non-academic purposes.

In an additional question, respondents were placed in a situation where they have decided to get reference help in locating materials for a research project. They were asked which one of the four options for reference service (face-to-face, telephone, email, or online chat reference) they would choose first. Overall, 71% indicated that they would choose face-to-face reference first. Email reference was a distant second at 19%, and telephone and online chat garnered 6% and 4% respectively (see Table 2). On an earlier question, the survey respondents reported having used face-to-face reference at disproportionately higher numbers than the other reference service options and the same service was the predominant option concerning a hypothetical future use of a reference service.

Table 2. UNC-CH - 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	59 / 79.7%	28 / 70.0%	18 / 52.9%	105 / 70.9%
Telephone Reference	2 / 2.7%	1 / 2.5%	6 / 17.6%	9 / 6.1%
Email Reference	10 / 13.5%	9 / 22.5%	9 / 26.5%	28 / 18.9%
Online chat reference	3 / 4.1%	2 / 5.0%	1 / 2.9%	6 / 4.1%

Concerning all four reference services, people's preference for choosing a future service was related to what they had used in the past (face-to-face - $\chi^2 = 10.866$, with 3 df, $p = 0.012$) (for telephone - $\chi^2 = 15.273$, with 3 df, $p = 0.002$) (for email - $\chi^2 = 9.114$, with 3 df, $p = 0.028$) (for online chat - $\chi^2 = 11.885$, with 3 df, $p = 0.008$). 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 email reference, though numerically 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 four people who reported to have used online chat reference, one chose telephone reference in the information need scenario, two chose email reference, and one chose online chat reference. It is interesting note that none of the four chose face-to-face reference, the favorite among people who had used the other services. It is of note that only one of the four having used online chat reference would chose to use it again in the scenario.

People's first choice for a reference service was compared with undergraduate/graduate/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/faculty status ($\chi^2 = 14.706$, with 6 df, $p = 0.023$). Undergraduates were more likely than the graduate students or faculty to choose to face-to-face reference as their first choice (see Table 2). 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 email compared to the undergraduates.

After asking respondents about the service they would choose first, the survey asked which one of the four reference services they believed would be the most heavily used in ten years. Respondents predicted that email reference would be the most heavily used service. Email reference constituted 44% of the responses, online chat reference 34% of the responses, face-to-face reference 20% of the responses, and telephone reference 2% of the responses. Predictions of the most popular service in ten years were associated with undergraduate/graduate/faculty status ($\chi^2 = 11.434$, with 6 df, $p = 0.076$). Whereas undergraduates and graduate students were equally likely to think email or chat would be the most important reference service of the future, the faculty clearly saw email as being more popular than chat (see Table 3).

Table 3. UNC-CH - Service predicted to be the 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	14 / 18.4%	11 / 28.2%	4 / 12.5%	29 / 19.7%
Telephone reference	3 / 3.9%	0 / 0.0%	0 / 0.0%	3 / 2.0%
Email reference	29 / 38.2%	15 / 38.5%	21 / 65.5%	65 / 44.2%
Online chat reference	30 / 39.5%	13 / 33.3%	7 / 21.9%	50 / 34.0%

Comparing those who had not chatted with their choice for the most popular service in ten years, email reference clearly prevailed with 68% of the tally. Online chat reference was a far distant second with 19%, face-to-face reference third with 13%, and telephone reference did not receive any support ($\chi^2 = 8.902$, with 3 df, $p = 0.031$) (see Table 4).

Table 4. UNC-CH - Service predicted to be most heavily used in ten years by online chat experience (number / percentage)

	Those who have chatted online	Those who have not chatted online	TOTAL
Face-to-face reference	25 / 21.7%	4 / 12.9%	29 / 19.9%
Telephone reference	3 / 2.6%	0 / 0.0%	3 / 2.1%
Email reference	44 / 38.3%	21 / 67.7%	65 / 44.5%
Online chat reference	43 / 37.4%	6 / 19.4%	49 / 33.6%

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 ($\chi^2 =$

19.037, with 9 df, $p = 0.025$). 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 would personally select 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. They were much less likely to think email would be the most popular service.

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 13%. These respondents who answered in the affirmative, were asked a follow-up question inquiring about the source of their knowledge. Fifteen percent reported the library web site as the source; 5% reported a friend, relative, or peer; 15% reported a listserv or email announcement; 35% reported a library instruction class, and 30% marked “other” on their surveys. It is important to delineate the sources contained in the “other” category because it received the second largest tally. Sources cited here were based on information from five people. Four of the five cited sources were classroom related; one faculty member learned from his/her students while in class, and three students mentioned the classes where they became aware of UNC-CH’s online chat reference service. Two of the three classes were courses offered in the School of Information and Library Science.

Cross-tabulation tables were created comparing awareness of UNC-CH’s online chat reference service to all other characteristics of the survey participants. There was no

significant relationship with status as an undergraduate, graduate student, or faculty member; whether one had used face-to-face, telephone, or email reference services, whether one had chatted before; the distance from campus of one's home; one's choice of reference service given the research scenario; or prediction of which service would be the most popular in the future. The only relationship apparent was the obvious connection between people who were aware of online chat reference and those who had used the online chat reference service. Even in this relationship however, there was one person who claimed to have used the online chat reference service and also reported being unaware of the service.

