

All Together Now!

Integrating Virtual Reference in the Academic Library

**Vicky Duncan and
Angie Gerrard**

Vicky Duncan is the Nursing Liaison Librarian at the University of Saskatchewan in Saskatoon, Saskatchewan, Canada. **Angie Gerrard** is the Political Studies and Psychology Liaison Librarian (formerly the Off Campus Services Librarian) at the University of Saskatchewan in Saskatoon, Saskatchewan, Canada. Submitted for review September 18, 2009; revised and accepted for publication July 7, 2010.

Although much has appeared in the literature regarding the initiation of virtual reference services, to date a case study discussing online reference service's integration into an academic library's current suite of reference services has not been written. At the University of Saskatchewan, the integration process forced the library to take a broader look at reference services as a whole and address several questions: What is reference? How should it be delivered? Who should provide it? On what reference service values are decisions being based? To facilitate the integration, it was necessary to identify the needs of our users and re-examine the core values of our reference service accordingly. This analysis resulted in system-wide changes to all of the library's reference services. The paper concludes with a set of planning recommendations that will be useful for college and university libraries currently considering, or presently offering, a virtual reference or instant messaging service and aspiring to incorporate the service permanently into their suite of reference services.

Although much has appeared in the literature regarding the initiation of virtual reference services and the "need to integrate 'digital reference' into reference,"¹ to date a case study discussing the integration of virtual reference into

a library's current suite of reference services has not been written. At the University of Saskatchewan Library (U of S Library), the process of integrating virtual reference has proven to be both challenging and successful. The library was forced to take a broader look at reference services as a whole and address several questions: What is reference? How should it be delivered? Who should provide it? On what reference service values are we basing our decisions? To facilitate the integration it was necessary to identify the needs of our users and re-examine the core values of our reference service accordingly. This case study will benefit all libraries currently considering, or presently offering, virtual reference and aspiring to incorporate this service permanently into their suite of reference services. The authors also provide a discussion on some lessons learned as well as recommendations for libraries moving forward in this direction.

VIRTUAL REFERENCE SERVICE AT THE UNIVERSITY OF SASKATCHEWAN LIBRARY

Many academic libraries have attempted to serve the needs of their remote users by offering appropriate reference services based on the technology

Reference & User Services Quarterly,
vol. 50, no. 3, pp. 280–92
© 2011 American Library Association.
All rights reserved.
Permission granted to reproduce for
nonprofit, educational use.

available, such as telephone, e-mail, instant messaging (IM), and short messaging service (SMS).² A brief history of virtual reference at the University of Saskatchewan Library provides a context for outlining our process of eventually integrating our virtual reference service.

The University of Saskatchewan (U of S) is located in Saskatoon, Saskatchewan in Canada. Geographically, Saskatchewan is a large province, approximately half the size of Alaska, with a small population of just over a million people concentrated in the southern portion of the province. The U of S is a doctoral degree-granting university with approximately 18,500 students (full and part-time).³ The library consists of seven on-campus branch libraries and employs approximately 150 staff members, 40 of whom are librarians.

For the purposes of this paper, *virtual reference*, also known as *digital reference*, is defined as the synchronous exchange of information between library reference staff and patrons, using online chat software. "Ask a Librarian Live" was the name given to the virtual reference service at the U of S Library.⁴

In July 2002, a small virtual reference pilot project was initiated at the U of S Health Sciences Library in response to a growing number of health sciences students and professionals studying and working outside Saskatoon. HumanClick, a simple version of chat software, was used. The off-campus library services librarian expressed an interest in the project, and from January 2003 until July 2004 both the Health Sciences Library and Off Campus Library Services used this software, now called Live Person. In 2003, the authors of this paper, along with the U of S library reference coordinator, were asked to establish a library-wide service serving all seven branch libraries. A virtual reference service interest group was formed, consisting of librarians and library assistants who provided traditional reference service and who were interested in providing reference virtually. It is important to note that interest group members volunteered their time to both evaluating potential software and staffing the service throughout its trial period. They recommended trying more sophisticated chat software to ensure that the service trial would not be handicapped by software limitations. LSSI was chosen because of its intuitive interface, attractive

pricing, good customer and technical support, proxy server compatibility, and the absence of a patron download. After two years with LSSI, a switch was made to Docutek as it was the only chat reference software at the time that did not require a user download, which might have presented an obstacle to using the service. Unfortunately, Docutek proved unstable, and at the end of the pilot's third year a decision was made to move to an instant messaging software, Meebo. Table 1 provides a summary of software used for virtual reference at the U of S Library from 2004 to the present.

When virtual reference service was first introduced at the U of S Library, the new service was not integrated into the existing traditional reference model. For three years, there were two separate staffing models, schedules, and statistical tracking systems. The authors clearly recognized the challenges of sustaining two separate reference models, virtual and traditional. Issues surrounding staffing, duplication of services and workload, and assessment were identified as roadblocks for efficient and effective reference service. The need to integrate virtual reference into existing reference service is a challenge faced by many libraries and is vividly described by Janes:

It was as though two trains were running on parallel tracks, headed for the same destination, taking effectively the same route but, yet, somehow not seen as the same. . . . However, if there are two trains going to the same place, eventually somebody is going to ask why. Justifying a separate add-on service, potentially seen as duplicative or even wasteful, in tight budgetary times, is not easy.⁵

STAFFING

Our most significant challenge was the different staffing models within the two services. Within the traditional model, a designated reference co-coordinator was assigned the task of overseeing reference services across the library system. Librarians and library assistants provided traditional reference service as part of their assigned duties. During the three-year trial period of virtual reference, volunteers were depended upon to staff the service. This

