"I don't think it's harder, just that it's different"

Librarians' attitudes about instruction in the virtual reference environment

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Abstract

Purpose – The purpose of this paper is to investigate librarians' attitudes towards instruction in virtual reference transactions and to review relevant literature.

Design/methodology/approach – Librarians who provide virtual reference services are surveyed about attitudes towards providing instruction via virtual reference software. In addition to gathering demographic information respondents are asked to rate agreement or disagreement with statements about virtual references using a six-point Likert scale.

Findings – The librarians surveyed see value in providing instruction during the virtual reference encounter, but also identify concerns and barriers. Discussion of Marchionini's concept of exploratory search and Madell and Muncer's study on control in computer mediated communication is used to highlight some characteristics of the virtual reference environment that might require unique pedagogy and reference practices.

Research limitations/implications – Most respondents are from academic libraries, potentially limiting its applicability to public or special library settings and the survey does not explore the attitudes of librarians who do not currently provide virtual reference.

Practical implications – Findings will be useful for institutional or consortial virtual reference training as well as improving individual practice. Findings may also have policy and/or staffing implications for virtual reference programs.

Originality/value – There is limited literature that focuses specifically on either information literacy instruction during the virtual reference transaction or on librarians' attitudes towards providing instruction in the virtual reference transaction.

Keywords Librarians, Library instruction, Information literacy, Reference services, Virtual work

Paper type Research paper

Introduction

Virtual reference (VR) services are, if not ubiquitous, widespread. In the years since these services first emerged, librarians and users alike have grown more accustomed to using online synchronous communication to keep up with friends and family, communicate with classmates or colleagues, and even to connect with retailers' customer service departments. Expectations about the type of service that can be provided using tools like instant messaging and chat are shaped by the different experiences users and librarians have with those tools both inside and outside the library.

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As instant and text messaging tools move off the cutting edge and into the mainstream it is helpful to take the time to reflect on the assumptions librarians bring to virtual reference service. While the tools continue to evolve, the way we talk about the service itself is similar in both philosophy and practice to the reference services libraries have offered for years in person, over the phone, and via email.

In this paper, the authors present the results of their survey asking librarians to report on their attitudes about providing research instruction during virtual reference. The survey results reveal librarians' attitudes and assumptions about virtual reference services, technologies and users. These attitudes and assumptions are then analyzed in light of research on exploratory search and computer-mediated communication.

Reference and instruction in the literature

That a reference interaction, particularly in an academic setting, is an opportunity for learning is generally accepted. In their *Guidelines for Behavioral Performance of Reference and Information Providers* the Reference and User Services division (RUSA) of The American Library Association (ALA), expects that those providers will be able to "explain the search strategy and sequence" as well as suggest tips, useful pathways and specific sources to researchers (ALA RUSA, 2004). Elmborg (2002) takes this several steps further, arguing that to teach at the reference desk, librarians must understand that the goal of reference service is teaching students to be self-sufficient researchers. Students share this expectation. In their study of face-to-face reference services at Wartburg College, Gremmels and Lehmann (2007) found that most students understand that interactions at the reference desk will include instruction.

Given the centrality of instruction to our physical reference practice it is important that we also examine how we integrate instruction into the virtual reference transaction. Does virtual reference lend itself to instruction? Is the technology appropriate? Do students and librarians expect that a virtual reference transaction will include instruction?

Some maintain that instruction is not significantly different whether it takes place in a virtual or a face-to-face environment (for example, Moyo, 2006). If this is true, then there is no need to examine pedagogical practice unique to the virtual reference transaction. This perspective may explain why pedagogy receives little attention even in the most recently published handbooks to virtual reference service like Kern's (2009) *Virtual Reference Best Practices* or Hirko and Bucher Ross's (2004) *Virtual Reference Training*. Wasik's (2008) chapter in *Virtual Reference Service: From Competencies to Assessment* does include competencies for instruction at beginner, intermediate, and advanced levels, but the competencies themselves are generic enough to apply to any reference environment.

Hirko and Bucher Ross (2004) list information literacy as a core competency for providers of virtual reference; however they do not discuss what this means for the librarian's practice but focus instead on the tools. In particular, they focus on the potential utility of co-browsing or application sharing in instruction. The lack of attention paid to instruction is an odd omission given the specific, detailed information these texts provide about other facets of virtual reference.