Respondents assessed 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." Sixty-five percent of the total number of survey respondents predicted a future requiring less human help and 35% forecast a future where people will need more human help.

The survey also addressed the time of day that people would be most likely to use online chat reference. Table 6 below shows the overall results about the potential times of highest usage. Two key observations from the table are, first, the 9 pm to midnight time period was the most popular by nearly twice the next highest time period. Second, combining the two most popular time periods creates a block from 5 pm to midnight, which represents almost 60% of the total preference quotient. If one concentrates on the

hours of the typical workday (8 am – 5 pm), many trends emerge. Only 9% of the undergraduates indicated that they would use chat reference during this timeframe, while 49% of the faculty members are partial to this time period ($\chi^2 = 52.222$, with 10 df, $p = 0.000$). This also means that a little over half of the faculty members favored usage outside the hours of the typical workday. Graduate students were split fairly evenly between the 8 am – 5 pm, 5 pm – 9 pm, and 9 pm – midnight time slots.

Table 5. UNC-CH - Time period most likely to use online chat reference by university position status (number / percentage)

	Undergraduate student		Graduate or prof. Student		Faculty member		TOTAL	
Midnight-8am	10 /	13.3%	3 /	7.7%	0 /	0.0%	13 /	8.7%
8am-noon	0 /	0.0%	4 /	10.3%	6 /	17.1%	10 /	6.7%
Noon-5pm	7 /	9.3%	8 /	20.5%	11 /	31.4%	26 /	17.4%
5pm-9pm	18 /	24.0%	8 /	20.5%	4 /	11.4%	30 /	20.1%
9pm-midnight	39 /	52.0%	14 /	35.9%	5 /	14.3%	58 /	38.9%
Never	1 /	1.3%	2 /	5.1%	9 /	25.7%	12 /	8.1%

There was a significant relationship between those who had chatted and their time period of preference for online chat reference ($\chi^2 = 30.950$, with 5 df, $p = 0.000$). People who had never chatted favored the use of the service during business hours, this group largely comprising professors. People who had chatted greatly favor the 9 pm – midnight time period, this group mainly populated with undergraduate students. It seems clear that the highest potential for usage times for chat reference are from the late afternoon (5 pm) until the late evening (midnight). This trend parallels many of the usage statistics reported by institutions across the country. It is particularly interesting that such a

comparatively large portion of faculty members (26%) indicated they would never use chat reference.

Finally, the survey addressed which characteristic of chat reference software, people would potentially value the most. Online chat reference touts a host of positive aspects; this question limited the scope to four key features. See Appendix A, Question 12 for a copy of the question and descriptions of the four features. Escorted browsing was the feature most commonly chosen with 39% of the tally. Transcript reception (27%) and voice-over IP (27%) were also popular choices.

At the end of the survey, people were invited to offer any comments. Twenty-nine people or 19% 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. It is important to note that no one made specific comments about the chat reference service at UNC-CH (most were unaware and had not used UNC-CH's specific service). 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 which illustrate 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 dominant status of face-to-face reference that became evident from the

multiple-choice portion of the survey continued in the comment section. Four people mentioned in-person reference as the most helpful service and one requested that chat reference not ever replace face-to-face reference.

Beyond comments directly about online chat reference itself, several people made more general comments indicating a less than bright future for the reference service. 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. Overall, the comments helped inform the multiple-choice portion of the survey.

UNCG – Survey

At the University of North Carolina at Greensboro, surveys were sent to 482 people, with 33 surveys returned as undeliverable. 122 completed surveys (25%) were returned. From the group of 122 survey takers, 43% were undergraduates, 22% were graduate or professional students, and 34% were faculty members. Concerning the location of respondents' residences, 16% lived on campus, 26% resided off campus and within five miles of UNCG, and 58% lived more than five miles from campus.

In regards to the question about previous use of reference services at their institution, Greensboro participants were far more likely to have used face-to-face reference as opposed to the other three types of reference services. Sixty-nine percent of Greensboro participants had used face-to-face reference, 30% had used telephone reference, 22% had used email reference, and 4% had used online chat reference.

Twenty-four percent of the Greensboro respondents had never used any of the reference services. At this point in time, it is clear that the face-to-face reference is the dominant service and that online chat reference is relatively unused (see Table 6).

