

Winter 2006

Instruction via Instant Messaging Reference: What's Happening?

Christina M. Desai

University of New Mexico - Main Campus, cdesai@unm.edu

Stephanie J. Graves

Southern Illinois University Carbondale, sgraves@lib.siu.edu

Follow this and additional works at: http://opensiuc.lib.siu.edu/morris_articles

Author supplied post print. Published in: Desai, C. M. & Graves, S.J. (2006). Instruction via instant messaging: What's happening? *The Electronic Library*, 24(2), 174-189. Available at:

<http://www.emeraldinsight.com/10.1108/02640470610660369>

Recommended Citation

Desai, Christina M. and Graves, Stephanie J. "Instruction via Instant Messaging Reference: What's Happening?." (Winter 2006).

This Article is brought to you for free and open access by the Morris Library at OpenSIUC. It has been accepted for inclusion in Articles by an authorized administrator of OpenSIUC. For more information, please contact opensiuc@lib.siu.edu.

Title: Instruction via Instant Messaging Reference: What's Happening?

Authors: Christina M. Desai, Science Reference Librarian, Southern Illinois University
Carbondale
Stephanie J. Graves, Humanities Reference Librarian, Southern Illinois
University Carbondale

Type of paper: Case study

Keywords: Chat, Virtual Reference, Bibliographic Instruction, Reference, Instant
Messaging, Information Literacy

Structured Abstract

Purpose of this paper - This case study analyzes one Instant Messaging reference service to determine to what extent instruction is or can be offered in this medium and whether patrons want or expect it.

Design/methodology/approach - The authors surveyed IM patrons over a seven week period to determine whether they felt they could and did learn from chat transactions. Transcript content was analyzed to find out whether and how instruction is being offered.

Findings - Results show that patrons overwhelmingly welcome instruction and that it is provided in a large majority of cases, using a variety of bibliographic instruction techniques. The way the question is phrased, however, affects the likelihood of instruction to some extent.

Practical applications - The results of this study indicate that librarians should make a habit of practicing instruction in IM reference even when patrons do not appear to be asking for it.

Originality and value of paper - The relationship between instruction and virtual reference has not been fully explored in the literature. Reference and instruction librarians will benefit from this study's exploration of instruction in the IM medium.

Instruction via Instant Messaging Reference: What's Happening?

Introduction

Library research and online resources can be complicated terrain. Finding the right tool for a particular research question can be a daunting task and knowing how to use that tool an added hurdle. Besides the problem of unfamiliar interfaces, there is the problem of formulating the question in such a way that a search strategy can be constructed. As any reference librarian knows, searchers' inquiries often convey a very unclear idea of what patrons are looking for. In these cases, internet search engines alone cannot produce precise results. Librarians in Instant Messaging (IM) reference, using their skill in clarifying the information need, bridge the gap between the online patron and the information. The popularity of virtual reference supports the assumption that students are adept at using technology for communication, but the nature of the questions they ask shows that virtual reference users are no more adept at research than are the patrons who ask questions at the traditional reference desk. Formulating the question online without the give and take of nonverbal cues and face to face conversation presents an added obstacle. Thus the need for instruction is challenging but no less important at the virtual reference desk than at the physical one.

This study addresses the question of what students want in the way of help from librarians in IM reference, and what they typically get. Do they just want the answers? If they want instruction in how to do research, do they get it, and is instant messaging reference an appropriate medium for instruction? Can librarians teach effectively and can students learn research skills this way? What instructional methods and techniques are being used? To attempt to answer these questions, the authors analyzed transcripts at their institution for over half a semester and conducted a survey of IM reference patrons, with some surprising results.

Literature review

Early studies of IM reference focused on the technology—the choice of software, features, system requirements. Later studies focused on policy issues such as staffing, cost, trade-offs, etc. Some studies have dealt with the quality and completeness of the reference transaction, conventions and techniques for improving the online communication between patron and librarian, and imaginative ways of reaching remote users or marketing the service. Many studies addressing the quality of virtual reference refer implicitly to its ability to enhance information literacy. Yet few researchers have dealt specifically with IM reference as a tool for offering bibliographic instruction.

Two documents promulgated by the Reference and User Services Association (RUSA) of ALA have gained acceptance as standards of reference service and quality. They are *Guidelines for Behavioral Performance of Reference and Information Service Providers* (RUSAA, 2004) and *Guidelines for Implementing and Maintaining Virtual Reference Services* (RUSAb, 2004). The first establishes best practices for reference, with attention to

maintaining the same level of service in the virtual environment. It stresses not only information accuracy, but instruction in the process of finding it. The effective librarian, according to *Guidelines*, not only "Constructs a competent and complete search strategy", but also "Explains the search strategy and sequence . . . Explains how to use sources . . . and Offers pointers, detailed search paths (including URLs), and names of resources used to find the answer, *so that patrons can learn to answer similar questions on their own*" (RUSAa, 2004, emphasis added). *Guidelines* also recommend working with the patron in refining the topic, selecting search terms, checking spelling, finding appropriate and high quality sources, and referring them to other sources, databases, libraries, or experts. These are all skills that are hopefully transferred to the patron as the librarian either demonstrates or explicitly teaches them. The second RUSA document complements the first, relating it to virtual reference. It asserts that virtual reference "should be accorded the same status and quality goals" (RUSAb, 2004) as traditional reference, thereby including instruction. A Virtual Reference Desk publication defining quality digital reference also refers to instruction as a vital component (VRD, 2005).