There are many who agree with Hirko and Bucher Ross that co-browsing software is important, if not essential, to virtual reference instruction interactions. However, this

idea is more often stated as a truism than as a conclusion based on evidence. Woodard (2005) suggests that co-browsing software is the only way the librarian will know how and when a student runs into trouble. Moyo (2006, p. 226) goes further, claiming that the librarian's "ability and desire" to provide instruction as part of a virtual reference encounter depends on software that includes "the capability to escort the patron anywhere on the Web." Graves and Desai (2006) offer an alternative perspective. They found that co-browsing did not result in an increase in instruction for patrons of their library virtual reference services, both because there were frequent technical difficulties with co-browsing software and because instruction was already provided in over 80 percent of appropriate virtual reference transactions even without taking advantage of any co-browsing capabilities.

Another important consideration is the student's or patron's motivation to learn how to search in an online interaction. Desai and Graves (2006) found that students, at least, are often interested in learning during virtual reference transactions. Oddly, they also found that sometimes the resistance to teaching students how to search came from the librarians. In some transactions librarians simply pushed resources at students without even indicating how they found the sources, even when the patron had specifically invited instruction by using phrases like "can you show me how." Steiner and Long (2007) suggest that some librarians believe that communication using instant messaging or other online tools is inherently simplistic, too simplistic to allow them to manage a reference interview, much less help a patron navigate a complex query.

In their 2006 study, Hyde and Tucker-Raymond used an analysis of virtual reference transcripts to evaluate the performance of librarians providing virtual reference services for L-Net, Oregon's statewide digital reference service. The researchers examined nine months of transcripts, using 19 performance measures, including one that looked at whether "[t]he librarian offered or provided some instructional guidance, including the search process or strategy." (Hyde and Tucker-Raymond, 2006, p. 14). The researchers determined that this measure was relevant in almost three-quarters of the transcripts, meaning that the librarian could have provided some instructional guidance during the transaction. Despite this opportunity, less than one-third (31.7 percent) of the librarians who had the chance to provide instruction did so.

Why might librarians resist teaching virtual users how to search? There appears to be little, if any, documentation of resistance to the idea that instruction belongs in the virtual reference transaction. What has perhaps not been adequately explored is whether librarians have the skills and the attitude necessary to help patrons learn in the virtual environment. To begin to understand how librarians perceive their own skills and attitudes in this area, we conducted a survey in Spring, 2008.

Methodology

The authors created a web-based survey using the subscription web service SurveyMonkey. A convenience sample of participants who provide reference assistance using instant messaging and/or integrated virtual reference software was recruited using a combination of messages posted to the "walls" of Facebook groups belonging to the ACRL Instruction Section, Meebo Libraries, and the Library 2.0

interest group and messages sent to the email lists Nextgen-L, ILI-L, Buslib-L, and Infolit-L.

The survey included items about the type of librar(ies) in which respondents worked, about respondents' use of instant messaging and/or integrated virtual reference software, and about the philosophy of reference services in respondents' libraries. The main body of the survey was devoted to 15 items designed to capture information about librarians' attitudes toward virtual reference services. This section included 15 questions that asked respondents to rate their agreement or disagreement with statements about virtual reference using a six-point Likert scale. Respondents were also given an open text box they could use to clarify responses or to add any additional information.

Because survey participants self-selected, the results of this survey cannot be interpreted to suggest anything about how librarians in general feel about virtual reference services. In fact, this was not the intent of the project. Because the recruitment documents targeted librarians who already provide services, the likelihood exists that the participant population includes a disproportionate number of early adopters who may be inclined to report favorable attitudes towards such services. The results of the survey are interesting not because they describe all librarians, but rather because they illuminate some tensions between what librarians say they believe about instruction in virtual reference transactions and what they report they actually do.

Demographic results

The survey generated 370 responses; 294 people completed all items. The overwhelming majority of responses (82 percent) came from librarians at two- or four-year academic institutions. The responses were more evenly distributed with regard to the tools these librarians use to provide VR services. 110 respondents (34 percent) use Instant Messaging (IM) software, like AIM or Yahoo!, to provide VR services. The survey did not ask them to further distinguish if they use a desktop aggregator like Trillian or a web-based aggregator like Meebo to monitor several IM accounts at once. 67 respondents (21 percent) indicated that their library has adopted an integrated virtual reference service product like OCLC's QuestionPoint. The remaining 143 respondents (45 percent) reported that their libraries use some combination of these tools to provide virtual reference. Very few respondents spend a lot of their time providing VR services. More than half (61 percent) reported that they spend just 1-3 hours on virtual reference in a typical week. Only 28 respondents (8.6 percent) reported providing more than 11 hours of service per week.