Table 1. Summary of Software Used for Virtual Reference at U of S Library

	Year One 2004-5	Year Two 2005-6	Year Three 2006-7	Year Four-Present 2007-8 +
Software	LSSI (cobrowsing)	LSSI (cobrowsing)	Docutek (cobrowsing)	Meebo (instant messaging)

presented human resource issues because the two virtual reference administrators, while recognized as leaders on this project, did not have formal administrative responsibilities. Occasionally, this presented problems when issues of service quality arose or when the virtual reference administrators were asked to evaluate the quality of service provision by volunteer staff. The virtual reference software provided transcripts to assess reference service that was not possible in traditional reference. While the virtual reference administrators utilized many qualitative and quantitative statistics from the software for program assessment, not all of the staff were comfortable with having their transcripts used to formally evaluate their performance, especially since they were volunteering their time. This type of evaluation was not standard procedure for staff providing traditional reference, and it was unlikely that staff would continue to volunteer if this idea was implemented.

The virtual reference service operated on a volunteer model, which proved to be problematic over the long term. Volunteers moved to new positions or became overwhelmed with additional responsibilities. Staffing the service became an issue since virtual reference shifts were in addition to reference desk shifts and were not recognized as reference hours contributed. As the administrators grappled with trying to find additional volunteers, it became clear that the library had never clearly defined the minimum educational requirements for staffing reference service. This presented a major obstacle when trying to recruit additional volunteers for the service. Ideally, anyone who was staffing our traditional reference desk had the ability to staff the virtual reference service, but there were staff members who were reluctant to provide virtual reference service for a number of reasons. The virtual reference administrators could not mandate participation because they lacked the authority to do so and because the service remained a pilot project. Although there were a handful of dedicated volunteers, there were other library staff members who believed that the service was an add-on service that should only be offered when the library was fully staffed. However, with medical, parental, sabbatical, and administrative leaves, it was rare that the library was fully staffed. This sentiment has also been reported in the literature.⁶The differing staffing models between the two services was not feasible for the long term.

DUPLICATION

Another challenge with providing two reference services concurrently was the duplication of effort.

There were separate meetings for all reference staff and for virtual reference staff; there were two different schedules for both reference models, as well as two separate means of gathering and organizing reference statistics. Our virtual reference service was often available at the same time as our traditional reference services. Our reference desks are normally staffed from 9:00 a.m. to 9:00 p.m. Mondays through Thursdays; 9:00 a.m. to 5:00 p.m. Fridays; and limited hours on the weekends. The virtual reference service was offered from 10:00 a.m. to 4:00 p.m. from Monday through Friday. Two different reference staff members had to be assigned to monitor our two services since our virtual reference service was often available at the same time as our traditional reference services. While this may not have been deemed negative, it is ideal when one staff member can monitor the virtual reference service while working at the traditional reference desk.

PILOT PROJECT OR PERMANENT SERVICE?

The pilot-project nature of the service was yet another challenge for the virtual reference administrators. Unlike the traditional reference model, the virtual reference service started as a library-wide trial project and maintained this status for three years. The temporary status proved challenging for planning, marketing, funding, and staffing the service. Although the administrators were aware that marketing the service would likely increase its use, they were reluctant to do so, in case user expectations were created for a service that might cease to exist by the next academic year. This was yet another reason for the recommendation to integrate the virtual service into the current suite of reference services.

RESPONSE TO THE SERVICE

From the service's inception, both qualitative and quantitative statistics were collected for assessment. Some statistics were essential and have been collected from the beginning, and some questions were introduced later as we tried to compose a clearer picture of our users. It is important to note that the service moved from a commercial, virtual reference product at the beginning of the 2007–2008 academic year to an instant messaging service that lacked the ability to gather usage statistics and administer user surveys. At this time, the user survey was separated from the online chat form and appeared as a separate link on the "Ask a Librarian" page. Patrons were not prompted to

answer the survey at the end of their session, but some chose to do so. Survey responses decreased significantly once that separation was made.

Of prime interest was the number of questions we received through virtual reference, and how the number compared to traditional reference questions (comprised of in-person, telephone and e-mail questions) (table 2). Questions asked through virtual reference do not represent a large percentage of the total number of questions asked, but they do represent a growing percentage of the whole. Significant to note is the downward trend of traditional reference questions and the growing number of virtual reference questions. Over the last five years the number of virtual reference questions has increased 291 percent. Undergraduates remain our largest patron group, although not as markedly as at the beginning of the project, while graduate students' questions now make up almost

one quarter of our total, up from 16 percent in 2004–2005 (table 3).

For the first three years, we tracked the type of virtual reference questions being asked; research questions represent the majority (table 4). Research questions were defined as those about how to find information on a specific topic, how to find journal articles or books, how to search a database, or how to cite a resource. Definitions of other types of questions can be found in appendix A.