While instruction has probably always been present as an implied part of reference, emphasis on it as a mandatory component is fairly recent. Beck and Turner (2001) discuss the changing role of the reference librarian and offer tips on how to facilitate the evolution from reference librarian as question answerer to librarian as "teacher/learning facilitator" (84). They offer numerous suggestions on how to get patrons to think about and verbalize their information need, how to teach by example, and how to stimulate a problem solving approach, as well as how to teach specific skills such as navigating a database interface. Their suggestions were developed for the physical reference desk, but most can be applied in the virtual environment. Green and Peach (2003) note that approaches to reference evaluation have so far focused on accuracy, communication skills, and/or patron satisfaction rather than instruction (257). To document the instructional activity of librarians at their library, they conducted a survey of patrons who asked in-depth research questions to determine whether they felt they had learned anything from the encounter. Results were overwhelmingly positive: 92% agreed they had (258). While their sample was limited to complex questions at the physical reference desk, the Green and Peach study serves as a model for the current study, which applies similar analysis to reference in the IM environment.

Few articles specifically address teaching via IM. Ellis (2004) examines digital reference as it relates to self-directed learning. She claims that digital media eliminates the hierarchical nature of traditional reference, empowering the patron to take a more active role. She believes that remote patrons, while they may have an unrealistic opinion of their own ability to find information, "have a high degree of self-efficacy, thus are receptive to learning" (106) and that digital reference is therefore better suited to facilitating that learning. She measured chat transcripts against the ACRL Information Literacy Competency Standards for Higher Education (ACRL, 2005). Despite digital media's greater opportunity for patron empowerment, Ellis found that teaching was confined to determining the exact information needed and teaching patrons how to find it (Standards 1 and 2). Higher level competencies such as evaluating the information and its source, using it effectively, and understanding societal issues surrounding it (Standards 3, 4, and 5), were hardly taught.

Ward (2003) notes that "Especially in the academic environment, there is a learning imperative" in reference practice yet "The online environment provides librarians with more opportunities to take short cuts" (53). Therefore, he conducted a study of the completeness of chat reference transactions, including whether instruction was provided. The questions used were archived patron questions, reformatted and submitted by proxies, posing as patrons. The reformatting consisted of changing the original questions to more standard wording, to begin "I need information about" or "Could you help me find something on . . ." (49). Instruction was said to occur if the librarian either recommended a specific database or suggested keywords or subject headings (49). He found that both forms of instruction were offered in 78% and at least one form in 90% of the cases (50). The present study builds on this one, analyzing actual patron queries, including many that are very unclear and often take the form of a single word or phrase rather than a complete sentence or question. Several additional forms of instruction are included in this study's analysis and the authors also analyze the format of the question to determine its effect on whether instruction is provided.

A more recent review article by Woodward (2005) summarizes the methods and models by which good pedagogical practice can be transferred from the physical to the virtual milieu, as well as the limitations and barriers that inhibit instruction. It is apparent from Woodward's analysis that most principles and methods of good practice can and should be adapted in the virtual environment. The current study attempts to gauge whether this is really happening on a regular basis at the authors' institution.

Method

This case study examines the use of *Morris Messenger*, an IM reference service at Southern Illinois University Carbondale, Morris Library. The service is restricted to SIUC affiliates through IP range identification. Home-grown software developed in 2001 by Keith Van Cleave and Jody Fagan, *Morris Messenger* offers IM, page pushing, and scripted messages but not co-browsing capability.

To determine how much instruction was actually taking place through our IM reference service, we conducted transcript analysis for seven weeks during spring semester, 2005. The authors reviewed each transcript and assigned it to one of the following categories:

- Category 1: The patron asked for and received instruction.
- Category 2: The patron asked for instruction but did not receive it.
- Category 3: The patron did not ask for instruction but the librarian provided it.
- Category 4: The patron did not ask for instruction and the librarian did not provide it.
- Category 5: No instruction was possible or appropriate given the nature of the question.
- Category 6: The patron did not ask for instruction and it was not given, but it was offered.

