

Analysis and Lessons Learned Instituting an Instant Messaging Reference Service at an Academic Health Sciences Library: The First Year

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ABSTRACT. In February 2006, Thomas Jefferson University went live with a new instant messaging (IM) service. This paper reviews the first 102 transcripts to examine question types and usage patterns. In addition, the paper highlights lessons learned in instituting the service. IM reference represents a small proportion of reference questions, but based on user feedback and technological improvements, the library has decided to continue the service. doi:10.1080/02763860802080119 [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2008 by The Haworth Press. All rights reserved.]

KEYWORDS. Instant messaging, virtual reference services, Ask a Librarian, chat, usage patterns, lessons learned, academic health sciences libraries, case study

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INTRODUCTION

In February 2006, the Scott Memorial Library at Thomas Jefferson University in Philadelphia launched an instant messaging (IM) reference service. This paper examines the first 102 archived messages to determine the nature of questions patrons asked reference librarians and provides statistical analysis on the frequency of IM shorthand use, how often patrons and librarians introduced themselves, and when questions were typically asked. In addition, issues that went into setting up the IM service and what the future holds will also be discussed.

Setting

Founded in 1824, Jefferson Medical College is one of the largest private medical schools in the United States. The academic medical center includes the Jefferson Medical College, Jefferson College of Health Professions, Jefferson College of Graduate Studies, and Thomas Jefferson University Hospital, a 900+ bed teaching facility. Scott Memorial Library serves the three colleges in the university and the hospital. It is a member of the Association of Academic Health Sciences Libraries (AAHSL). The library's collection includes nearly 200,000 print volumes, over 6,000 journals, and 350 e-books. The library serves approximately 2,100 students and over 5,680 full-time employees.¹

Instant Messaging—Global Usage

IM claims to be the new e-mail. A Pew Internet and American Life Project study, "Teenage Life Online: The Rise of the Instant-Message Generation and the Internet's Impact on Friendships and Family Relationships," conducted in 2001, found that 74% of online teens use IM, and 69% of these individuals use it regularly.²

A more recent 2004 Pew Study, "How Americans Use Instant Messaging," posited that 62% of Internet users ages 18 to 27 have used IM. According to the Pew study more than 50 million Americans use IM, with 24% stating they use it more frequently than e-mail. The Radicati Group projects the number of IMs sent daily will grow from 13.9 billion in 2005 to 46.5 billion in 2009.³

Another Pew Internet and American Life Project, "Teens and Technology," found that IM is one of many new technologies preferred for talking to friends and that e-mail is used to communicate with "old people,"⁴ although other studies have refuted this claim. For example, the

ECAR Study of Undergraduate Students and Information Technology surveyed 28,724 students in 2006 and found they overwhelmingly preferred e-mail to IM.⁵ The Henry J. Kaiser Family Foundation's study, "Media Multitasking Among American Youth: Prevalence, Predictors and Pairings," reports the total weekly hours (based on diary data) devoted to IM is one hour and four minutes, while the three most common multitasking activities paired with IM include music, Web surfing, and e-mail.⁶ IM is popular, but still trails e-mail in popularity of use.

Fifty-three percent of adult Internet users sent or read e-mail on a typical day in December 2005, which is an increase of just 1% since 2000. As noted by the authors of "Riding the Waves of 'Web 2.0,'" the 53% of adult Internet users who sent or read e-mail on a typical day is more than IM, blogging, and online shopping combined.⁷

Instant Messaging—Use in Medical Schools

E-mail is still being used on college campuses, but with so many new forms of communication, the information services (reference) department decided to investigate them for opportunities to extend services. In August 2006, the incoming medical school class of the Jefferson Medical College (255 students) answered a short survey. One question asked if the students IM; 84% reported using IM, with 16% not using any IM program. The number of academic and research libraries using IM or real-time digital reference services in various forms continues to grow and reflect its popularity among matriculating students.