RECOMMENDATION FOR INTEGRATION

The aforementioned challenges prompted the virtual reference administrators to include the following as the primary recommendation in the final reports for both Year II (2005–2006) and Year III (2006–2007) of the virtual reference pilot project:

Table 2. Reference Questions Received at U of S Library

	2004–5	2005–6	2006–7	2007–8	2008–9	2009–10
Total Reference Questions	28,111	26,900	25,169	19,699	18,945	16,043
Total Virtual Reference Questions	647	674	653	770	1,347	1,444
Percentage of Total	2.30%	2.51%	2.59%	3.91%	7.11%	9.00%

Table 3. Breakdown of Virtual Reference Questions Received at U of S Library by Patron Category

	2004–5	2005–6	2006–7	Sept. 2007*– Mar. 2, 2009	Mar. 3, 2009– Present **
Undergraduate	55%	58%	57.6%	50.0%	40.3%
Off-Campus (not in Saskatoon)	10%	13%	8.2%	n/a	n/a
Graduate Student	16%	12%	15.1%	22.6%	24.6%
Public	5%	7%	2.2%	n/a	n/a
Staff	4%	4%	9.2%	5.7%	1.8%
Faculty	6%	3%	3.9%	6.6%	8.8%
Alumni	3%	2%	3.2%	n/a	n/a
Reciprocal	1%	1%	0.3%	n/a	n/a
Borrower					
Other	n/a	n/a	0.3%	15.1%	24.5%

*from Sept. 2007 forward, patrons could choose from 5 categories only: undergraduate, graduate, staff, faculty or "other"

** last verified Jan. 26, 2011

Table 4. Type of Virtual Reference Question Asked at U of S Library

Question Type	2004–5	2005–6	2006–7
Research	42.2%	53%	45.3%
Circulation	18.2%	14%	15.2%
Access	17.9%	12%	14.9%
Catalogue	8.1%	7%	9%
Directional	7.2%	7%	8.4%
Other	4.0%	5%	5.7%
Reconnect	2.4%	2%	1.5%
Total	100%	100%	100%

“that an integrated reference model be developed and that virtual reference be subsumed under this service model.”⁷

The authors stated

Ask a Librarian Live has become a vital component of reference service at the University of Saskatchewan Library, and should be mainstreamed into reference service offered at the University of Saskatchewan Library In this context, it is essential that virtual reference become part of an *integrated approach* to reference service. . . . An integrated reference service would treat all types of reference service at the Library equally. This would require providing reference service via one or more modes, and in one or more locations, depending on the needs and anticipated needs of our users, and within available resources.⁸

The process of integrating the virtual reference service at the U of S necessitated that the needs of library users be reassessed and that what is meant by ‘reference service’ at the library be re-examined. To undertake such an assessment there needed to be a return to the foundations of reference service.

ORIGINS OF REFERENCE SERVICE

Samuel Swett Green is often considered the “American pioneer of reference service.”⁹ In 1876, at the first conference of the American Library Association, Green presented a talk titled “The Desirability of Establishing Personal Relations Between Librarians and Readers in Popular Libraries.” The ideas in this presentation were seen as quite revolutionary and controversial for the time. That same year, Green published an article on the same topic in *Library Journal*.¹⁰ In these two works, Green

stressed that the role of librarians was not only to be the keepers of books and organizers of information, but that librarians must expand their role to include reference services. This was the first time reference services were clearly identified as an important component of librarianship. Tyckoson summarized Green’s four core functions of reference librarians:

- Instructing the reader in the ways of the library
- Assisting the reader with his queries
- Aiding the reader in the selection of good works
- Promoting the library within the community.¹¹

Tyckoson argues that although there have been many changes and improvements to reference services in libraries since Green’s time, these founding four philosophical functions remain unchanged.¹²

VALUES OF REFERENCE SERVICE

As Green identified the original core *functions* of reference librarians in the late eighteen hundreds, core values for reference service have also been identified.¹³ Tyckoson identified these values as accuracy, thoroughness, timeliness, authority, instruction, access, individualization, and knowledge.¹⁴ In *Our Enduring Values: Librarianship in the 21st Century*, Gorman discusses broader values for the librarian profession, such as stewardship, intellectual freedom, rationalism, privacy, and equity of access to recorded knowledge and information.¹⁵ While these values are foundational and important, each library must consider the needs of its patrons and place different emphasis on particular values to best serve them.

In the 1997 article “The Shape of Things to Come: Values-Based Reference Service for the Largely Digital Library,” Ferguson and Bunge

make a compelling argument to retain traditional library values “while exploring new values such as integrating technologies, maintaining holistic computing environment, delivering core services through the network, making technology work for all, and collaborating across administrative lines.”¹⁶ He advocates providing services to users where they are and when they need it as well as maintaining personal assistance. To move forward, libraries need to rethink their core values and perhaps identify new values to meet users’ changing needs and expectations.

It was the value of “equity of access” discussed by Gorman¹⁷ that stood out for the authors as they struggled with integrating reference services. At the U of S Library, patrons have increasingly accessed library resources online. Because of the vast size of Saskatchewan, many students choose to study by distance or online. These students may never have the opportunity to visit campus or use the library in person but, nevertheless, deserve equal access to library services and resources. Gorman points out that technology such as virtual reference can be used to provide equitable access to reference service, explaining that “none of these methods is as effective as human-to-human reference, but they are far better than no reference service for the rural, the home bound, or other such seekers of knowledge and information.”¹⁸

Compounding the issue of vast physical distances between patrons and the library is the issue of resource format. Like other academic libraries, the U of S Library has experienced a huge shift from housing print material to providing an increasing amount of material electronically. Consequently, even more users do not have to enter our library to gain access to services and collections. Because so many library resources are available online, users can choose to come into the physical library or not, and many, for numerous reasons, choose not to. The Association of Research Libraries (ARL) statistics reflect this trend in other academic libraries. Between 1991 and 2004, the number of in-person reference questions went down 34 percent,¹⁹ while in-house use of material decreased by 57 percent.²⁰

There are other indications that the trend toward users accessing library materials remotely will continue. In 2006 the Association of College and Research Libraries (ACRL) Research Committee was given the task of identifying ten assumptions about the future that would have the most impact on academic libraries and librarians. Topping the list was “there will be an increased emphasis on digitizing collections, preserving digital archives, and improving methods of data storage

and retrieval.” Another assumption was that “distance learning will be an increasingly more common option in higher education, and will coexist but not threaten the traditional bricks-and-mortar model.”²¹ With more material being digitized and made available online, and the growing number of students studying online or at a distance, users are now spending a greater proportion of their time online and not physically in the library.