In cases where the patron asked for instruction, the authors determined whether the request was direct or implied. Transcripts in which instruction was given were further analyzed to determine what methods of instruction were used. These included: Modeling, Resource Suggestion, Terms Suggestion, Leading, and Lessons. Definitions and example of each are provided in Results section. The authors also analyzed the transcripts to determine how many times the librarian pushed a web page or gave a citation, rather than explaining or showing how to get there.

During the study period, 169 eligible transcripts were analyzed. Eligible transcripts were conversations that resulted in reference transactions, excluding the 88 turnaways and disconnects where no conversation occurred. Turnaways represent patrons who could not connect to the service because there were no available librarians. Disconnects represent instances in which a patron merely typed in a query and left before the librarian could respond. Of the 169 transcripts, 26 were quick queries in which the librarian responded by providing instruction in how to find the answer, but the patron did not acknowledge the answer. Since the librarian's response satisfied the patron's request we included these in our analysis.

To supplement the transcript analysis, the authors also developed a survey that ran for the same seven week period. There were 50 responses to the survey, just under a 30% response rate. We asked whether patrons were shown how to find information, whether they wanted instruction or would rather have simply been given an answer, and whether they learned anything from the conversation. Though these questions may seem very similar, they address three separate aspects of instruction:

- 1) whether instruction was provided
- 2) whether it was wanted, and
- 3) whether it resulted in learning

We hoped to learn whether the IM reference medium is capable of supporting bibliographic instruction and how often our staff is offering instruction. The ultimate goal, of course, is patron learning, which is unlikely to take place without instruction. Willingness to receive instruction may affect learning outcome, but may not be a required condition; some may learn as long as instruction is offered even if they were not initially interested in learning.

Users were also asked if they felt that this medium was a good way to *learn how* to find information and were given a text box for any comments on the service. Finally we asked if patrons had used the service before and whether they would use it again. This question elicited information on the patrons' "willingness to return", a key measure of reference effectiveness as developed by Durrance (1995). For transcripts that included patron surveys, we compared the patron's assessment with our own assessment of whether the patron wanted and received instruction. This is important if librarian responses are based on perceived willingness on the part of the patron to receive instruction.

Results

Transcript Analysis

Results show that Categories 1 and 3, instances in which a librarian provided instruction, account for the majority of transactions. Category 5 represents instances in which instruction was not appropriate given the nature of the question. Subtracting this number from the total leaves only dialogues in which instruction was possible, 146 transcripts. Including Category 5 would have skewed statistics as librarians cannot be responsible for providing instruction when the question does not permit it. Chart 1 illustrates those results.

[Take In Figure 1]

Adding Categories 1 and 3 shows that librarians provided instruction in 83% of the cases in which it was possible. Of the total cases in which the patron requested instruction (Categories 1 plus 2), we find that instruction was provided 95% of the time. Of the instances in which the patron did not request instruction, Categories 3, 4, and 6, instruction was provided or offered in 77% of the cases. The discrepancy between these two data sets shows that patrons who directly or indirectly requested instruction were 18% more likely to receive it.

The authors also investigated the various instructional techniques employed. Instructional techniques were broken down into the following five methods. Each code was used only once per transcript, regardless of how many times it occurred during the dialog.

- A. Modeling: Librarian finds and gives the needed information, then outlines the steps to locate it but does not make sure the patron is following along
- B. Resource Suggestion: Librarian suggests print or electronic resources such as the library catalog, a database, or URL
- C. Terms Suggestion: Librarian suggests appropriate keywords, subject headings, Boolean, or limits
- D. Leading: Librarian leads the patron step-by-step to the needed information
- E. Lessons: Librarian explains library or research terminology such as the peer-review process

Figure 2 depicts how many times each code was applied over the 146 transcripts in which instruction was possible.

[Take In Figure 2]

By far, Resource Suggestion was the favored instructional technique, with 88 instances. Leading followed with 62; Terms Suggestion with 42; Modeling with 33; and finally Lessons with 8 occurrences. These results are not surprising since Resource Suggestion is a necessary step in information retrieval. Leading is preferable to Modeling from a learning perspective since it engages the patron in a synchronous, participatory way. Modeling, though asynchronous, is efficient and has the advantage of providing all instructional steps at once, in case the patron disconnects. Terms Suggestion usually comes into play only if the patron participates in active searching with the librarian after a resource has been accessed. Lessons, while sometimes needed during information retrieval, are perhaps more appropriate to formal bibliographic instruction settings.

The following section illustrates the categories and instructional techniques. Sample chat transcripts are provided to demonstrate how each was defined and understood by the authors. Irrelevant sections of some transcripts have been excluded; this is indicated by ellipses.

Category 1: The patron asked for and received instruction.

This was the largest category at 43% (62 transcripts). It shows that instruction is both possible and appropriate in the chat medium. Because this category also represents patron requests for instruction, the high percentage shows that many patrons want instruction in their chat reference experience. Patrons' expectations for instruction will be further investigated when we discuss the survey results.