Librarians also reported on their use of instant messaging tools for personal and professional communication. 175 respondents (52.5 percent) use IM at least weekly to communicate with friends, family, colleagues or co-workers. Of this group, a little more than half (89) reported using IM daily for personal or professional communication. On the other end of the spectrum, almost one-third of the responses (31.5 percent) came from librarians who never use IM except to provide virtual reference, and an extremely small group of responses (5.3 percent) came from librarians who have never used instant messaging software and who only provide VR using integrated systems.

Attitudes

Librarians were asked to express their agreement or disagreement with thirteen statements about virtual reference using a six-point Likert scale. The list of attitudinal statements was followed by two open-ended questions. The first allowed librarians to clarify any of their responses. A total of 78 provided additional clarifications. The final question was completely open, and 55 librarians provided additional insights, about both virtual reference and the survey. The attitudinal responses were grouped into three loose categories for discussion: attitudes about students or patrons, attitudes about the tools librarians use to provide VR, and attitudes about trying to provide instruction in the VR environment.

Assumptions about students

Respondents were asked to agree or disagree with the statement: "people who use virtual reference services are looking for quick answers". Most (63 percent) agreed with this statement. In addition, several librarians discussed this concept further in their open-ended comments:

> [v]irtual reference is often driven by the impatience of the patron. Patrons in VR seem to be much more in a hurry than do live patrons. They often want quick answers, and they will disappear without warning when they think they have enought [sic] information.

The open comments also reveal that while librarians may agree with the statement, they are less likely to agree about what the statement means to their ability to teach in the virtual environment. Some believe that users' desire for speedy service has negative implications for the service itself, calling virtual reference "the worst of the quick and dirty patron assists". Another set of comments focused on the impact on the librarian: "users who are rushed ... sometimes contribute to virtual librarian burnout which results in lower quality service for users who use the system appropriately."

Others do not see a desire for speedy service as a problem, for the service or for the providers. One clarified an "agree" response by noting, "I want to be clear that I don't think this is a bad characteristic of information seekers. Sometimes we all need quick answers!" And, of course, 37 percent of respondents disagreed with the statement in the first place. One who did so elaborated on their answer, saying "it seems a lot of people come to virtual reference when they've looked everywhere else first."

Interestingly, though many believe virtual reference users are in a hurry, 79 percent of respondents disagreed with the statement: "people who use virtual reference services don't want to learn how to search for themselves". In the open comments, one respondent points out the ways that users show their willingness to learn: "I thought meebo type virtual reference would make the teaching part very difficult but instead have found that users hang on if they want to learn and will continue to ask for more steps or details or clarification when they want to, and have the time to, learn more." Another respondent, with a more cynical view, agrees that assuming virtual reference users are different than others is problematic: "It's not that chat/IM users don't want to learn – 'most' users don't want to learn, whether they're here in the library or not."

Attitudes about VR tools

Librarians are fairly evenly divided in their attitudes about the tools they use to provide virtual reference. A small majority of librarians (55 percent) disagreed with the

statement: "I worry about problems with the technology getting in the way when I try to teach my users how to do something new". The open-ended comments related to technology failures suggest that many of the negative attitudes librarians have about their VR tools come from the more robust features of integrated VR systems. In particular, several librarians discussed the technical problems they face trying to get co-browsing to work: "We used to use a co-browsing software and we had a hard time getting it to work technically on the library end and then it was so clunky for patrons that it was hardly ever used."

These failures may explain why 61 percent of respondents disagreed with the statement: "features like co-browsing are essential to effectively teach a virtual user how to search". The open comments about this item reveal a certain level of ambivalence in these attitudes. Some librarians wanted to clarify that they still believed in the potential of co-browsing in teaching, if it would only work as advertised: "I think co-browsing would be a wonderful teaching tool, but I have so rarely been able to get it to work correctly that I don't even try it anymore." It is difficult to call something "essential" when one has had to learn how to do without it.