Table 6. UNCG - Use of reference services
by university position status (number / percentage)

	Undergraduate student	Graduate or prof. Student	Faculty member	TOTAL
Face-to-face reference				
Yes	32 / 61.5%	18 / 66.7%	34 / 81.0%	84 / 69.4%
No	20 / 38.5%	9 / 33.3%	8 / 19.0%	37 / 30.6%
Telephone reference				
Yes	6 / 11.5%	6 / 22.2%	24 / 57.1%	36 / 29.8%
No	46 / 88.5%	21 / 77.8%	18 / 42.9%	85 / 70.2%
Email reference				
Yes	6 / 11.5%	6 / 22.2%	15 / 35.7%	27 / 22.3%
No	46 / 88.5%	21 / 77.8%	27 / 64.3%	94 / 77.7%
Online chat reference				
Yes	1 / 1.9%	1 / 3.7%	3 / 7.1%	5 / 4.1%
No	51 / 98.1%	26 / 96.3%	39 / 92.9%	116 / 95.9%
Used None				
Yes	18 / 34.6%	6 / 22.2%	5 / 11.9%	29 / 24.0%
No	34 / 65.4%	21 / 77.8%	37 / 88.1%	92 / 76.0%

When use of the four reference services is broken down by affiliation type (undergraduate/graduate/faculty), some interesting trends appear. Faculty have used the telephone far more than either group of students; 57% for faculty, 22% for graduate students, and 12% for undergraduate students ($\chi^2 = 24.063$, with 2 df, $p = 0.000$). Faculty members also have used email reference at significantly higher rates than the students; faculty at 36%, graduate students at 22%, and undergraduate students at 12% ($\chi^2 = 7.834$, with 2 df, $p = 0.020$). There were no relationships of significance concerning the use of online chat reference because only five people had used the service. It is interesting to note that while online chat reference is billed as a service for computer savvy undergraduates, three of the five people reporting they had used the service were faculty members. When focusing on the cluster of university affiliates stating that they

had not used any reference services, undergraduate students comprised the highest numbers. Thirty-five percent of undergraduate students had not used any service, 22% of graduate students, and 12% of faculty members ($\chi^2 = 6.634$, with 2 df, $p = 0.036$).

Finally, it is important to comment that there were no significant relationships between where people lived and their prior use of reference services.

At UNCG, 67% of the participants had prior experience with using online chat. It is important to note that the vast majority of university affiliates having used online chat reference were students; 87% of undergraduates had used chat, 70% of graduate students, and only 39% of faculty members ($\chi^2 = 24.021$, with 2 df, $p = 0.000$). Respondents who had chatted before were far less likely to have chosen telephone or online chat reference in the information needs scenario than face-to-face or email reference; face-to-face and email tallied 67% and 22% respectively, while telephone and online chat garnered 8% and 4% respectively ($\chi^2 = 8.741$, with 3 df, $p = 0.033$).

When faced with an information need scenario, UNCG affiliates selected in-person reference as their first choice. Sixty-one percent selected in-person, 13% selected telephone, 22% chose email, and 4% chose online chat reference. Undergraduate students were the most likely to choose face-to-face reference; 15 percentage points higher than graduate students, and 27 percentage points higher than faculty members ($\chi^2 = 21.402$, with 6 df, $p = 0.002$). It was also notable that university affiliates who lived farther away from campus were more likely to choose the three reference services that bridge distances; telephone, email, and online chat reference services ($\chi^2 = 24.734$, with 6 df, $p = 0.000$). Table 7 below illustrates these relationships. In addition, respondents who had used face-to-face reference were significantly more likely to have chosen face-

to-face reference in the information need scenario than those who had not used face-to-face reference ($\chi^2 = 12.569$, with 3 df, $p = 0.006$); the same experience/preference relationship was also found for telephone ($\chi^2 = 19.057$, with 3 df, $p = 0.000$) and email reference ($\chi^2 = 9.475$, with 3 df, $p = 0.024$).

Table 7. UNCG - First choice for reference help with a research project by distance from campus of one's home (number / percentage)

	On campus	Within 5 miles of campus	Five miles from campus or beyond	TOTAL
Face-to-face reference	17 / 94.4%	24 / 80.0%	28 / 42.4%	69 / 60.5%
Telephone reference	0 / 0.0%	1 / 3.3%	14 / 21.2%	15 / 13.2%
Email reference	0 / 0.0%	4 / 13.3%	21 / 31.8%	25 / 21.9%
Online chat reference	1 / 5.6%	1 / 3.3%	3 / 4.5%	5 / 4.4%

Even though online chat and email reference services did not fare well in their usage to date or their potential usage given an information need scenario, the respondents did believe that their day would come. When asked which reference service would be the most used in ten years, the UNCG respondents most frequently indicated email reference (40%), online chat reference a close second (38%), face-to-face reference a distant third (18%), and telephone reference as least likely (4%) (see Table 8) ($\chi^2 = 7.182$, with 6 df, $p = 0.304$). The results from this question did not produce significant connections with other variables in the study because of the relatively radical break from not favoring or using email and chat reference to predicting its dominance.

Table 8. UNCG - Service predicted to be the 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	9 / 17.6%	4 / 15.4%	8 / 20.0%	21 / 17.9%
Telephone reference	1 / 2.0%	1 / 3.8%	3 / 7.5%	5 / 4.3%
Email reference	17 / 33.3%	10 / 38.5%	20 / 50.0%	47 / 40.2%
Online chat reference	24 / 47.1%	11 / 42.3%	9 / 22.5%	44 / 37.6%

Respondents were also asked whether they were aware of the online chat reference service at UNCG (prior to taking the survey), and if so, how they learned of it. Seventeen percent of the respondents reported that they knew of the service. The source of their knowledge varied widely; 38% of those who were aware learned from the library web site; 14% from a friend, relative, or peer; 33% from a library instruction class, and 14% from a source other than the three just mentioned. These other sources (based on the reporting of three respondents) included a newsletter announcement and printed cards in the computer labs.