Of the Category 1 transcripts, 46 were deemed Direct requests for instruction. These 46 transcripts accounted for 32% of total interactions where instruction was possible. In Direct requests the patron asked "how do I" or "can you show me how," indicating an openness to instruction. Following is an example of a Direct request for instruction and the corresponding librarian response.

Direct Request Sample

Patron: I need to find online newspaper articles, how do I do that?
.....
Librarian: There are several ways to find newspaper articles. Do you have a particular newspaper in mind?
Patron: well, i'm trying to find newspaper articles online about drinking and driving
.....
Librarian: Ok. I think we should try to use EBSCO for your search. Let me show you how. Please follow along with me.
Librarian: First, go to the Library's homepage www.lib.siu.edu
Patron: okay
Librarian: Click on the button at the top of the page that says "Articles, Journals, & More"
Librarian: Click on the blue link that says EBSCO. Then click on the link that says Academic Search Premier. This is a large database index that covers many subjects. It is a good place to get started doing research.
Patron: ok
Librarian: Let me know when you are in the search interface
Librarian: Type the terms drunk driving in the search box. Next, use the limiters at the bottom of the page to select Full Text. And limit the document type to Newspapers.
Patron: okay i am in EBSCO
Patron: ohhhh ok i see now
Librarian: That will give you only full-text newspaper articles.

Patron: okay
 Patron: ok thank you, i found 25 articles

This interaction is a good example of instructional technique Leading (Code D), in which the librarian breaks up the instruction into small successive steps, checking back on the patron's progress. Leading can be less intimidating, more interactive, and allows patrons to direct the pace.

Of the 62 transcripts coded as Category 1, the remaining 16 were coded as an Implied requests for instruction, constituting 11% of the 146 transcripts. Implied requests were those in which the patron asked leading questions such as "Where would I find information on" or "I've looked here and can not find". These statements suggest that the patron is probably open to instruction. Following is an example of an Implied request and the librarian/patron dialogue that followed.

Implied Request Sample

 Patron: I'm tryin to find some info for a debate, and I want really professional, academic sources. I've tried searching under Articles and journals with no luck. I'm looking for stuff on adoption, and how it is easier to adopt black babies as opposed to white babies
 Librarian: Okay, have you tried searching in EBSCO?
 Librarian: You can limit your search there to scholarly journals/
 Patron: yeah, And I limited it to full text, I only get 4 results
 Librarian: Try these search terms: adoption (in the first line) and black* or (african american*) in the second line, with the limit to peer-reviewed journals. I got lots.
 Librarian: They may not be all full text but we may have the print
 Librarian: Here's an example of one I found:
 Title: Why are we waiting? The demography of adoption for children of black, Asian and black mixed parentage in England. Child & Family Social Work; May 2005, Vol. 10 Issue 2, p135, 13p
 Patron: oh, okay. I got a lot too. I'll check through them and see. This should be enough. Thank you dude!
 Librarian: another database to try is Sociological Abstracts

The librarian intuitively this query as an implied request for instruction and employs several instructional techniques. She suggests two databases, several keywords, truncation, a Boolean operator and a limit. Therefore, the transcript was coded for Resource Suggestion (Code B) and Terms Suggestion (Code C).

Category 2: The patron asked for instruction but did not receive it. All three transcripts in this category were coded as Direct requests for instruction. Though only 2% of the total (#? Transactions), they represent a failure to provide

instruction despite the patron's request. In the following example, the patron asks "can you help me find," not "where is" or "would you find for me."

Patron: can you help me find a book called the bedford glossary
Librarian: Thank you for your patience. Please give me a few second to type the information you need.
Librarian: Murfin, Ross C. Title: The Bedford glossary of critical and literary terms / Ross Murfin, Supryia M. Ray. Published: Boston : Bedford Books, c1997. Subject (LCSH): Litreature—Dictionaries. Criticism—Dictionaries. Institution: Morris Library - SIUC Location: Books, 2nd Floor Call Number: 803 M975b1997 Copy: 1 Status: Available
Librarian: Here is the book and call no. as per your request...
Patron: thank you so much, have a great day
....

While the patron does thank the librarian and seems to be satisfied with the dialogue, the librarian has missed an opportunity to enhance the research skills of a library user by teaching how to find information independently.