In the fall of 2006, Cleveland and Philbrick conducted a study to determine current trends in virtual reference services in academic health sciences libraries.⁸ They examined the Web sites of the 137 academic health sciences libraries represented in the *Membership Directory of the Association of Academic Health Sciences Libraries* (AAHSL).⁹ The majority (127, or 93%) offered virtual reference services with only 7 (5%) not offering virtual reference services. However, only 35 (28%) offered chat reference services and 30 (24%) offered IM reference services. A similar study conducted several years earlier in 2003 found similar levels (27%) of virtual reference services.¹⁰ Future studies could examine why more libraries have decided not to offer IM or chat.

Jefferson librarians were aware that IM had become a popular mode of communication. Many businesses, including database vendors, had started offering IM and chat functionality to their Web sites. In an effort to offer these same services to patrons, Jefferson librarians decided to add IM to existing e-mail, phone, and in-person reference services. IM

would not replace these services but would be offered as a supplementary communication method to reach and educate patrons,^{11,12} in short, an extension of existing reference services.¹³

PROJECT SET-UP

Jefferson librarians considered commercial virtual reference software. However, evidence that these platforms had technical barriers to use, such as pop-up blockers and required forms,¹⁴ and that some libraries had discontinued their services for lack of added value¹⁰ led to the decision to begin with a low-cost IM pilot.

Jefferson librarians selected the Trillian software because it supported multiple IM networks in one interface and the basic version was free. In the winter of 2006, Information Services initiated the pilot IM project. The reference service supported the AIM, Yahoo!, and MSN networks. Screen names were added to the Ask a Librarian Web page, which provides all of the methods for contacting the reference service: IM, e-mail, chat, telephone, in-person, and a knowledge base of frequently asked questions. To better promote the service, a link was added to the library banner in the upper right-hand corner that appears on every library Web page (see Figure 1).

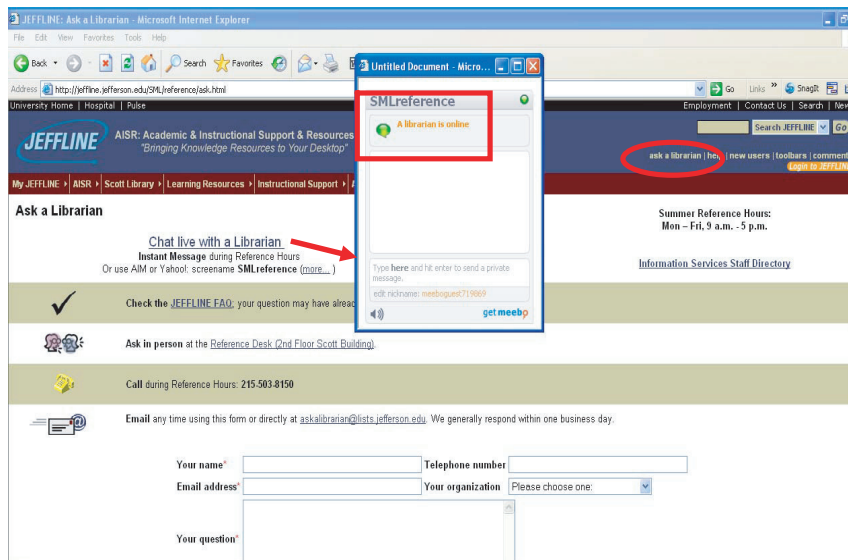
During the pilot, librarians practiced IM within the department, testing the various networks on campus, testing the video and document transfer features, and trying to standardize a cohesive narrative including greetings and responses for frequently asked questions.

Software Costs and Staffing Issues

Thomas Jefferson paid \$25 to upgrade to TrillianPro for its Google Talk and Meebo support. Despite the minimal software costs, the library staff did invest significant staff time to plan, design, and promote the service and continued to spend time evaluating and improving it. One librarian led the project, with eight librarians and two reference technicians eventually trained, staffing the service and participating in its development.