What does that mean for reference service in academic libraries? It means that libraries need to re-examine what they do and how they do it. Martell expresses this well: “Libraries are no longer bound; they are boundless. Our users need our assistance as never before. Our challenge is to discover the roles we must develop in order to be of greatest benefit to them and to society.”²² While the format of library materials is increasingly online, and we see our patrons less and less, Samuel Swett Green’s core functions remain constant: to instruct, assist, and aid our patrons (in-person and remotely), while promoting the library and its services.

In this dynamic environment, libraries need to reexamine their reference service values to ensure all patrons are well served, regardless of their location. Providing assistance to users who do not physically visit the library speaks clearly to Gorman’s value of equity of access, which “involves removing or minimizing all the many barriers to use of library resources and programs for all library users.”²³ Gorman feels that “one should be able to have access (either to a library building or from a remote location), that library services should assist in the optimal use of library resources, and that those resources should be relevant and worthwhile.”²⁴ Equity of access is felt to be a key value at the U of S Library, where many patrons are off campus or online. Library staff confirmed that they continued to demonstrate Tyckoson’s values of accuracy, thoroughness, timeliness, authority, instruction, access, individualization, and knowledge. Yet to serve the growing population of remote users well, and acknowledging the growing number of online resources, it became apparent that the library needed to emphasize the core reference value of equity of access. What equity meant to library staff members was that a conscious decision was made to treat each question equally, regardless of the format in which a patron chose to contact the library. For example, an in-person request for information would be given no more and no less time and attention than a request sent digitally. Placing an emphasis on equity of access meant that remote users received the best reference service they could, given their physical distance from the library.

In 2008, the virtual reference administrators wanted to know more about the service users. Were they our “regular” patrons who visited the library and asked questions in person, or perhaps by telephone or e-mail? Or were we reaching a population that had never used traditional reference services? For this reason, we added to the survey the question “In the past twelve months, have you (check as many as are applicable):

- Sent an e-mail question to the library?
- Phoned a library information desk?
- Asked a question in person at a library information desk?
- Attended a library orientation session?
- I have never used any of the above services.”

We were quite surprised to note that 30.16 percent of patrons taking the survey have “never used any of the above services.” It is possible to conclude from this result that the virtual reference service was reaching a population that has not been reached before with traditional reference services. By offering virtual reference services, then, we are both assisting greater numbers of our patron population and promoting the library and its services, as Green advocates.

Gathering feedback was an important component of the service. The feedback survey was carefully designed to allow for both survey-type and open-ended questions. Some of the values Green, Tyckoson, and Gorman mention, particularly timeliness, access, individualization, and knowledge, are reflected in the feedback that patrons provided in their surveys. Most patron comments can be categorized according to these main themes: clarifying information, helpfulness, time saving, cool factor, access, technical concerns, responsiveness, and suggestions for improvement. For each theme, we attempted to select a spectrum of comments, including both positive and negative, to highlight many different experiences with the service since 2004.

Clarifying

- “Now I understand how to do it” (year 2)
- “[I] was getting so frustrated. But at least I know how to find them now. Thank you!” (year 2)
- “I think I just had to keep filtering words and keep going. I can keep working on this, thank you so much!” (year 3)

Helpfulness

- “Very fast and reliable. I am not overly familiar

with all databases that are available, or how to use them. This service has allowed me to not only get an immediate response, but to also watch and learn” (year 1)

- “Okay, thank you for your help, I was about to remove my hair strand by strand. This has been wonderful” (year 2)
- “I was stressing all night and you have made my day. Thanks soooo . . . much” (year 2)
- “ya I sure do thank you . . . ok well I have to go to class now but if I need any more help I will come on here again . . .” (year 3)
- “The person helping me answered my question, provided other related, useful information, and asked for my e-mail address to provide additional information as it became available. Excellent and convenient service!” (year 4)
- “It was my first time using it, but it was very helpful and so efficient, I got my answers quickly and I am going to be promoting this service—thank you very much!” (year 5)

Time Saving

- “This service is great! You get your answer right away!! Awesome! Thanks!” (year 1)
- “It saved me a lot of google searches” (year 2)
- “This saved me a trip to the library” (year 2)
- “It worked great! My questions was answered fast and succinctly” (year 4)
- “I love how efficient this is. I don’t have to wait a long time for an e-mail and if I have further questions there is less wait time. Also, it’s more personal. It’s easier to explain something when the person is able to converse, not simply jot down notes” (year 4)

“Cool Factor”

- “It is very nice to have someone for help at the time you experience a problem. I find this an example for a very good use of technology” (year 1)
- “Pretty cool service” (year 1)
- “This is a wicked function of the library” (year 2)
- “Neat system, this Librarian Live” (year 2)
- “Pretty freaking awesome. Great idea” (year 3)
- “FABULOUS” (year 3)

Accessibility

- “It was very helpful, considering some students are at all different places on campus and may not have time during the regular reference hours to run to main library, go see the reference

librarian and go back to class” (year 1)