Category 3: The patron did not ask for instruction but the librarian provided instruction. Category 3 was the next largest category represented with 59 transcripts and 40% of the total transactions. These include questions such as "where is ...[directional]," "do you have [specific resource or title] . . ." or "can you find . . ." Also included are queries consisting of a single word or phrase. In our software, entry into the chat reference service looks similar to a search engine so patrons often type in keywords or keyword phrases as the beginning points for their reference dialogs. Librarians are quite aware that many patrons are not expecting a human to reply and formulate their response accordingly. Take the following example:

Patron: equine
Librarian: Hi there. My name's Stephanie. What can I help you find?
Librarian: Are you looking for information on horses?
Patron: I need an article written from a professor
Librarian: ok. Do you have the professor's name or the title of the article?
Patron: Dr. King
Librarian: Do you know the first name, title of the article, or subject of the article?
Patron: sheryl king
Librarian: Thank you. That's very helpful. Hold on one moment while I search.
Patron: subject equine
Librarian: Is it about embryo transfers in mares?
Patron: yes
Librarian: Ok. Hold on and I'll show you how to get it.
Patron: thank you
....

The patron's subsequent replies are as brief as the beginning of the dialogue. Nothing in the patron's responses indicates a desire to learn how to find the information independently. The librarian nevertheless continues the dialog using Leading and Resource Suggestion to guide him/her to the requested article.

Category 4: The patron did not ask for instruction and the librarian did not provide it. Like Category 2, this Category could illustrate the failure of the librarian to practice instruction. However, it is different in that these patrons did not directly indicate or imply that they were open to instruction. Category 4 represents 12% of the total. Many of these questions tended to be "do you have [specific resource or title]" types of inquiries.

Patron: Do you have the 17th edition of the Bluebook of Citations in reserve?
Librarian: Hi there, welcome to Morris Messenger.
Librarian: Okay, let me see what I can find for you. Hold on for a bit.
Patron: k, thanks
Librarian: Can you tell me what course or instructor it is for? Can't search reserves by title or item here
Patron: It is for Paralegal 300A
Librarian: Okay, let me see what I can find for you. Hold on for a bit.
Librarian: BLUEBOOK: A UNIFORM SYSTEM OF CITATION RESERVE ITEM
Yes, this item is on reserve for your class. Just ask at the reserves desk on the 1st floor
Patron: ok, thanks a lot

Should the librarian practice instruction when the patron does not ask for it? The patron will most certainly be using the library's Reserves system for future classes; this would have been an excellent opportunity to instruct them how on to use it.

Category 5: No instruction was possible or appropriate given the nature of the question. Of the 169 eligible transcripts, 23 were found to be of this nature, approximately 14% of all questions asked. Like the physical reference desk, librarians in the chat medium must respond to directional and policy questions such as the following:

Patron: can I check out a book without my student id?
Librarian: Yes, if you have some other form of ID like a drivers license
Librarian: is there anything else I can help with today?

While the authors advocate practicing instruction in the chat medium as much as possible, we recognize that it may not be appropriate in all cases. While it is important to report these types of questions, we subtracted this category from the above analysis since it does not speak to instructional activity.

Category 6: The patron did not ask for instruction and it was not given, but it was offered. There were 4 transcripts, 3%, in which the patron did not ask for instruction, the librarian offered to provide it, but the patron did not indicate that they were willing to accept instruction. Following is an example.

Patron: I want to borrow a DVD, Spirited away DVD00510. Still now, I can borrow only 2 hours? Thank you

Librarian: Hi

Librarian: Let me check if we have the DVD by going to SIUCat, do you want to search with me?

Patron: Last time, I try to check out it, but I could only 2 hours, so I gave up. cpuld you check its status now.

Librarian: Sure

Librarian: Reserve Desk has a copy.

Patron: In other words, how many days can I check out?

Librarian: Let me call them and make sure, if it is a 2hour DVD or not.

Librarian: Ok, it is a 2hour DVD.

Librarian: You can check it out only for 2 hours.

Patron: I see, Thank you very much

....

The librarian attempts to draw the patron into instruction using a Leading technique, asking the patron if he/she might follow along in a search through the library's catalog. However, the patron is only interested in the answer.

Not all reference transactions are appropriate for instruction. At the physical reference desk, librarians have the luxury of gauging body language, facial expression, voice inflection and tonal quality as a means of determining if a patron is willing to accept instruction. These factors are missing in the virtual environment. As we will see from the survey responses, the patrons' text is not a very reliable indicator of whether they want instruction. While a librarian may not feel that a patron would be receptive to instruction, it doesn't hurt to ask as the above librarian has done. If the patron is unreceptive, the transaction can continue without it.

Two instructional techniques are not illustrated in any of the examples above, Modeling (Code A) and Lessons (Code E). Modeling examples quite often used scripted responses for quick instruction. The following is an example.

To access WebCT, go to www.lib.siu.edu (Morris Library homepage). At the right of the page you will see "Quick links". Toward the middle of the list you will see WebCT. Just click on this link and it will refer you to the website. From there you can create your account or log in to an existing account. If you have difficulty or need additional help, just call Academic Technology at xxx-xxxx. If you are in the library and need help, the Academic Technology office is in rm 110 right off the main hallway. Thank you.

Instruction is present, in a series of steps that the user must follow as "modeled" by the librarian. Modeling does not, however, actively engage the patron in a synchronous search with the librarian.