When respondents were asked to predict if people will need more or less human help with future research, 73% indicated there would be less need for human help, leaving 27% who indicated the need for more human help. Three people commented on this question at the end of their surveys. Two basically stated that younger, less-experienced researchers will need more help but experienced researchers will need less. The third person commented that s/he would have chosen the same level of human help in the future, not more or less.

The survey also addressed the times of day people might be the most likely to use online chat reference. The 9 pm - midnight time period was the most popular at 32%, 5 pm – 9 pm was second at 28%, noon – 5 pm was third at 22%, 8 am – noon was fourth at 7%, and midnight – 8 am was last at 5%. There was a significant relationship between the time period a respondent selected and their affiliation as an undergraduate student, a graduate student, or a faculty member ($\chi^2 = 36.854$, with 10 df, $p = 0.000$) (see Table 9).

Table 9. UNCG - Time period most likely to use online chat reference by university position status (number / percentage)

	Undergraduate student	Graduate or prof. Student	Faculty member	TOTAL
Midnight-8am	6 / 11.5%	0 / 0.0%	0 / 0.0%	6 / 5.2%
8am-noon	0 / 0.0%	0 / 0.0%	8 / 20.5%	8 / 6.9%
Noon-5pm	5 / 9.6%	6 / 24.0%	14 / 35.9%	25 / 21.6%
5pm-9pm	16 / 30.8%	9 / 36.0%	7 / 17.9%	32 / 27.6%
9pm-midnight	21 / 40.4%	7 / 28.0%	9 / 23.1%	37 / 31.9%
Never	4 / 7.7%	3 / 12.0%	1 / 2.6%	8 / 6.9%

Finally, the survey addressed which characteristic of chat reference software people will potentially value the most. See Appendix A, Question 12 for a copy of the question and descriptions of the four features. Escorted browsing was the trait most commonly chosen with 35% of the tally. Voice-over IP (31%) and transcript reception (28%) were the second and third most popular choices.

At the end of the survey, people were invited to offer any comments. Nineteen people or 16% of the total survey pool made comments. Five people expressed pleasure with the availability of the service and said they would use it in the future. Three of these five mentioned the convenience of not having to travel to the library, and the other two

mentioned that it would be particularly helpful concerning navigation of the online journal system. Four people stated a strong preference for face-to-face reference because so many communication cues are lost in online communication. One person said that he was not a native English speaker and could convey what he means a lot easier through in-person contact. Another noted that many people still do not have access to computers. One stated that face-to-face is the best for complex questions. Finally, two respondents made it clear from their comments that they did not understand what chat reference is. Overall, the comments were very insightful.

UNC-CH and UNCG Survey Comparison

When focusing on the basic demographic attributes of respondent pools from UNC-CH and UNCG, there are two primary divergences. The first difference, though it is not significant, concerns the percentages of undergraduate students, graduate students, and faculty members from each school ($\chi^2 = 3.155$, with 2 df, $p = 0.206$). The UNCG sample has a lower proportion of undergraduate and graduate students, and consequently, a higher proportion of faculty members. The second area of notable difference is the distance respondents lived from campus. When compared to UNC-CH, the Greensboro 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 fact that the UNCG respondent group had more faculty members and generally live farther from campus are the two most distinguishing differences between UNC-CH and UNCG in an otherwise very similar set of findings.

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 of the respondents at UNC-CH reported having chatted before while the correspondent statistic from UNCG was 67%. This variation can be explained by the fact that the UNCG pool contained a greater proportion of faculty members, who were less likely to have chatted than students at both schools. The reference services respondents have used also depicts this idea. Somewhat more respondents have used face-to-face reference at UNC-CH because undergraduates use this service the most and they live closer to campus. UNCG had a smaller percentage of undergraduate students respond and a smaller percentage of people living on campus. Telephone and email reference were used at slightly higher rates at UNCG. These trends are can be attributed to the idea that the Greensboro sample had more faculty members than the Chapel Hill sample and faculty members have a strong preference for telephone and email reference compared to undergraduate and graduate students. In addition, the Greensboro study includes more respondents living farther away, which is related to a preference for telephone and email reference services.