- “This is an awesome way for students to get help and questions answered especially when they are not at the school and are on their computers at home” (year 1)
- “great service—have used several times and is particularly helpful during my fieldwork overseas when I am not able to go into the library myself” (year 2)
- “I found the help desk was always busy so it was great to get some help online immediately. I didn’t want to keep wasting time on the job. Thanks” (year 2)
- “This is the best thing in the world for Off Campus Students! Thanks” (year 2)
- “Fantastic! Especially for nursing students who are not in Saskatoon but have access to the U of S Library as we are full-time U of S students” (year 3)
- “This is an excellent way for questions to be answered—I think that I may be tempted to use library services more with this type of communication method in place. It’s fast and very simple. Thanks” (year 4)
- “It was great. Fast and convenient!” (year 5)

Technical Concerns

- “The information was helpful except I had to stop due to computer error” (year 1)
- “I hate it when technology does not work!” (year 3)
- “If it were faster, like instant messaging, then I would use this service a lot more” (year 3)
- “I waited but didn’t get a reply ☹” (year 3)
- “The browser was much too slow!” (year 3)
- “I used the IM embedded in the library reference page and I didn’t hear back immediately, so while I was waiting I clicked on the ‘Survey’ link and it navigated away from the IM page! I have no idea what happened to my request . . .” (year 4)
- “I have often experienced disconnections while using the Ask Us service through the University service . . .” (year 5)

Responsiveness

- “I didn’t get a response. Cool idea, but not helpful when resources are not employed to their full potential” (year 1)
- “Will I use it again? No, I didn’t receive a reply” (year 4)
- “I have used the Ask Us Live service on more than one occasion but it is a complete and utter waste of time. I just sit there waiting for

a response and never receive one. I have not been able to ‘Chat’ YET, unless typing to myself counts. Extremely dissatisfied” (year 4)

- “That’s awesome! I didn’t even know about the service until I saw it on the website, but I’ll definitely use it again! And it was fast! I thought I’d have to wait for someone to get back to me, but they were right there! Awesome! (year 4)
- “Thanks you for your prompt response! ☺” (year 5)
- “I have waited for almost ten minutes for someone to respond to my question or to acknowledge that I am online. There is also no way of mentioning to me that it may take some extra time and to be patient regarding the ask us live chat. This is very frustrating and does not help in allowing questions to be answered away from the library” (year 6)

Suggestions for Improvement

- “I think that this kind of service is absolutely appropriate. I hope that you will hire a librarian work a night shift and other times that students are working throughout the year” (year 1)
- “This service is a great idea—quick, friendly service. However, the library website has so many usability problems, that sometimes the librarians can’t find the answers. Improving the website would reduce the frustration of your users!!!” (year 1)
- “Many thanks for your assistance. I really find this service. Valuable. I’m hoping that at some point it will be extended past 5:00p.m. I will definitely use the service again and think that it is a great idea!! Very helpful☺” (year 2)
- “It is a good service, but at least a regular e-mail about the facilities and services offered by the library can be sent to grad students. Thanks!!!” (year 3)
- “It would help traffic considerably if you put this widget on the main page” (year 4)
- “The service is great, the results are poor. They should be a bit more friendly and if they do not understand how to help me, tell me the truth, don’t just close the chat window or fail to respond” (year 4)
- “If the service is offered there should be staff available to make it work” (year 5)

What stood out for us is the number of comments related to responsiveness after the instant messaging service was implemented in 2007. Although we did receive some negative feedback in 2006 while we used Docutek, it was quite minor compared to the negative feedback that we received

after implementing Meebo. Patrons who successfully connected to the service seemed quite satisfied with it, but those whose calls were not responded to were quite irate. The issue of disconnecting is challenging for library staff, who are often simultaneously assisting an in-person patron and trying to monitor incoming virtual reference requests. At times, library staff will be physically away from the desk and therefore temporarily unable to monitor the service. Although it is possible to indicate that staff are “away” while monitoring Meebo, this step is often inadvertently overlooked. From the virtual patron’s perspective, Meebo indicates that library staff are online, so they are naturally perplexed and annoyed when they request help and do not receive it. Patrons’ expectations seem to be different with telephone or e-mail reference service. If their telephone call is not answered immediately or their e-mail is not returned immediately, there does not seem to be the same sense of frustration. This is an area requiring further research.

MOVING FORWARD

In spring 2006, two years into the virtual reference trial, the U of S Library welcomed a new dean who undertook an extensive strategic planning process. The purpose of the planning process was to determine the vision for the library’s future and set appropriate priorities for action.²⁵ A strategic action item, specific to transforming reference service, was to “implement library-wide *integrated approaches to services*, collections and facilities that remove barriers to learning and teaching.”²⁶ In August 2006 the authors met with the dean to discuss the final report for Year II. The dean endorsed the report but noted that the “virtual reference service had already moved beyond being a pilot project, although organizationally there seemed to be some reluctance to accept/admit this.”²⁷ The dean recommended speaking about the project to the librarians’ forum group, a group which discusses matters of interest to the library profession as well as library policy at the U of S. Although concerns were expressed at the librarians’ forum about the relatively small number of questions answered through virtual reference, there was general support for the service, since it was agreed that the needs of the user were paramount to the format of the question posed. Consensus was reached to strike a task force to implement an integrated reference model.