The least used of all instructional techniques was E: Lessons. These were instances in which the librarian attempted to explain library terminology or the research process. Such instances were clearly identifiable in the transcripts. Note the example of the librarian explaining peer review to a chat user.

Patron: What is a peer review journal?
Librarian: Welcome to Morris Messenger!
Librarian: A peer review journal is one that sends manuscript out for review by experts (peers) before a decision is mad to publish the manuscript in a journal.
....

Page Pushing and Citations

In all, there were 63 instances of page pushing, defined as any instance in which a librarian manipulated the user's web browser to a specific web site. Occurrences were not evenly spread across chat dialogues or staff members. Some librarians tend to push several pages in a single dialogue, while others seldom use this feature.

While it is tempting to take the patron directly to the source of information, patrons are unlikely to pay attention to the URL for the page pushed and it is doubtful whether they will retain the web address for future use. Below is an example of a transaction in which the librarian chooses to offer instruction and hands-on practice rather than push the patron's browser.

Patron: I would like to check my siu email but don't know how to access the login page for siu email.
Librarian: Type in webmail.siu.edu in the URL field.
Patron: got it. Thanks
Librarian: you're welcome

Like page pushing, giving citations without showing how they were found represents missed opportunities for instruction. This occurred in 56 instances.

Research should not be a magic act performed by the librarian. The research process should be made as transparent as possible. While the catalog record may be just what the patron was looking to find, not explaining *how* it was found only disadvantages the patron in future research attempts. This practice also contradicts RUSA's *Guidelines* which advocate transparency in the reference process (RUSAa).

Survey Results

While only 50 of 169 possible surveys were returned, the responses received are consistent and encouraging. Survey results are shown in Figure 3.

[Take in Figure 3]

First time users account for 70% of respondents of the service, a surprisingly high number given recent attention to students' heavy use of chat media. We can also be confident that the service is being well received with 98% of the respondents indicating that they would use it again. An optional comment box provided at the end of the survey confirmed the positive reception. The service received glowing complements such as:

Never used it before...extremely helpful. I tried it out just on a whim and it really helped progress my research.

[Librarian name] was extremely helpful with what I needed and she showed me exactly how to do it without just telling me.

I love the chat reference service. It is wonderful. I love also the librarians who work behind the scene. Thank you for your hard work.

The one complaint received related to a collection development issue, not to the IM reference service.

Did the patrons want instruction in their chat reference experience? Survey results say yes. Nearly half (46%) of respondents said that they definitely wanted the librarian to teach them how to find the information themselves. Another 16% answered that instruction from the librarian "would be nice". An apathetic 30% indicated that they "didn't care" if the librarian taught them anything. Apathy towards instruction is something that every reference and instruction librarian is quite used to seeing and does not necessarily represent a negative view of it. The few remaining 8% of respondents, however, may be unreachable. They responded "no way, just find it for me", a very clear statement that the teaching moment may never occur with them.

Survey results show that chat users want to learn. What was discovered during transcript analysis, however, is that many patrons do not phrase their questions in ways that signal the librarian to provide instruction. Librarians may have difficulty initially gauging the patron's willingness to accept instruction. Take the following example.

Patron: drugs in sport
Librarian: Hi there, welcome to Morris Messenger.
Librarian: articles or books?
Patron: I am trying to research some articles on drug use in sport
Librarian: Okay, let me see what I can find for you. Hold on a bit.
Patron: articles in journals
Librarian: Do you know how to use EBSCO?
Patron: I will if you explain it to me
....

This patron eventually indicates willingness to learn, although the initial inquiry, "drugs in sport," does not sound like a request for instruction. Adding those patrons who answered they definitely wanted instruction to those who thought it would be nice, at least 62% were

willing to be instructed. The apathetic 30% may also be willing to accept instruction if offered. Transcript analysis, however, showed that only 45% of patrons directly asked for or implied that they wanted instruction (Categories 1 and 2) by the way they phrased their inquiry. This shows a disparity between patrons' willingness to be instructed and the way in which they formulate inquiries. Therefore, librarians should not rely strictly on patron questions to determine whether or not to practice instruction. More want instruction than we would intuit from their question format.

Many survey respondents seemed to want instruction. Did they feel as if the librarian provided it? In response to the survey statement "The librarian showed me how to find information for myself," 80% responded 'yes', 16% 'sort of', and 4% 'not at all'.

Did the users' willingness to accept instruction and the librarians' efforts to provide it actually result in learning? Survey responses showed that chat patrons feel they are learning, with 96% answering positively that they learned something new. This exceptionally high percentage reflects well on both our service and on the hypothesis that instruction is needed, appropriate, and possible in IM reference. It is also directly in-line with the statistics above. Respondents said that librarians provided instruction 96% of the time (compilation of 80% 'yes' and 16% 'sort of' responses) and 96% said they learned something new, an exact match.