Reference librarians were initially assigned IM shifts from their offices in the afternoon. After a few weeks, IM requests were few, so it was decided to expand the service to full reference hours, while still monitoring from librarian offices. Because the scheduling was cumbersome

FIGURE 1. Ask a Librarian Link to Chat, E-Mail, IM, and Phone Information



and traffic remained low, the service was consolidated with the librarian at the reference desk. This led to consistent scheduling and provision of reference service.

TRANSCRIPT ANALYSIS

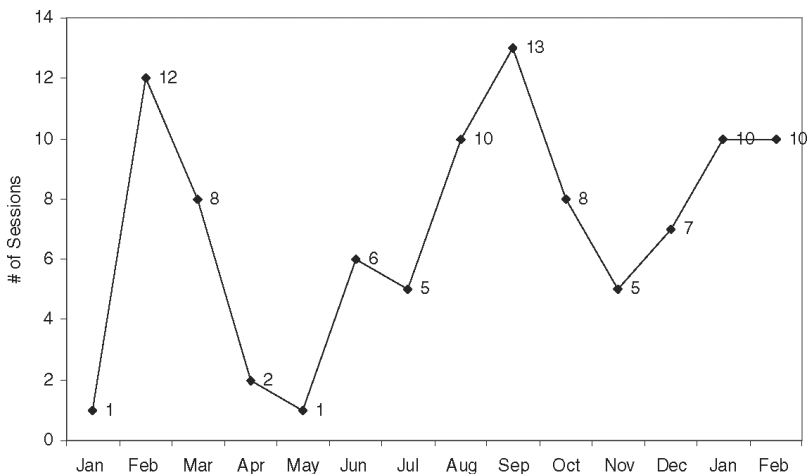
By February 2007, 102 IM questions had been answered. Coinciding with the first-year anniversary of the service, the transcripts were analyzed.

Of the 102 messages analyzed, September 2006 had the highest number of IM questions, with a total of 13. May 2006 had the lowest, with only one question. The numbers correlate with the start and end of the academic year. On average, the reference desk answered 7.3 questions per month (see Figure 2).

Most Popular Time of Day for Questions

The most popular time of day for receiving IM questions was between 4:00 p.m. and 5:00 p.m. (see Figure 3). The least popular time was during

FIGURE 2. Session Frequency per Month



the morning, from 9:00 a.m. to 11:00 a.m. The service was staffed from 9:00 a.m. to 8 p.m., Monday to Thursday; 9:00 a.m. to 5:00 p.m. on Friday; and 11:00 a.m. to 5:00 p.m. on Saturday. There is no reference service on Sunday.

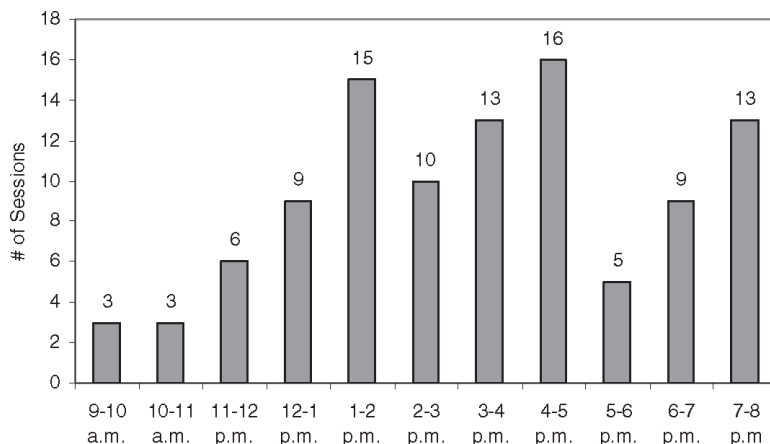
Most Popular Day for Questions

The most popular day of the week to ask an IM question was Thursday (30 questions) (see Figure 4). The least popular day was Friday (8 questions).