INTEGRATED REFERENCE TASK FORCE

The integrated reference task force, created in the fall of 2006, “was charged with preparing

a draft program statement and implementation plan for the transition to an integrated service delivery model for reference services as the U of S Library.”²⁸ An extensive literature search was undertaken and many open staff forums were held to gather comments, experiences, and suggestions about reference services in general. At the forums, library staff expressed concern about the relatively small numbers of questions asked through the service but also agreed that most other universities were offering the service. There was also discussion about how efficiently virtual reference can assist patrons when compared to telephone or e-mail reference, but the discussion came back to the issue of our patrons and their preferences for contacting us. We agreed that the patrons and their choices should be driving our services, not our awareness of the limitations inherent in each type of reference service. Another major point of discussion was the skills required to provide effective virtual reference service. While the library was moving toward a liaison librarian model that encourages subject-specific knowledge and appropriately tailored services, it was agreed that a more generalist approach was ideal for providing virtual reference service. Clearly, two different types of skills were required to provide traditional and virtual reference service: in-depth, subject specific knowledge to support each college or department at a program level following the liaison model, and more generalized information about library policies, procedures, information on undertaking research, and the ability to know when and to whom questions should be referred.

After consulting the literature and obtaining input from staff, the task force was compelled to address many overarching questions: What is reference? How should it be delivered? Who should provide it? The task force also addressed micro-level questions: Did directional questions count as reference? Did confirming the status of a patron’s fines constitute reference? Was answering a telephone call about library hours considered reference? Does a patron standing at the reference desk have any priority over a patron phoning or e-mailing the library? The task force was obliged to consider all of these different types of questions. It is important to note that this level of analysis had not been undertaken before. With input from all library staff, the task force drafted a final report recommending several revisions to the existing service model.

The *Integrated Reference Task Force Final Report* recommended major changes to the current reference model. Changes included implementing a two-tier reference model with library assistants

and librarians with limited liaison responsibilities providing tier one reference services. Tier one reference was defined as helping patrons (generally first and second year undergraduate students) with general or directional questions and providing one-on-one instructional activities, such as finding books, journal articles, and other sources of information for a given topic. Tier two reference services were to be delivered by liaison librarians who assisted patrons with in-depth, complex research questions in their respective subject liaison areas and providing extensive one on one subject instruction by appointment. Tier two service was mainly designed for senior undergraduate and graduate students, faculty, and other researchers and practitioners. One of the goals of this new two-tier approach was to alleviate the reference desk workload concerns of liaison librarians while utilizing the skills and experience of library assistants.

To successfully implement a two-tiered reference service, the *Integrated Reference Task Force Final Report* recommended that a formal reference training program for library assistants be developed. At the time, the library did not have enough reference staff to adequately cover both traditional and virtual reference services. Remaining true to our newly developed strategic plan, we wanted to develop our existing human resources and take advantage of the skills that our library assistants had to offer. Before that could be done, however, it was necessary for the library to identify the formal educational qualifications required to work at the reference desk, since there had been system-wide inconsistency in this in the past. To reach a decision, the senior management team reviewed a Canadian Association of Research Libraries (CARL-ABRC) survey of the qualifications of library staff working at reference desks as well as the qualifications required by two other libraries in the province: the University of Regina Library and the Saskatoon Public Library. After much discussion, it was agreed that newly hired reference assistants would require an undergraduate degree and/or a library technician diploma. Existing reference assistants without an undergraduate degree or a library technician diploma maintained their current classification and remuneration but were encouraged to attain formal qualifications. This decision had implications for library assistant remuneration, which necessitated meetings and agreement with the Canadian Union of Public Employees (CUPE). Library assistants who expressed interest in and were chosen to attend the formal training session received a reassignment memo documenting the inclusion of reference service provision in their position responsibilities.

A pro-rated higher-level duty pay was agreed upon by the university and the collective bargaining unit governing library assistants.

A standard reference training program was developed to provide “a foundation on which library assistants could acquire and build reference knowledge and skills.”²⁹ The program was offered as a pilot project, which could then be assessed for viability. The program’s goal was to train qualified library assistants not currently providing reference service to increase the number of people who could undertake reference service. A call for expressions of interest was issued to public services library assistants within specific branch libraries participating in the program. Ten library assistants were chosen. The program was designed by the reference coordinator, along with another librarian who had taught reference courses in two different library technician programs in western Canada. The course was delivered over a seven-week period and consisted of weekly three-hour instruction sessions. The participants identified key competencies that they expected to acquire by the end of the training program. These included approachability, communication, interviewing, searching, source knowledge, user knowledge, referral, and technology. Participants and branch heads assessed the training program. The final report concluded that the “project was successful in meeting the goal of adequately training library assistants with appropriate academic qualifications and interest to provide Tier 1 reference service . . . [but that] there has not been any formal assessment around how well the pilot project addressed the issue of reference desk release time for liaison librarians.”³⁰ Although the program was deemed successful, the second recommendation of the report was “that an alternate method of conducting general reference training be investigated, e.g., utilizing existing reference courses offered by library technician programs (online or face-to-face) or through contracting out training to an external trainer.”³¹ The primary reason for this recommendation was the time commitment required by the reference coordinator and other course instructors to deliver the content. By the end of the pilot project, the reference coordinator position was eliminated in the library’s organizational structure, which presented a major obstacle to delivering this program in the future.