A strong majority of respondents (71 percent) agreed with the statement: "it's harder to do a good virtual reference interview than it is to do a good face-to-face reference interview". This supports Steiner and Long's conclusion, discussed above, that for some librarians there are difficulties inherent in computer-mediated communication that exist independently of the specific tools used to deliver virtual reference. One commenter summed up the views of many: "The only thing harder about a virtual reference interview is the absence of visual and audio clues from the patron." Several respondents mentioned delays in response time as a major factor complicating the reference interview: "It isn't *harder* to do a good reference interview, but it takes LONGER."

Attitudes about virtual instruction

For some commenters, these delays are an insurmountable barrier: "many times patrons don't have a lot of time when they come to me via IM so I don't have the luxury of a long reference interview or a long explanation of HOW to search." Time came up more than once as a barrier to teaching users how to search in virtual reference: "VR sometimes takes long enough without my needing to show the patron fruitless searches ... " or "I don't teach in IM because it takes too much time and typing." These time pressures can be exacerbated when librarians help more than one person at the same time. A strong majority of survey respondents (78 percent) agreed with the statement: "I'm less likely to teach someone how to search when I have multiple virtual users at the same time".

Read alongside some related items, these statements about time reflect some deeper attitudes about the importance of teaching in the virtual reference encounter. Almost three-quarters of respondents (72 percent) agreed with the statement: "I think it's important to help the user 'follow along' with what I'm doing when I provide virtual reference services". At the same time, a small majority of respondents (54.2 percent) agreed with this statement: "I like virtual reference because it gives me the chance to try searches out without the users seeing everything I do". In the open comments, one librarian discussed this tension:

> ... there are times when I can try things without [the users] and that does come in handy – but in a face to face encounter there are many times when I try something that doesn't work that actually helps the student more – being able to see it is essential.

Some comments point towards a need for more practice or training specifically aimed at teaching and learning in the virtual reference transaction. One respondent wrote, "I think IM could be an effective medium for teaching users how to search, I just haven't figured out how to do that effectively."

Correlations

To identify variables that might predict agreement or disagreement with these attitudinal statements, cross-tabulations were performed with the following variables: library type, the tools the librarian uses to provide VR service, and the librarian's personal experience with instant messaging tools. The cross-tabulations did not reveal any statistically significant relationships. In some cases there was strong agreement or disagreement across the variables, but in others small sample sizes made statistical significance unlikely. A few interesting patterns did emerge; these suggest further lines of inquiry.

We hypothesized that the tools used to provide VR would have an impact on a librarian's attitudes about virtual reference services. Specifically, that librarians who only used integrated VR systems would be more likely to express negative attitudes or concerns, particularly about using VR for longer, or more complex interactions. Cross-tabulations revealed that librarians who use integrated VR systems alone are more likely to express concern about their tools failing during a reference transaction, while librarians who use instant messaging tools exclusively tend to disagree with the statement: "When I'm doing virtual reference, I worry about problems with the technology getting in the way when I try to teach my users how to do something new."

A little more interesting is the pattern of responses about the item: "I don't feel like I need to teach my virtual reference clients everything about how to search because I assume they'll use the service again when they run into problems". In this case, librarians who use IM daily or weekly for their own use are more likely to agree, while those who use integrated systems tend to disagree with the statement, which might suggest that they do not expect their users to use their VR service again.

We also hypothesized that a librarian who was very comfortable using instant messaging as part of their regular communication flow would be more likely to express positive attitudes about using VR as a teaching opportunity. Regular use of IM to communicate with colleagues and friends did not correlate with any of the attitudinal items with the exception of one. Those who use instant messaging daily or weekly tend to disagree with the statement: "When I'm doing virtual reference, I worry about problems with the technology getting in the way when I try to teach my users how to do something new". Those who rarely or never use IM tend to agree.

While the population of librarians who responded to this particular survey from public libraries was far too small to allow for meaningful correlation, cross-tabulations revealed some patterns that suggest that a similar project with a higher response rate among public librarians would be of interest. Two of these reveal some different assumptions about the best way to teach search. On the item asking whether factors like co-browsing are important to effectively teach search, librarians from four-year

colleges and universities had a clear tendency to disagree, while their peers from public libraries tended to agree. Interestingly, community college librarians' responses are scattered without any pattern. A very similar pattern emerged when librarians were asked if it is important to routinely allow virtual reference users to "follow along" as the librarian searches. Librarians at four-year schools showed a solid tendency to agree with that statement, while public librarians were more likely to disagree. Community college librarians again had more diverse responses, though on this item they tended to cluster on the "agree" side of the scale.