Average Length of Sessions

In 2000, the Pew Research Center polled 754 teenagers, finding that the average IM session lasts more than a half hour.² The average length librarians spent on IM interactions was 14.6 minutes. A total of 1,764 minutes (29.4 hours) was spent answering IM questions. The longest interactions lasted 74 minutes, and two interactions lasted only one minute.

FIGURE 3. Most Popular Time of Day to Send IM Questions

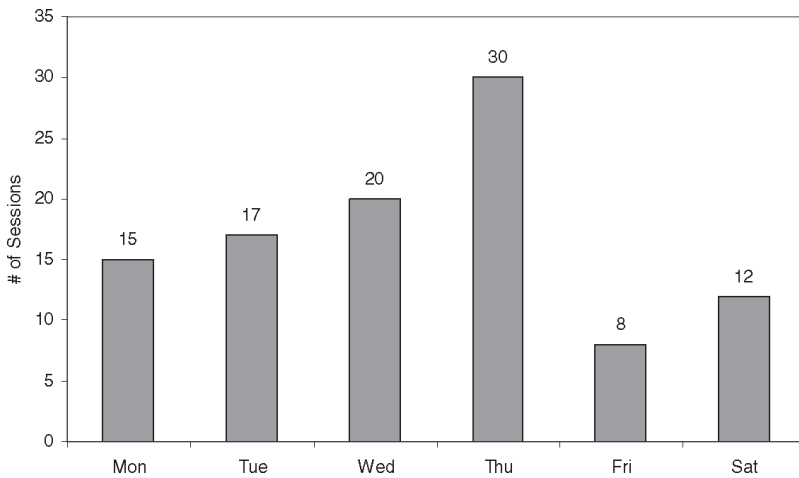


Types of Questions Asked via IM

To help examine the types of questions received via IM, librarians created the following categories:

- Technology (login, access to database, wireless, course management systems, for example, “I’m having trouble logging into Ovid. Is it down?”)
- Document Delivery (ILL, catalog, requesting journal, book or citation, license exceeded, for example, “The catalog says you don’t have the journal I need. How can I get an article from it?”)
- Reference question (statistics, phone numbers, database instruction, for example, “I am trying to get a recent article on the following topic: Retail health clinics such as take care systems [run by nurse practitioners] and quality of care delivered by them compared to primary care physicians.”)
- Library policy (hours, borrowing policies, etc., for example, “Hi, when does the library close today?”)
- Curriculum/class assistance (help with specific class assignments, for example, questions from first-year medical students about their self-directed learning cases)
- Bibliographic Management Software question (RefWorks and how to cite resources, for example, “I’m off campus. How can I login to RefWorks?”)

FIGURE 4. Day of the Week IM Questions Were Asked



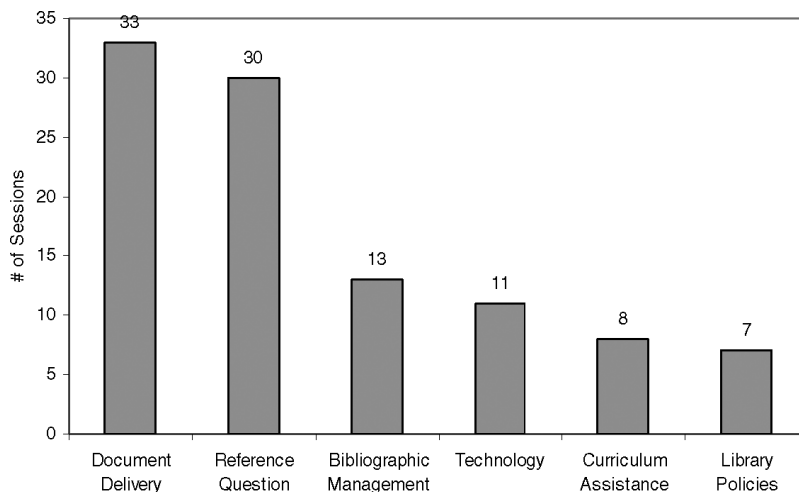
Many Jefferson librarians have noticed that the majority of questions asked at the reference desk are known item requests, which have been included in “document delivery,” and this is true of the IM data as well (see Figure 5). A close second is the category of reference questions. Navigating the library’s electronic collection continues to produce many questions from patrons. Surprisingly more technology questions were not asked via IM. This could be attributed to the Learning Resources Center (computer lab) answering many of the technology questions on campus. Bibliographic management continues to be a popular question type, for example, how to cite specific resources using APA, how to login to RefWorks from off-campus, and how to format a bibliography.