Finally, the survey asked if users thought chat was a good way to *learn how* to find information. Responses to this question exactly matched the response rate to the question on whether the user would use the service again, i.e., 98%. Some positive responses to these questions occurred in interchanges in which the authors determined that instruction had not occurred. It is possible that some respondents gauged both their willingness to return and their perception of chat as an effective instructional medium by the fact that the librarian fulfilled their information need. Possibly they were simply satisfied with the answer provided and wanted to return a positive survey. On the other hand, since the majority indicated they wanted to learn and felt they did learn from the transaction, and since almost all indicated they would use the service again, it is clear that both informational and instructional needs are for the most part being met by the service.

Conclusion

Can instruction be offered via IM reference? Do students want it? Can it be effective? The answer to all three is yes. The analysis of transcripts shows that instruction is indeed provided in most cases. This agrees with patrons' responses as revealed in the survey. In addition, students definitely want to learn; their survey responses indicate this willingness even in cases where their initial query gave no indication of interest in instruction. Patrons also overwhelmingly responded that they felt they had learned something new from the transaction and that IM is a good way to learn. Their willingness to return is another indication of their satisfaction with the process, a process most often involving instruction. However, the way the patron formulates the question affects the likelihood that the librarian will provide instruction. In a limited number of cases, librarians failed to provide instruction; this happened especially when the patron did not appear to be asking for it.

What are the most common bibliographic instruction techniques librarians used to teach via IM reference? Suggesting appropriate resources was the most common technique, followed by leading the patron through a series of steps. Other methods, including suggesting keywords, subject headings, truncation, limits, Boolean operators, etc., and modeling were also commonly used. In this respect IM reference mirrors the physical desk. With proper training and due diligence, virtual reference providers can meet the standards for best practices set by RUSA.

What are the limitations of IM reference? Besides the obvious limitations of not being able to show physical resources, the authors acknowledge higher level information literacy standards are not being met in this medium. These include evaluating the information and its source, synthesizing the information to create new ideas or products, and understanding the societal, legal, and economic issues surrounding its use. The authors believe that information literacy at these levels is the result of the total educational experience and cannot be conveyed in a single chat conversation. Furthermore, though any reference transaction involving instruction could result in a heightening of information literacy, it would be difficult to measure the acquisition of these higher standards from analysis of these short conversations.

What does the future hold? Most commercial virtual reference providers now offer some form of co-browsing, which allows patrons and librarians to view the same screens simultaneously. Does co-browsing increase the likelihood of instruction or its effectiveness? Is this feature used often? These questions will be explored in a follow-up study. An additional feature of interest is the knowledge base. Knowledge bases are searchable storehouses of past questions and answers. How often are librarians asked the same questions thereby making knowledge bases worthwhile? Will patrons use the knowledge base for self-instruction?

New communication formats such as palm pilots and cell phone text messaging may cross over from general use to electronic reference as instant messaging did. What effect will these have on virtual reference? Will the small screens of these media inhibit instruction? Will voice and visual capability become widespread, making IM reference more like a telephone? These are fruitful areas for future research and development. Whatever the future holds, it is clear that patrons want to be taught how to navigate in it.

References

ACRL. Association of College and Research Libraries. (2005), *Information Literacy Competency Standards for Higher Education*, Available at:

<http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>

Beck, S. E. and Turner, N. B. (2001), "On the fly BI: reaching and teaching from the reference desk", *The Reference Librarian*, No. 72, pp. 83-96.

Durrance, J. C. (1995), "Factors that influence reference success: what makes questioners willing to return?", *The Reference Librarian*, No. 49/50, pp. 243-65.

Ellis, L. A. (2004), "Approaches to teaching through digital reference", *Reference Services Review*, Vol. 32 No. 2, pp. 103-119.

Green, D. D. and Peach, J. K. (2003), "Assessment of reference instruction as a teaching and learning activity", *College and Research Libraries News*, Vol. 64, No. 4, pp. 256-258.

RUSAA. Reference and User Services Association. (2004), *Guidelines for Behavioral Performance of Reference and Information Service Providers*, Available at:

<http://www.ala.org/ala/rusa/rusaprotools/referenceguide/guidelinesbehavioral.htm>.

RUSAb. Reference and User Services Association. (2004), *Guidelines for Implementing and Maintaining Virtual Reference Services*, Available at:

<http://www.ala.org/ala/rusa/rusaprotools/referenceguide/virtrefguidelines.htm>.

VRD. Virtual Reference Desk. (2003), *Facets of Quality for Digital Reference Services. Version 5*, Available at: <http://www.vrd.org/facets-06-03.shtml>.

Ward, D. (2004), "Measuring the completeness of reference transactions in online chats", *Reference and User Services Quarterly*, Vol. 44 No. 1, pp. 46-56.