Although the integrated reference task force’s final report did not directly address the integration of the virtual reference service, it did recommend that the library continue to offer its current virtual reference service until the end of the 2006–7 academic year and switch to instant messaging

software in the fall if reliable cobrowsing software was not found. Recognizing this oversight, the July 2007 meeting of the library's senior management team focused specifically on integrating the virtual reference service into the traditional reference service model. Much discussion focused on what hours to offer virtual reference service. The point was raised that telephone or e-mail reference service was not restricted to limited hours of the day, so why restrict the hours that virtual reference was offered? The senior management team decided that virtual reference should be fully integrated and offered whenever traditional reference service was offered, which included evenings and weekends. Virtual reference statistics were incorporated into the central networked reference statistics spreadsheets and reported to senior management. Because the virtual reference service was staffed system wide, the allocation of hours per branch was determined jointly by the reference coordinator and one of the virtual reference administrators. The total number of reference hours provided by the U of S Library during the week was divided proportionately by the number of reference staff available at each of the seven branch libraries. Larger branches with more staff were assigned more hours to staff the service. It was left to the branch to determine how they would staff the service—some branches chose to staff the service from the reference desk, while others chose to have a second person monitor the service from a separate location, such as an office or from home. The most popular choice has been to monitor the service from the reference desk.

Since the fall of 2007 the U of S Library has been using Meebo instant messaging software. This software was chosen because it is easy to use, works on different operating systems, supports many types of instant messaging services, and incorporates a widget allowing patrons to easily type in their question without having to use chat software. Since that time, there have been human resource changes in the library that have directly impacted reference services. The authors, former virtual reference administrators, are no longer responsible for virtual reference as this service was subsumed under the larger integrated reference service model. The reference coordinator position was also eliminated, resulting in the absence of a champion for reference services. Internal statistics reveal the use of the virtual reference service continues to be a small but steady proportion of the library's reference service.

In light of the impact of the recent economic downturn in Canada, some library staff have questioned continuing a service which is not

statistically overwhelming. Despite the relatively small number of questions received, comments submitted by users through an online survey have demonstrated that the service is valuable and significant. Recently, a study by Granfield and Robertson used both surveys and focus groups to identify the "help-seeking preferences of library users" in two academic universities in Ontario.³² The survey was administered to two groups, one at the reference desk and one online after patrons asked a virtual reference question. The study concluded that even though both groups acknowledged the physical reference desk as their first choice for getting help, there was a strong feeling, particularly from graduate students and students living off campus, that virtual reference is "an important service point even from within campus libraries."³³ The study concludes that "libraries should respect and accommodate the use of VR within library facilities."³⁴

LESSONS LEARNED AND PLANNING RECOMMENDATIONS

The authors offer lessons learned and planning recommendations from their experience with integrating virtual reference into their current reference service model.

1. It is vital that the library both identify and communicate its core reference values to all staff. From the very beginning, the authors felt strongly that equity of access was a key value. This reference value was a guiding principle throughout the years of providing reference service. It is important for libraries to identify, communicate, and reassess their reference values on an ongoing basis.
2. The integration process forced the U of S Library to look at reference services from a wider perspective. While this was not the original intent of the integration project, it was a very useful process to undertake. It forced the library to question the basic tenets of reference including what is reference and how should it be delivered? Who should deliver it and when?
3. The integration process revealed a need for a clearly communicated policy about the minimum educational requirements needed for all reference assistants. Because of this oversight, there was a disparity between staff members who were providing different forms of reference service. After a rather lengthy process involving numerous meetings with a collective bargaining unit and the university's human resources department, the library successfully

developed a policy on educational requirements for staffing its reference services.

4. There should be a designated reference person on staff to monitor system-wide reference issues such as staff training, technological advances, and new products.
5. The only way U of S Library reference services were able to move forward was with the support and dedication of all library staff: library assistants, librarians, branch heads, senior administration and our dean. Without this support, the project would not have been possible or successful.

CONCLUSION

Core reference values as well as the importance of a strong reference service philosophy can be traced back to Samuel Swett Green's belief in the importance of the personal relationships between librarian and patron. Although Green introduced this foundational ideal in the late 1880s, it still remains true today.

Evolutionary uses of technologies for fielding reference questions, from the use of the telephone to instant messaging, have allowed library patrons to ask questions and receive assistance in a variety of modes available and convenient to them. Over the years, libraries have adopted commonly used technologies and communication tools to best suit their users' changing needs. Does the mode or method of how the question is asked make a reference question any less valid? The authors would argue not. Equity of access for patrons, and therefore equity of reference service, was a guiding principle throughout the integration process. A reference question is a reference question regardless of format or location of the patron.

The virtual reference administrators initially introduced the idea of developing an integrated reference model at the University of Saskatchewan Library. This recommendation's implementation provided the impetus to re-examine reference services as a whole at the library and forced us to question what we do, how we do it, and why. The successes of this examination led to a new reference model that had far-reaching implications, including a more integrated approach to service delivery and a new reference staffing model. From the authors' point of view, the integrated reference task force was a success in that most of the recommendations addressed all types of reference services, not only virtual reference. The integrated reference project has evolved into a truly integrative reference service, not simply a reference service with a virtual reference add-on.