Policy and technology questions were almost all handled in 15 minutes or less. Among the 15 longer transactions taking over 30 minutes were six questions (40%) concerning bibliographic management software. Based on the time spent answering these, the library created, recorded, and printed tutorials to help address these questions.

Did the Reference Librarians Introduce Themselves?

Similar to the traditional face-to-face reference interview, an initial greeting is important and can establish approachability and credibility.¹⁵

FIGURE 5. Types of Questions Asked via IM



According to research, patrons are more satisfied and have more positive reactions to their library interactions when employees use their names.¹⁶ Some suggest that patrons feel more comfortable asking their questions anonymously without feeling embarrassed or frightened.^{11,17} IM technology is ideal for this type of interaction. In “The Generic Librarian,” Joan Durrance reported that “citizen leaders” who knew a librarian by name were far more likely to think highly of the library as an important information source for their “real world” public policy activities than those who did not.¹⁸ For these reasons, reference librarians who answered IM questions were instructed to introduce themselves by name and title.

The analysis at Jefferson looked at how many times the reference librarians introduced themselves by first name and how many times the patrons volunteered to share their names with the librarians. Of the 102 total interactions, librarians introduced themselves 73 times (72%). Patrons introduced themselves 35 times (34%).

User Affiliations

One hundred two questions were asked by 69 unique users, 11 of which asked more than one question. Of the 102 questions, 88 self-reported their affiliation. More than three-fourths of these (78%) were

Jeffersonians (students, staff, faculty, and alumni). Other users included high school students, paralegals, and students from other universities. Although the location of users was not solicited, the transcripts sometimes made it apparent. Of those, 49 were off-campus and five were on campus.

Did Patrons Use IM Lingo That Confused Librarians?

The *Chronicle of Higher Education* and other media outlets have reported that college students have started to incorporate IM acronyms in their essays and other class assignments.^{19,20} The popularity of IM acronyms posed a concern for librarians. During staff training a list of popular acronyms was shared to familiarize librarians with lingo. However, very few chat sessions included any IM lingo. Of the 21 sessions that did, 14 were simply *u* for *you* and other variations (“r u there?”). Only seven sessions used acronyms and only four unique terms were used (brb; lol; ic; afk). Only once was a librarian uncertain of the meaning (afk, away from keyboard). While librarians who are new to chat may need to become accustomed to less formal language, IM acronyms were not a barrier to use.

SURVEY RESULTS

With each IM interaction, librarians sent a short online survey to users to gather feedback on the new service. Below are a few comments received from IM patrons:

Great idea, thanks!

I enjoyed it very much.

A very valuable service.

This was great.

This is a WONDERFUL service. My mother is a medical reference librarian and I told her how great and useful this is, especially for someone living off campus without easy access to the library and staff.

Overall, the positive reactions echo those from other institutions who have published similar survey results.¹⁷

One patron did express technological frustrations:

Instant Messaging—another technological bane of our existence. Another interruption. Another fixation on the “instant.” I don’t think it’s the right direction for us to be moving forward in our technological—or overly technological—society. We need to foster the personal, the long-range view, and depth. “Instant Messaging” fails on these counts.