Predictably, there was also division based on library type on an item that asked whether the librarian would be more likely to take the time to teach a patron to search if the patron came from the library's user community. Librarians at four-year colleges and universities were likely to agree with that statement, while those from community colleges and public libraries were noticeably more likely to disagree. While these patterns are far from statistically significant, they are interesting and they suggest that a project with sample sizes large enough to measure significance might reveal some interesting differences between academic and public librarians.

Discussion

Exploratory search

The responses and comments, taken as a whole, reflect librarians' ambivalence about teaching search in the virtual environment. Overall, there is an impression that they do not want to discredit patrons, nor devalue instruction, but they are not willing to say that librarians have made the jump to effective instruction in virtual reference. It is not surprising that in trying to resolve this ambivalence, some conclude that it is not the librarians, and not the patrons, but the technology itself that is ill equipped to handle the challenges of virtual teaching.

In order to really talk about what it means to teach during virtual reference transactions it is particularly important to think about what it means to teach someone to "search." There are, of course, the true known-item searches like the student who has a citation but can't quite figure out how to get to the actual article or the patron who wants a discrete piece of ready-reference type information. Whether or not we decide to do it, we nearly always know how to guide that user through the procedure to get the information they want. In fact, it may be precisely because the known-item search is relatively simple that so many librarians brought up time-related factors in the open-ended comments. Typing step-by-step instructions can take a librarian much longer than it would take to show or tell someone how to do a known-item search in a face-to-face interaction. A librarian who decides to "save the time of the user" and simply find a call number for the patron instead of showing them how to do it themselves may feel that the transaction is a missed instructional opportunity even as they decide it is the appropriate route to take to meet the user's need. This can manifest as a focus on the limitations of the tools or the impatience of the patron as the source of failure and a conclusion that it is hard, or even impossible to teach search in VR.

Teaching search, however, can often go far beyond finding known items. Marchionini (2006) argues that known-item search, which he calls "lookup search," is important, but must be distinguished from "exploratory search," or searching to support inquiry and learning. For the librarian providing virtual reference, it is very

important to understand this distinction. Even those users who present themselves to the librarian with a simple, lookup kind of question are often engaged in a larger, more complex exploratory process. Their single "how do I find" request is just one piece of a larger whole. For someone engaged in an exploratory search process the line between learning to search and learning from search is blurry, if it exists at all.

Where the technology of virtual reference can make teaching simple searches seem clunky and difficult, that same technology has the potential to make learning from search, a time-consuming and non-linear process, easier for librarians to facilitate. A chat session can be left open, with the patron off working independently through search results, following links or citations. If a new question arises, the librarian is still right there, accessible without hovering or interrupting. Previous conversations might be logged by the system to help both the patron and the librarian keep track of resources and pick up where the last reference interaction left off, saving everyone time.

It is important to note that if librarians believe that each reference transaction must be completed before moving on to the next one, or if the system they are using requires them to do so, then they may close out the session just as the user's exploratory search is beginning. Requiring – whether by policy or software design – librarians to resolve every question, deciding if it has been answered, lost or transferred works well for statistics and quality control but might also have the side effect of discouraging librarians from leaving sessions open to keep themselves easily available to users who may come back 20, 30 or 40 minutes later when they reach another point of need.

Staffing models that replicate the physical reference desk also complicate the picture. Scheduled shift changes can make a librarian rush to finish a transaction before the next librarian takes over; "handing-off" a patron is a more difficult matter in many virtual reference systems. Similarly, a user might come back to the service expecting to work with one librarian and find another, disrupting their search process as they have to explain their information needs again.

One librarian said:

> ... virtual reference is a potentially a great service to have, but I don't think it is a good substitute for face-to-face or even telephone reference. It is most effective when the user is already familiar with the library system and is asking for some quick guidance or clarification.