A last example of this point can be drawn from the tallies of both schools concerning the choice of a service given a hypothetical information need scenario. At both schools, respondents overwhelmingly chose face-to-face reference first (UNC-CH = 71%, UNCG = 61%), email a distant second (UNC-CH = 19%, UNCG = 22%),

telephone third (UNC-CH = 6%, UNCG = 13%), and chat fourth (UNC-CH = 4%, UNCG = 4%). The reason why UNC-CH has slightly more support for face-to-face and slightly less for email and telephone is because UNC-CH had fewer faculty member respondents and fewer respondents living farther from campus. The differences described in these examples were not large and none were 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, UNC-CH came in at 13% and UNCG at 17%. At both schools, this awareness came from a variety of sources. Concerning the question about the need for more or less human help in the future, UNC-CH registered 65% saying less and UNCG had 73% saying less. In regards to the time period of preference for using chat reference, both schools had all five options in the same preferential order with the top two, 9 pm – midnight, and 5 pm – 9 pm, both within two percentage points of each other. At both schools, the favored order of the four features of chat reference was the same (escorted browsing being the most selected feature) with the widest variation on any specific feature being five percentage points. Even the numbers of people making optional comments at the end of the survey was very similar; 19% at UNC-CH and 16% at UNCG. 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 email reference first (UNC-CH = 44%, UNCG = 40%), online chat reference selected second (UNC-CH = 34%, UNCG = 38%), face-to-face reference third (UNC-CH = 20%, UNCG = 18%), and telephone reference fourth (UNC-CH = 2%, UNCG = 4%). The closeness of the results from both schools promotes the idea that these findings are

externally valid to other medium and large public universities having recently begun chat reference programs.

UNC-CH and UNCG Librarian Interviews

Three librarians were interviewed as part of this project. Two were from UNC-CH and one from UNCG. They were all people who have been closely involved with the implementation and operation of the chat reference services at their respective institutions. The questions they answered focused on the development of the service at their school, with an emphasis on marketing. They also provided insights about many of the key issues surrounding online chat reference.

In the spring of 2001, a trial was conducted at Greensboro. Overall, there was little reference traffic through the service and public awareness of the service was gained chiefly through bibliographic instruction classes. The most important finding of the trial was that librarians liked offering the service. They were pleased with being able to offer it from their offices. In the fall of 2001, advertising began in earnest in the bibliographic instruction classes. There were about 200 chat sessions during the semester, outpacing email reference. The Greensboro librarian felt that people began using the service because it gives an instant sense of gratification and it meets people at their point of need. More recently, in the spring of 2002, the numbers of sessions are down a bit, even though six more hours were added. Greensboro offers the service a total of 30 hours per week.

The librarians at Greensboro have incorporated a number of marketing approaches concerning online chat reference. The primary target audience is undergraduate students. The librarian commented that these students are used to

unmediated searching and need to be instructed and advised about the benefits of using chat reference. The library uses HumanClick software from LivePerson, which provided little in the way of marketing guidance -- only a set of buttons. The buttons were not used because they did not blend in well with the library's web site. They did not want customers to think that the service was being provided by an outside organization.

Marketing ideas implemented have included paper tents on computers in labs across campus, articles in the school newspaper, bookmarks, and the Ask-a-Librarian button on the library's homepage. The bookmarks purposely advertise all of the reference services because many did not want to call attention to chat at the expense of other services or lead people to believe that chat reference may be replacing any other reference service.

The librarian provided a number of suggestions for future marketing endeavors. The librarian said that buttons should be ubiquitous, appearing on all library web pages including all catalog pages and databases. The librarian also suggested termination of the "Ask-a-Librarian" label because students generally see librarians only as "keepers of the books", people for whom they would never have a question. A more generic help button is necessary. A last endeavor mentioned was the possibility of a state wide cooperative reference effort through NC LIVE (North Carolina Libraries for Virtual Education, a public/academic library consortium that, among other activities, pools monies to purchase major index and database systems). This cooperative effort would combat the fear of being flooded with questions and help compete with commercial interests, but the UNCG librarian felt that libraries have such unique resources and goals that collaboration could be difficult.

At UNC-CH, the first rumblings about online chat reference began in the fall of 2000 with a short demonstration from Library Systems and Services, LLC (LSSI). The goal was to get the service up and running using a short time table but, with the numbers of departments and people involved, the progress was slow. One key component in moving the service toward its inauguration was financial assistance from the Distance Education Program. It was decided that the service would be powered by LSSI software and a test of the service was to occur in the spring of 2001. The test did not come to fruition because of delays in the implementation process. UNC-CH did not choose to do any preliminary marketing because the literature was already showing chat reference to be promising. In addition, one library official said any survey about online chat reference would be fraught with problems because chat reference is very difficult to define. People would be giving their opinions about a tool they did not fully understand. The service came online in the summer of 2001 at the Health Sciences Library and in September 2001 at the central Academic Affairs Library. Up until the present, the overall use of online chat reference has been light; the total numbers of users per month has ebbed and flowed a bit with no distinctive increases or decreases.

A number of marketing strategies have been used at UNC-CH. The target audience was described as university affiliates and distance education students. One interviewee said the service is definitely for the young generation. One of the UNC-CH librarians stated that the service was basically open to anyone and that it could be scaled back if necessary. The service has been advertised in the current news section of each library's homepage for many months. It is also linked from the library's tutorials. Bookmarks are being distributed. There is a short story about the service in the Welcome

to the Libraries Newspaper and a half-page article appeared in the University Gazette in November 2001.

Concerning the direction for future marketing, both UNC-CH librarians said placing the button linking to chat reference help on every library and database page is important. Staying with the “Ask-a-Librarian” button was mentioned as key because people are used to this phraseology. One of the librarians mentioned the importance of describing chat reference at every bibliographic instruction session and bringing chat reference to center stage in a staff development program. The idea of creating a chat reference service consortium through NC LIVE was also purported. Finally, one librarian reported that a key to the successful marketing of a new program is the prerequisite that the service have a strong champion. Because of staff shortages, it has been difficult to find such a champion.