Of the 30 surveys received (29% response rate) from January 24, 2006 to February 28, 2007, the majority of the users were very satisfied and would use the service in the future. The breakdown of respondents who answered the online survey included: 18 students, 10 staff members, one faculty member, and one alumnus. When asked if patrons would use the service in the future, 24 responded “yes” and six indicated “no.” User satisfaction was high; 18 patrons were very satisfied, four somewhat satisfied, six neutral, and six had no response.

PERCEPTIONS FROM LIBRARIANS WHO STAFF THE IM SERVICE

By the end of the first year, all librarians who worked a shift at the reference desk were participating in the chat service. A survey of these staffers was distributed to determine if they valued the service and whether it should be continued. Because the service is a project of certain individuals on the staff, it was important for the chat operators to have a chance to express their opinions anonymously. A short questionnaire with six questions was prepared, and the administrative assistant for the library’s parent organization administered it.

All nine operators completed the survey. Of those, 8 (89%) said they would like to continue staffing the service over the coming year and that the library should continue the service.

Of the five non-exclusive options representing the value of the Jefferson IM reference service, its ability to improve relationships with users was the most frequently selected (8, 89%). Broadening the reach of the library’s reference service to underserved populations and increasing users’ productivity were the next most commonly chosen (6, 67%).

Increasing speed (4, 44%) and accuracy (3, 33%) of the reference service were the least chosen benefits.

Three respondents added free-form comments. Two qualified the values, and one requested improvements to procedures.

- While use has been low, I think it is well appreciated by those who use it.
- I don't believe it *improves* accuracy—speed perhaps—but not accuracy.
- [reach] No evidence that the users were otherwise underserved. Rather the opposite, because they found out about it as a result of either already using our online services or reading our promotional literature.
- [accuracy] No reason an IM answer should be any more or less accurate than any other medium.
- [speed] Maybe. It's no faster than a phone call, but definitely faster than in-person visit or 24-hour email. It may actually be slower than a phone call.
- [relationships] Maybe. Offers a different kind of relationship which seems to be welcome to some users.
- We simply need to continue to offer reference service through all plausible means of communication.
- The alert requiring folks to add a patron as a buddy before the chat box opens is frequently inadvertently ignored and the opportunity to chat w/a user is thwarted. Is there a solution?
- Current stats for IM are *tedious*! Is this not something that can be compiled all at once and scored by 1 person?

LESSONS LEARNED

During the pilot, lessons learned included:

- The university firewall prevented the use of Trillian's file transfer and video capabilities. E-mail continued to be the preferred method of sending files.
- Librarians needed practice to get in the habit of greeting patrons with an appropriate introduction.
- A naming standard was important for saving transcripts to a repository. The information services staff devised the following standard: year, month, day, start time, IM network, question (e.g., 20060205_1434_AIM_catalog.txt)

- Determining who and how the librarians would answer IMs changed during the pilot. Initially librarians were assigned a shift in their office in addition to their traditional reference desk shift, but it worked more smoothly having reference librarians monitor IM, answering questions directly from the reference desk whenever it was open.
- Speakers with sound were installed at the reference desk to help librarians hear incoming messages.
- Until habits were formed, one librarian was assigned to monitor that all the reference librarians on duty be online and that all transcripts and statistics be recorded.
- It should not be assumed that all reference staff have experience and are comfortable with IM. All staff were encouraged to open their own accounts and practice with colleagues before answering questions from patrons.
- The following techniques were stressed to all librarians who answered questions: introduce yourself by name, conduct a reference interview, make sure that the patron received what was needed, and send a link to the survey.
- IM offers reference departments an additional means of communication for users to ask questions. Some questions are straightforward and resolved during the IM transaction (see Appendix A), while others are resolved with a follow-up phone call, e-mail, or in-person consultation (see Appendix B).
- Several canned messages were drafted, but ultimately it was easier to respond to each message rather than to search for a canned message. Moreover, canned messages seemed negative and impersonal, detracting from the goal of conveying that a librarian is answering their question and not just another automated answering service.²¹
- A disadvantage is the difficulty in conducting instruction via this platform. Typing out directions is time consuming and this mode of communication makes it easy to just share a URL or answer, rather than teaching users to become more information literate and self-sufficient.²²
- An online survey was sent to IM users who asked questions. After a question was answered the librarians would send the URL to patrons to help gather their thoughts on the program and receive feedback to improve the service.
- In an effort to promote the service, IM information was added to multiple pages on the library Web site, posters around campus,