The assumption that this librarian is making, that users need to understand the specific systems unique to their library, is important. When virtual reference is used to help users understand the specifics of a particular library, especially when those specifics are tied to the physical spaces or collections, it is challenging, and it does take a long time. It is much harder to explain how to find a book on the shelf in text than it is in face-to-face conversation.

This challenge relates more deeply to the ongoing conversations in instruction librarianship about the librarian's teaching role. Should that role be limited simply to skills related to using the library and library resources or should librarians play a part in guiding students and patrons towards the more conceptual layers of information literacy? To many, teaching students to use library resources is not an end in itself, even when the specific question the student asks may require a lesson in using library tools. Instead, the deeper goal of information literacy instruction is to develop

"students/users [who are] willing to assume responsibility for formulating an understanding through the knowledge or information they gained" (Ellis, 2004, p. 106). In other words, a goal of information literacy instruction is to teach students to engage in, and learn from, exploratory search. The idea that virtual reference might facilitate a librarian's ability to do this in an organic way, as the student is engaged in a complex process, is intriguing, and pushes the librarian to think about their instruction goals for reference services in very broad terms.

Power and control

Virtual reference may, in fact, be better suited to teaching our users to search on their own than traditional face-to-face reference for an additional reason that may also help to explain some of the lingering discomfort librarians have with the medium: it shifts the control of the reference interaction away from the librarian. The power in a virtual reference transaction is much more balanced between the librarian and the patron. There is no desk to sit behind, and no physical barriers that might force a patron away from a reference interaction, like the lack of a nearby patron workstation. The idea that sharing control over the transaction with the patron might make it easier to use the transaction as a teaching opportunity is a bit counter-intuitive. Consider, though, the larger purpose of information literacy instruction: helping students take responsibility for their own inquiry and learning.

Teaching students to engage in, and learn from, exploratory search is also consistent with larger trends in teaching and learning, trends that favor active, engaging pedagogies. Alison King's, 1993 description of the teacher who works as a "guide on the side" is a highly influential metaphor that is very useful here. As she concludes, guiding students through active learning experiences helps those students become independent learners:

> Engaging our students in such active learning experiences helps them to think for themselves – to move away from the reproduction of knowledge toward the production of knowledge – and helps them become critical thinkers and creative problem solvers so that they can deal effectively with the challenges of the twenty-first century (King, 1993, p. 35).

These trends towards active, hands-on, or experiential learning have had a strong impact on library instruction. The Association of College & Research Libraries *Characteristics of Programs of Information Literacy that Illustrate Best Practices* (ALA's, 2003) identifies pedagogies that are active, collaborative, student-centered and tied to real-life experiences as a necessary part of effective information literacy programs. To create authentic, active, student-centered classroom experiences for students, librarians must give up some control over what happens in the classroom. In face-to-face reference the librarian can be present, hoping the student engaged in an active learning process will come to the desk with questions along the way. In virtual reference the librarian can take on the "guide on the side" role in an even more literal way, sitting on the computer screen ready to help.

Research in communication studies suggests that young people may prefer media like text messaging, instant messaging, or even email for communication because these tools allow them to take their share of control over communicative interactions (Madell and Muncer, 2007). With the tools we use for virtual reference, the user can take their time and formulate responses at their own pace. They can decide which pieces of their

identity to share, and which to conceal. Madell and Muncer's study focused on adolescent users, but these features are likely to appeal beyond that age group, particularly as tools like instant messenger become more familiar to and popular with older users.

This idea challenges some of the assumptions librarians have about why users choose to talk to the librarian online, and about some user behaviors during virtual reference transactions. One common assumption, expressed by many librarians, is the perception that users who choose to pose reference queries via virtual services must be in a hurry; users who are not in a rush would choose another form of communication. Respondents commented on this feeling frequently, saying things like "many times patrons don't have a lot of time when they come to me via IM," that "users are really focused on the quick answer," or even that "by its nature, IM communication is brief, quick, and to the point." IM for the perception that users are in a hurry leads to several related assumptions. These include the idea that patrons do not have the time to learn how to search themselves and the idea that they are even too rushed to let the librarian really engage with the complexity of their search.

The idea that users want to assert some control over the transaction, their query, and how they present themselves provides another explanation to the question of why they might choose IM instead of face-to-face reference. They can decide how much of their identity to reveal, and they can choose not to answer questions they do not understand. One librarian expressed a similar concept: "I think that IM technology can actually enhance reference interview experiences for many users as they are less afraid to "look" stupid, make mistakes, etc."