In addition to the specifics about development of the service at their institutions and their marketing strategies, the librarians at both UNC-CH and UNCG were asked about other key issues concerning online chat reference. When asked about staff attitudes they all reported that some colleagues had mixed feelings because of fears about being overwhelmed with questions and a lack of staffing. But time has shown that these apprehensions may be unjustified. One librarian commented that people thought they would be overwhelmed when they started email reference and when they put email links from their web pages, but an unmanageable onslaught never materialized. When asked if a quality reference interview could be replicated online, they all pointed out that replication should not be the goal. One said it is like the difference between a movie and a book; it depends on preferences. Chat is just different, not better or worse; it is

powerful because it can reach a distinctive clientele. On a more critical note, one librarian did say that s/he notices the move to end conversation occurs more quickly than in-person reference, which may not be a good sign of a quality reference interview. The librarians said it is common with chat reference interviews that people need to be directed to wait for an email response, come into the library, or use some other media to answer their question. All three of them said patrons did not mind this type of occurrence.

The librarians were posed a question about using chat reference to personalize reference service by creating user profiles. One librarian said they already have ways for users to personalize their service. They can store searches and compare them to lists of new materials and sign up for several listservs that broadcast news and information about the library. Within the library system, there are increasing opportunities for patrons to personalize their library experience, but the librarians are not actively seeking or using any personal information people provide. One librarian noted that there is not library-specific profiling technology and each person would need to grant permission to create such a profile. Most chat reference software does, however, let the library produce reports that aggregate data about such information as whether the patron was an undergraduate student, graduate student, or faculty member. Another librarian said that it would be beneficial to move toward an Amazon.com model of operations, where the library seeks to learn more about their patrons.

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 favoring 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 usage 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.

What does this mean for chat 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/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 usage and in the hypothetical scenario points to people's preference for a service they have used before and with which they are familiar. Librarians involved in the marketing of chat reference services need to realize that their patrons are not going to immediately flock to online chat reference, even the technology savvy undergraduates. 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 sweeping judgments are made.

Many interesting trends surfaced about telephone reference. Faculty members were three times more likely to have used telephone reference and were more likely to choose telephone as their first choice in the reference scenario. This result may be an

access issue because faculty members have offices with phones. However, undergraduates have dorm rooms with phones and the proliferation of cell phone usage especially among younger generations has been explosive. In addition, more research is being done at home where nearly everyone has a phone. It is likely that students are just not as apt to use the telephone for reference help. Also, many faculty members began using reference services when telephone was the only alternative to face-to-face service. Overall, this study indicates that telephone reference will decline. The service was only a few percentage points above online chat reference in the hypothetical information need scenario and concerning the service expected to be used most heavily in ten years. Further, it was well behind email and face-to-face reference concerning those two questions.

The results for email reference were surprising. Faculty members were the heaviest users of email reference with nearly twice the participation of graduate students and four times the participation rate of undergraduate students. Part of this phenomenon can of course 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 email reference at least once. However, it is also important to understand that, in the question about choice of a service based on an information need scenario, technology literate undergraduates were the least likely to choose email reference (faculty were the most likely at UNC-CH and second behind graduate students at UNCG). 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 email requests. In addition, this trend may point to the effectiveness of

marketing that was originally performed for email reference services when they were first introduced about eight years ago.

It is fascinating that, while overall email 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 predict what people were thinking will change in order to advance the popularity of email reference. Perhaps they think people will be engaging in more distance education in the future, thus opting to bridge the miles with email. 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 (10% at UNC-CH and 2% at UNCG) behind email reference, did so because people just are not familiar enough with it. In fact, people who have not chatted before overwhelmingly think email will be the flagship reference service in ten years.

This study exposed some disappointing news about the current state of online chat reference. Only about 1 in 10 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 tended to not see its role in the reference setting. Many may only connect

chatting online with informal, social communication. This is not surprising as the connotation of the word 'chat' indicates casual conversation. Librarian marketers need to be cognizant about use of the word chat in their advertising.

The good news is that just 7% of the survey takers at Greensboro (8% at Chapel Hill) said they would never use online chat reference, and over one-third of the survey respondents believed it will be a leading service in ten years. They are truly predicting a revolution in the way reference services are provided. It is partly in the hands of marketers to make the academic community's visions for the future become reality. There is an inclination toward online chat reference if marketers want to take advantage of it. There is little doubt that chat reference has the potential to grow in its use. Its rate of growth will be largely determined by how successfully it is marketed.

Viewing email and chat reference together, people definitely see a future where services with the highest level of technical sophistication are most prevalent. It seems that in the immediate future people will continue to primarily choose face-to-face reference as the service of choice. Then at some point in the not too distant future, email and chat will begin to make great inroads into face-to-face service's dominance. Yet, many people completing the survey probably feel like the respondent who wrote in the comment section that chat reference has great potential for the future, but it is not for me.