flyers at library service points, and included in all library orientations to new students, staff, and faculty.

- In December 2006, Trillian Pro (\$25) was purchased for its support of the Jabber network used by Google Talk and Meebo. It was installed on one reference desk computer.
- A free Meebo widget was added to the Ask a Librarian and IM pages. This made it easy for patrons visiting the pages to submit questions without needing an IM account.

CONCLUSION

The trend towards communicating with students in new ways now includes cell phone text messages, IMs, MySpace, and Facebook social-networking services. Chat has evolved to include the next generation of features: location based chat, flexible identities, and contextual chat.²³ Qualitative studies confirm that IM will continue to expand into the future. As noted in observations by students at the University of Wisconsin-Milwaukee, "I'm hopeful that the use of IM will expand into the future, as the use of e-mail has. Communication is an essential element of instruction."²⁴ Also, "As email is a step up from snail mail, IM is a step up from e-mail and telephones in the educational and business setting. Instant communication is essential in the fast-paced world of technology."²⁴

At Thomas Jefferson University the first step into these communication channels was a pilot IM reference service. Analysis of the first year's 102 session transcripts demonstrated that:

- IM acronyms are not as commonly used in academic chat as anticipated. Extensive staff training to learn IM acronyms is not needed.
- The most frequent IM question type asked fell under the category of document delivery.
- Traditional reference statistics gathering does not offer the level of detail of an IM transcript.
- Archived transcripts helped reference staff identify usage patterns. Reference staff learned that afternoon and evening hours were popular times to use IM.
- Analyzing archived transcripts helped reference staff understand patrons' needs. This helped library staff identify areas where more help documentation was needed.

These findings highlight and confirm two assumptions. First, the majority of questions asked via IM continue to be document delivery,

demonstrating a need to improve how electronic resources are presented to patrons. Second, free IM services are a viable means of offering reference for a small-to-medium sized medical library. With the growth of online communication methods, such as IM and chat, and the incorporation of these technologies in academic health sciences libraries, additional studies analyzing these services and their effects on traditional reference models are needed.

Based on user survey results and transcript analysis, the IM service at TJU has proved to be sufficiently effective to offer it for a second year. Staff will continue to improve it by monitoring the current service and investigating new developments in virtual reference software.

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APPENDIX A

TRANSCRIPT OF IM SESSION FOR JOURNAL LOOK-UP

User2 (1:09:33 PM): hi i have a question to ask about journals . . . if I know the author and title of the journal, how do i go about searching the internet on jeffline to see if jefferson has them?

SMLreference (1:10:33 PM): hi this is Anna [pseudonym used]. we have an online catalog that you can search or i can check it for you

User2 (1:11:14 PM): hi this is Carly [pseudonym used]. where would i go for the online catalog . . . “m new with this whole system so “m trying to learn

SMLreference (1:13:08 PM): there is a tab titled Scot t Library, put you mouse on that tab and a drop down menu will appear, go to Collections, and you will see another drop down menu, choose ThomCat from that menu

User2 (1:14:55 PM): ok im in thomcat

User2 (1:14:59 PM): thank you

SMLreference (1:15:16 PM): are you ok will finding the journal that you need from here

User2 (1:15:25 PM): yeah thanks

SMLreference (1:16:11 PM): you are welcome. would you mind taking a short survey at your convenience?