References and Notes

1. Joseph Janes, "Introduction: The Integration of Digital Reference," in *The Virtual Reference Experience: Integrating Theory into Practice*, ed. R. David Lankes (New York: Neal-Schuman Publishers, 2004): 2.
2. Cathy Carpenter and Crystal Renfro, "Twelve Years of Online Reference Services at Georgia Tech: Where We Have Been and Where We Are Going," *Georgia Library Quarterly* 44 (Summer 2007): 6–9; Jo Kibbee, "Librarian Without Borders? Virtual Reference Service to Unaffiliated Users," *Journal of Academic Librarianship* 32, no. 5 (2006): 467–73; Elizabeth Brown, Sarah Maximiek and Erin E. Rushton, "Connecting to Students: Launching Instant Messaging Reference at Binghamton University," *College & Undergraduate Libraries* 13, no. 4 (2006): 31–42; William Breitbach, Matthew Mallard and Robert Sage, "Using Meebo's Embedded IM for Academic Reference Services: a Case Study," *Reference Services Review* 37, no. 1 (2009): 83–98.
3. University of Saskatchewan, "U of S Facts & Figures," www.usask.ca/uofs/fact_sheet.php (accessed Sept. 8, 2009).
4. Vicky Duncan and Darlene Fichter, "What Words and Where? Applying Usability Testing Techniques to Name a New Live Reference Service," *Journal of the Medical Library Association* 92, no. 2 (2004): 218–25.
5. Janes, "Introduction," 3.
6. Brown, "Connecting."
7. Vicky Duncan and Angie Gerrard, "Virtual Reference Report Year II, September 2005–April 2006," (2006): 2; Vicky Duncan and Angie Gerrard, "Virtual Reference Report Year III, September 2006–April 2007," (2007): These reports are internal documents located on the U of S Library's intranet. Copies may be requested from the authors.
8. Duncan, "Virtual Reference Report Year II," 1.
9. Kenneth Whittaker, "Towards a Theory for Reference and Information Service," *Journal of Librarianship* 9, no. 1 (1977): 49–63.
10. Samuel S. Green, "Personal Relations between Librarians and Readers," *American Library Journal* 1, no. 2/3 (1876): 74–81.
11. David Tyckoson, "On the Desirableness of Personal Relations Between Librarians and Readers: The Past and Future of Reference Service," *Reference Services Review* 31, no. 1 (2003): 183–96.
12. Ibid; David Tyckoson, "What We Do: Reaffirming the Founding Principles of Reference Services," *Reference Librarian* 28 no. 59 (1997): 3–13.
13. RUSA, "RUSA Annual Report," <http://rusa.ala.org/blog/2009/06/26/rusa-annual-report-2009/#more-253> (accessed July 9, 2009); Michael Gorman, "Values for Human-to-Human Reference," *Library Trends* 50, no. 2 (2001): 168–82; David Tyckoson, "What is the Best Model of Reference Service?" *Library Trends* 50 (Fall 2001): 183–96.
14. Tyckoson, "What is the Best Model of Reference Service?" 183–96.
15. Michael Gorman, *Our Enduring Values; Librarianship in the 21st Century* (Chicago: American Library Association, 2000).
16. Chris D. Ferguson and Charles A. Bunge, "The Shape of Services to Come: Values-Based Reference Service for the Largely Digital Library," *College & Research Libraries* 58, no. 3 (1997): 252.

17. Gorman, "Values for Human-to-Human Reference," 168.
18. Ibid.
19. G. Sonntag and F. Palsson, "No Longer the Sacred Cow—No Longer a Desk: Transforming Reference Service to Meet 21st Century User Needs," *Library Philosophy and Practice* (2007), www.webpages.uidaho.edu/~mbolin/sonntag-palsson.htm (accessed Jan. 26, 2011).
20. Charles R. Martell, "Guest Editorial: The Ubiquitous User: A Reexamination of Carlson's Deserted Library," *portal: Libraries and the Academy* 5, no. 4 (Oct. 2005): 441–53.
21. James L. Mullins, Frank R. Allen, and Jon R. Hufford, "Top Ten Assumptions for the Future of Academic Libraries and Librarians: A Report from the ACRL Research Committee," *College & Research Libraries News* 68, no. 4 (Apr. 2007): 240–41, 246.
22. Martell, "Guest Editorial: The Ubiquitous User," 451.
23. Gorman, *Our Enduring Values*, 132.
24. Ibid., 133.
25. University of Saskatchewan Library, "University of Saskatchewan Library Strategic Plan 2007–2012," (2006): This report is an internal document located on the U of S Library's intranet.
26. Ibid., 13; emphasis added.
27. Vicki Williamson, e-mail to Vicky Duncan, June 18, 2008.
28. Vicky Duncan et al., "University of Saskatchewan Library Integrated Reference Task Force Report," (2006): This report is an internal document located on the U of S Library's intranet.
29. Susan Murphy, "LA Reference Training Pilot Project Final Report—April 2009," (2009): This report is an internal document located on the U of S Library's intranet.
30. Ibid., 4.
31. Ibid.
32. Diane Granfield and Mark Robertson, "Preference for Reference: New Options and Choices for Academic Library Users," *Reference & User Services Quarterly* 48 no. 1 (Fall 2008): 44.
33. Ibid., 51.
34. Ibid.

APPENDIX. DEFINITIONS OF QUESTION TYPES

These definitions were modeled after definitions drafted by the University of Alberta Library, and were used with permission.

- Research: How to find information on a specific topic, how to find journal articles or books, how to search a database, how to cite a resource.
- Circulation: Questions concerning circulation policies, loan periods, the "My Account" feature, barcode or PIN number, renewals, requests, ILL, reserve.
- Access: E-journal passwords, difficulties with database connection, proxy server/EZProxy questions, TAL/COPPUL cards, distance ed. services, accessing a particular e-journal title.
- Catalogue check: Simple search of the catalogue. Do we have a specific journal (*Harvard Business Review*) or a specific book, how to interpret/use the catalogue (use limiting features, etc.).
- Directional: Hours of operation, how to find a building on campus, do we have group study rooms.
- Reconnect: Patron disconnected from a previous session and reconnected to continue where s/he left off.
- Other: Anything that doesn't fit in the above categories.