There are also interesting implications for the future when more than a two-thirds majority of the respondents predicted people would need less human help with research projects in the future. About 80% of the undergraduates forecasted less human help needed, whereas both faculty and graduate students were split nearly evenly on the subject. Since the vast majority of those living on campus were undergraduates and the

majority of those who had chatted were undergraduates, these two variables also created a strong influence toward the anticipation that the future will mean the need for less human help. It is hard to know if the undergraduates are ushering in an era of needing less human help concerning research or if these very 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 will produce less need for human help with research. In any case, librarians must keep in mind that undergraduates make up the vast majority of their clientele.

If the majority have anticipated the future correctly, it is likely that reference contact numbers will continue to decline. However, people may have differing views of what constitutes human help. People may have only viewed face-to-face communication as human help, while not considering chat or email because of their technological masks. One survey taker wrote in the comments section that this was his/her perception of the question.

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 aware of chat reference, librarian marketers must be ready to battle a trend that asserts little if any human help is needed at all. With the recent exponential proliferation of information, librarians have increasingly noted a development that people seem to settle for the first information they find on a topic. 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 demand human help. Librarian marketers 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 only one click away.

There are many other results from this study that inform marketing of online chat reference. At both schools, people who had never chatted were, of course, far less likely to have used online chat reference. This trend points to a conclusion reference librarians should not overlook. Traffic for online chat reference will likely not increase while large numbers of library users continue to have had no experience with online chatting. In their marketing of online chat reference services, librarians should consider advertising with the theme that no prior chatting experience is required.

Undergraduate and graduate students are split evenly in their backing of email or chat reference as the most popular service in ten years. Marketing tactics should sell each service based on the unique reference need circumstances for which they are best suited. The faculty at both schools, on the other hand, strongly predict email over chat reference 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 reason why there was no significant relationship between awareness of the chat reference service and the other variables of the survey was largely due to the small

number of people who were aware. Marketers of chat reference systems need to understand that they currently face the prospect of needing to cast a wide net; people of all backgrounds and preferences campus-wide are largely unaware of the service.

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 landed more than 35%, 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 with the "other" category, 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. Two of the three librarians interviewed for this research project spoke highly of classroom contact as a primary component in an overall marketing portfolio for online chat reference.

The results of the question about chat reference features provide direction for librarian marketers. Escorted browsing was the most popular choice at both schools (UNC-CH = 39%, UNCG = 35%). This result mirrors the opinions of the two librarians interviewed at UNC-CH who also both declared that co-browsing was potentially the most powerful attribute of online chat reference. People marketing chat reference services should highlight this feature as part of their campaigns. The second and third most popular choices for this question were closely behind co-browsing and even more closely ranked with each other. These two features were transcript reception and Voice-

over IP. The common selection of voice-over IP indicates that many people will use the service from home where they likely have only one phone line. Both of these characteristics of chat reference services should be utilized in the promotion and advertising of online chat reference.

Respondents' comments at the end of their surveys contain valuable perspectives that can be used to inform the marketing of online chat reference. Librarian marketers will need to be sure their advertising and promotion reflect the idea that online chat can be used for academic and scholarly communication and be used 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 it is an intelligent tactic in pursuit of the highest quality research.

Librarians need to face realities. Reference numbers are declining, people think they will need less human reference assistance in the future, and commercial interests are siphoning off customers. It is time to quit worrying about an onslaught and start working to create one. In order for marketing to be successful, it needs a competitive flare. Librarians need to cease apprehensions that heavily advertising one reference service will come at the expense of others. The top priority should be finding what services best satisfy the customers, not offering as many differing kinds of services as possible. Chat reference is new and has potential; it should be advertised accordingly.

Conclusion

There are a number of weaknesses concerning this study. One of the librarians interviewed for this project noted that the library did not do preliminary surveying of the

potential patron audience because of the likelihood that people would not be able to understand what chat reference is. Even though all terms were defined, there were a few indications through the analysis of the data that there was confusion among the survey takers of this study. First, of the nine people who reported having used chat reference, three claim to have never before chatted online. Second, one person claimed to have used chat reference while at the same time reporting an unawareness of the service. 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 person made the comment that s/he prefers face-to-face reference to the other reference services because it is the only service that will work if reference books are needed to address the question. This person does not understand that reference books are consulted frequently with all four types of reference services.

Another weakness of the study is its lack of a complete look at the customer base for chat reference. Sloan (2001) reported that many people using chat reference during his study were not university affiliates. One promise of chat reference is to bring in more outside customers; these citizens need to be surveyed concerning their level of interest to get a complete picture of the possible success of chat reference. 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 problematic 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, up until reading the survey, of which they were unaware. For most of the questions of this survey, people were asked to pick their single top choice among a group of alternatives. A deeper understanding of people's preferences could have been achieved by allowing a rank ordering of possible selections. Several survey takers noted under the general comment section that they felt constrained by needing to choose one answer for most questions.