User2 (1:16:19 PM): sure

SMLreference (1:16:43 PM): you can find it at <http://jeffline.jefferson.edu/SML/reference/aimsurvey.html>

SMLreference (1:16:49 PM): thanks, have a great day

SMLreference (1:17:30 PM): bye

User2 (1:17:33 PM): thx you too

User2 (1:17:34 PM): bye

APPENDIX B

TRANSCRIPT OF IM SESSION ABOUT WRITE-N-CITE

Start of user buffer: Tue Jul 24 17:04:20 2007

[16:28] user: Are you available to answer a Write-N-Cite question?

[16:28] SMLreference: in just a second.

[16:31] SMLreference: hi, thanks for waiting. this is Jane [pseudonym used]

[16:31] SMLreference: how can i help you?

[16:31] user: hello Jane, i can't seem to install write-n-cite on my MAC

[16:32] user: i've used the link provided on jeffline to the download page, but it never downloads a functioning program

[16:33] SMLreference: (just logging into RefWorks now so I can see what it looks like . . .)

[16:34] SMLreference: Okay, you got to the RefWorks "Download Write-N-Cite" page?

[16:34] user: correct

[16:34] user: i've clicked on the option for the mac version

[16:34] SMLreference: it should download a compressed file that you have to drag into your applications folder

[16:36] user: when i double click to open the install program afterwards it says the file type is not supported

[16:36] user: the file is called "Archive.sitx" is that correct?

[16:38] SMLreference: hmmm. it should be a .dmg file

[16:38] user: ok . . . well, i thought perhaps the safari browser wasn't supported, so i tried netscape next and got a completely different file that also does not seem to cooperate

[16:38] SMLreference: what kind of mac do you have (what operating system)?

[16:38] user: os x

[16:39] user: the macbook before the most recent version

[16:39] SMLreference: I wouldn't think the browser would matter, just so long as you download the file.

[16:39] SMLreference: Have you installed much other software on that machine?

[16:40] user: nothing fancy, some palm software, the ms office suite, etc.

[16:41] SMLreference: is it os 10.4? or 10.3?

[16:42] SMLreference: is the file 132 KB?

[16:42] user: not sure, where do i find that?

[16:42] user: no, 199kb

[16:43] SMLreference: under the apple menu "bout this mac," maybe?

[16:43] user: actually, it says 199kb on the website, but the file i'm getting using netscape is only 184kb
[16:43] user: 10.4
[16:44] SMLreference: (I ask because my Mac experience is with 10.3)
[16:44] SMLreference: what does the icon of the downloaded file look like?
[16:45] user: a blank sheet
[16:45] user: seems to be unrecognized
[16:45] SMLreference: I can try emailing you the file.
[16:45] user: that would be great, [email address removed]
[16:46] user: if that doesn't work, perhaps i can stop in later in the week or try to put the file on my thumb drive using a mac in the LRC
[16:46] SMLreference: just sent it . . .
[16:47] user: so then i drag it into the applications folder . . .
[16:48] SMLreference: right. . . .
[16:48] user: and double click to install?
[16:48] SMLreference: oh . . . wait. try double-clicking the file i sent. hopefully it will un-stuff.
[16:48] SMLreference: then the resulting folder should have a program to drag into Applications
[16:49] SMLreference: or does the file i sent look like the same blank document?
[16:49] user: still a blank document
[16:49] user: no program recognized to open the file
[16:50] SMLreference: I'm looking around for anything about this as a known problem. . . .
[16:50] user: ok, i appreciate your help . . . unfortunately, i have to leave the computer now, if you find anything out please send me an e-mail
[16:50] user: if not, i'll try to the macs in the LRC later on
[16:51] user: thanks again
[16:51] SMLreference: will do . . . i'm reading about 10.4 discontinuing stuffit support . . . I'll send you an email
[16:51] SMLreference: thanks for asking

Note: The problem was resolved during an email exchange.