The absence of social cues (save for the occasional smiley face) in virtual reference transactions can also complicate this picture. Librarians who agreed that the reference interview is harder to conduct virtually also left comments like "facial cues can be crucial to accurate understanding of a patrons [sic] needs." Not being able to see one another also means that both the librarian and the patron make assumptions about what is happening on the other side of the screen. Patrons might well assume the librarian on the other end is helping only them, much as the librarian might assume the patron is focused only on the reference transaction. In reality, of course, the librarian could be working with more than one patron at least part of the time, and the patrons might be dividing their attention between multiple tasks. Patrons who seem to rudely disappear may not be gone at all.

The fact remains, of course, that when someone's question appears on a virtual librarian's screen, the librarian only knows what the asker has chosen to share and that is unlikely to be enough. So how can a librarian discover if a patron is truly in a hurry; if a student has already tried everything he knows how to do and is asking for help because he is feeling desperate; if a person is interested in following the "rabbit trails" of exploratory search? The obvious answer is to ask.

Conclusions

Beyond asking, however, there are techniques to use to avoid peppering a patron with questions before ever offering a resource or two, and ways to strike a balance between open-ended questioning and baffling students. Something as simple as suggesting possible answers might mean the difference between a student realizing she needs

background information and being frustrated by a library-centric question like "what kinds of information do you need?" Letting patrons know what kinds of searching you are trying keeps them in the loop, and gives the librarian time to search without leaving the patron to wonder if they have been disconnected or forgotten. Examples of some specific things to try follow.

The balance of power

Being mindful about the different power dynamics in the virtual reference transaction can help re-frame the transaction as a user-directed process. When the librarian holds on to control it can feel, on the receiving end, like instruction is being forced (teaching a skill because they "need to know this") or withheld ("I can't teach this person how to do this because they're in a hurry"). In some cases it might be better to send at least a preliminary "answer," then ask the question: would you like me to tell (or show) you what I did? Do not be paralyzed by finding a perfect response; work through the issues with the patron, dealing with dead ends and new pieces of information as they come along.

Similarly, think about ways to let the user control the pace of the transaction. Guard against making assumptions about slow responses; resist the temptation to jump ahead of the patron by delivering several instructions at once. Something as simple as leaving the window open, giving the patron the chance to come back and ask new questions as necessary, can dramatically change the dynamic. The user will leave when they are ready. Avoid the tyranny of resolution codes, or the sense that every transaction must have a clear and tidy end point.

Regular rules apply

Similarly, think about how the skills librarians develop in other arenas, like instant messaging or face-to-face reference, can be applied. Treat the virtual reference conversation like a "regular" IM conversation. Provide information in short bits that can be easily read in a typical IM or chat interface. Ask your patron to let you know when they are ready for the next step you want to give them, and then be ready for the user to take some time to work through what you have given them. Most of all, remember that a virtual reference transaction is a conversation that can be negotiated like any other conversation. If you are going to be silent for a while, you can warn the user in advance of that fact. If you are going to have to "monologue" for a while, let them know about that before you start.

Similarly, think about what you would do in a "regular" teaching session. Thinking about your desired outcomes can be helpful. No librarian could develop unique learning outcomes for every virtual reference transaction, but every librarian can think about what a user needs to be able to do as a result of this single, specific interaction. This can help you resist the temptation to jump ahead to the end of their process, mentioning everything they will need to know in one interaction.

Of course, think about what you would do in a "regular" reference interaction. The reference interview is an excellent tool for finding out what the user needs to do now. Sometimes, they will not need to learn how to search. As with face-to-face reference, it is unlikely that every virtual reference transaction will include instruction, nor should it be expected to.

It is easy to let the technology be a barrier to teaching and learning. It is easy to assume, in the absence of visual cues, that patrons who come to us via virtual reference services are not interested in learning how to search for themselves. Facilitating exploratory search via virtual reference does not depend on new technology, it depends on policies, reference interview skills, and perhaps most important, attitudes that are geared towards looking for opportunities to put the patron in control of his or her learning. New technology features or tools might make this switch easier or more successful, but in an absence of an instruction-focused attitude there is no technology that will make instruction simpler, more effective, or more prevalent.

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