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 users. It would also be interesting to see if distance education students are attracted to the service and if, indeed, those who are shy and independent are those gravitating toward the service. Because online chat reference holds the potential to personalize reference services for customers and increasingly 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 answer the question of whether these opposing trends will stifle the potential for online chat reference services. Finally, once more consortia (which include academic libraries as members) are operating, it will be important to study the patronage of such collaborative systems.

There is great enthusiasm in the library world for online chat reference. Chat reference promises new opportunities to reach remote users and stave off declining

reference contact numbers. The numbers of libraries offering chat reference services is growing rapidly; both the University of North Carolina at Greensboro and the University of North Carolina at Chapel Hill have joined the trend. The purpose of this study was to explore university affiliates' awareness of, use of, and interest in chat reference, and how marketing techniques are being, and can be, used to affect the levels of awareness and interest. Many attributes of the respondents were examined, including the school of affiliation (UNCG or UNC-CH), university position status (undergraduate student, graduate student, faculty member), the distance from school of one's home, and previous experience with online chat. All of these respondent characteristics were used to identify trends in the kinds of reference services people have used, their awareness of chat reference services, and the kinds of services they think will be dominant in the future. In addition, the attributes of the respondents were used to find patterns in beliefs about the most useful features of chat reference and predictions about the future of chat reference. 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 the best ways to market such services. In light of the small amount of research in this area, this study will help librarians begin to understand if patrons share their high level of enthusiasm for this new reference technology.

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Appendix A – UNC-CH Cover Letter and Survey

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 UNC-CH 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 (April 2002).

This study has been approved by UNC-CH Academic Affairs Institutional Review Board. If you have any questions about this project, you may contact Corey M. Johnson at johnc@ils.unc.edu, or Dr. Barbara Wildemuth at wildemuth@ils.unc.edu. For additional information regarding human research participation, you may email Dr. Barbara Davis Goldman, chair of the Academic Affairs Institutional Review Board, at aa-irb@unc.edu.

Thank you for your support of educational research.

Corey M. Johnson
Library Science Graduate Student
University of North Carolina at Chapel Hill

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. Which ONE of the following best describes you?
 I am affiliated with the Health Sciences programs at UNC-CH.
 I am NOT affiliated with the Health Sciences programs at UNC-CH
3. Where do you live (check one)?
 On campus
 Within five miles of campus
 Five miles away from campus or beyond
4. Have you ever chatted online in real-time? (for example, used AOL Instant Messenger or Netscape IRC)
 Yes
 No
5. Which of the following library reference services have you used at UNC-CH? (check 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)
 Email Reference (emailed your question to a reference librarian and received a reply)
 Online Chat Reference (chatted with a reference librarian online; this service is called Live Online Help at UNC-CH)
 None
6. 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
 Email Reference
 Online Chat Reference
7. 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
 Email Reference
 Online Chat Reference
8. Before you took this survey, were you aware that your campus library offered Online Chat Reference (Live Online Help)?
 Yes (If Yes, go on to 9.)
 No (If No, go on to 10.)

9. If you were aware of Online Chat Reference (Live Online Help) at UNC-CH, 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 a listserv/email announcement
 Heard about it through a library instruction class
 Other - Please Specify:

10. 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.

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

- midnight - 8 am
 8 am - noon
 noon - 5 pm
 5 pm - 9 pm
 9 pm - midnight
 Never

12. 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:

Appendix B – UNCG Cover Letter and Survey

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 UNCG 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 UNCG Institutional Review Board. If you have any questions about this project, you may contact Corey M. Johnson at johnc@ils.unc.edu, or Dr. Barbara Wildemuth at wildemuth@ils.unc.edu. For additional information regarding human research participation, you may contact Dr. Beverly Maddox-Britt at (336) 334-5878.

Thank you for your support of educational research.

Corey M. Johnson
Library Science Graduate Student
University of North Carolina at Chapel Hill

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 (check 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 UNCG? (check 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)
 Email Reference (emailed 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
 Email 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
 Email 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 UNCG, 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 a listserv/email 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 am
- 8 am - noon
- noon - 5 pm
- 5 pm - 9 pm
- 9 pm - 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:

Appendix C - Virtual Reference Interview Questions

Slate of Interview Questions: Marketing Virtual Reference at UNCG and UNC-CH

1. Describe the process and events your institution experienced in the introduction of online chat reference at you institution?
2. What kind of marketing strategies or programs came as part of your software purchase?
3. What kinds of initial surveying or interest gathering did you explore prior to your decision to offer virtual reference?
4. What audience are you targeting with your service and why those particular patrons?
5. What specific ways have you, are you, and do you plan to advertise and promote your virtual reference service?
6. How has your marketing of this service differed from the marketing of other library services? What is the reasoning behind these differing approaches?
7. How has web-design and the placement of the “chat reference button” played into your marketing strategy?
8. How have attitudes from your staff affected the marketing of your virtual reference service?
9. How has the fear of being swamped with questions played into your marketing strategy?
10. How have you been measuring the level of success concerning your virtual reference service?
11. Can a quality reference interview be replicated with chat? Explain.
12. Should academic libraries compete with commercial online chat services? Why or why not?
13. Should chat reference be used to provide greater personalized service to patrons? What data can/should be gathered about people and how could/should it be used?