Woodward, B. S. (2005), "One-on-one instruction: from the reference desk to online chat", *Reference and User Services Quarterly*, Vol. 44 No. 3, pp. 203-209.

Biographical Information

Christina M. Desai received her M.S. in Library and Information Science from the University of Illinois in 2000. She is Assistant Professor/Science Reference Librarian and Coordinator of Online Reference at Morris Library, Southern Illinois University Carbondale. Chris has been providing virtual reference since 2001. Her research concerns virtual reference, especially communication and instruction via instant messaging reference. She has also written on illustration and war in children's picture books. Chris can be reached at cdesai@lib.siu.edu.

Stephanie J. Graves is Assistant Professor/Humanities Reference Librarian at Southern Illinois University Carbondale, Morris Library. She received her Masters of Library and Information Science from the University of Illinois Urbana-Champaign in 2004. Her background is in English and Comparative Literature. Research interests include the investigation of emerging reference technologies, library instruction, the use of multi-disciplinary sources by humanities scholars, and the use of technology by humanities scholars. She can be reached at sgraves@lib.siu.edu.

Figures:

Figure 1: Requested/Received Instruction Where Possible

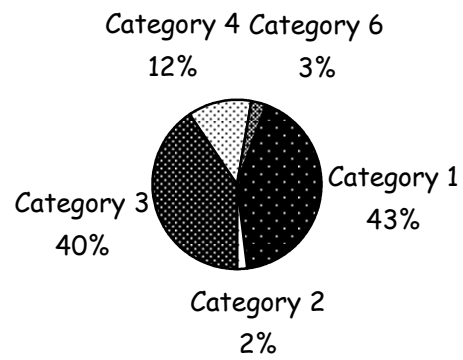


Figure 2: Instructional Techniques

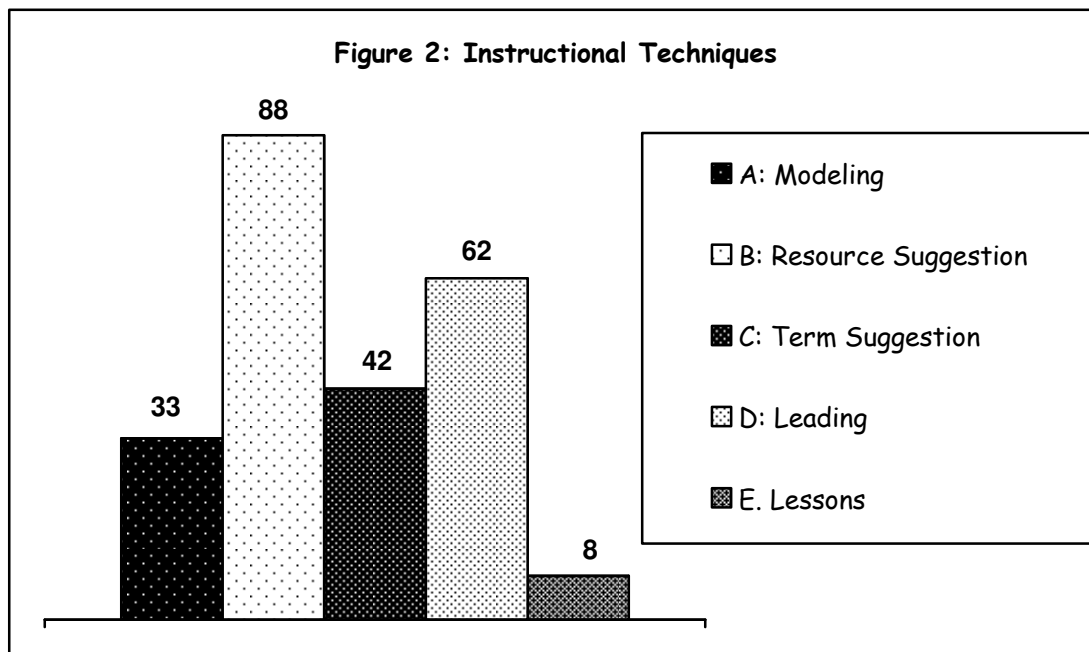


Figure 3: Survey Responses

Survey Question	Possible Responses			
Have you used Morris Messenger before?	Yes	No		
	15	35		
Would you use Morris Messenger again?	Yes	No		
	49	1		
Do you think chat is a good way to <u>learn how</u> to find information?	Yes	No		
	49	1		
The librarian showed me how to find information for myself.	Yes	Sort Of	Not At All	
	40	8	2	
I learned something about how to find what I was looking for.	Yes	Sort Of	Not At All	
	46	2	2	
I wanted the librarian to teach me how to find the information myself.	Definitely	Would Be Nice	Didn't Care	No Way, Just Find It For Me
	23	8	15	4