FEATURE

Overcoming Transactional Distance

Instructional Intent in an E-mail Reference Service

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Dedication: Martha Portree died tragically on July 7, 2007, just days after she completed her work on revisions to this paper. Her enthusiasm and wicked sense of humor sustained us throughout this project, even during the most trying times, and her sly editorial pen lent much needed focus to this paper. As her co-authors, colleagues, and most importantly, her friends, we dedicate this article to her memory. The three remaining uses of "therefore" and any excessive commas are no fault of Martha's and would likely not have escaped her pen!

Theory is increasingly important as libraries transition traditional reference practices to online learning environments. This paper suggests and explores the boundaries of a new theory of reference interaction in the online environment that is grounded in online learning theories and the educational theory of transactional distance. The paper examines an operational definition of the librarian's instructional intent in e-mail reference service, considering it the level of customized content in canned, instructional messages at institutions that provide e-mail reference service. This definition is tested statistically, suggesting that when a canned response is edited for content by the responder more instruction is likely to occur and transactional distance is overcome.

Online reference services lack a general theory that reflects the learning that occurs in interactions between the librarian and the user. Rather, discussions of online librarian–user interactions are based on the theories and practices that have defined face-to-face interactions such as the reference interview. For example, as reference services transition to an online environment, especially through "Ask A Librarian" e-mail services, so too has the reference interview. There is a need to develop new reference theories, especially in relation to online services. Such new theories need to emphasize the role of the learner and the learning experience within the context of the online learning environment.

This paper is an attempt to define the boundaries of one new reference theory. We frame an asynchronous e-mail reference service within distributed education theory, and in particular within the sociocultural learning theories of transactional distance and interaction. It should be noted, however, that our purpose in defining this theory is not to initially prove that instruction is taking place via e-mail or asynchronous reference services. We think that it is possible that instruction can happen in this medium and does not necessarily require a back-and-forth interaction between the librarian and the user; an interpretive case study by Doherty learned that librarians in a particular e-mail service recognized the limits to asynchronous interactions and instinctively sought to build in an implied interaction.[1] This implied interaction, where instruction can be said to be intended by the librarian, is what we wish to evaluate in this paper.

It is our contention in this paper that such instructional intent is reflected

in how much the librarian customizes the canned response of this particular e-mail service to better meet the needs of the user. We tie this customization into educational theory, especially theories of online learning and online learning environments. We offer a definition of librarian-to-learner interaction that we call instructional intent as the level of customized content in a librarian's reply to an online question, and then seek to test this statistically.

ONLINE REFERENCE SERVICES

The library literature on online reference services, particularly synchronous services such as chat and instant messaging, assumes that technology can be used as a tool to transition practices such as the reference interview to the online learning environment without the need to apply a critical lens to such practice in the first place.[2] Janes notes that reference is generally "independent of any specific technology" while conversely noting that any definition of online reference implies a dependence on technology.[3] We argue that this dependence on technology could be used to transform reference services beyond just "services, values, users, and all the rest."[4] Examining our dependence on technology can and should generate much needed conversations on the critical aspects of librarianship in general, and reference services in particular.

The catchall terms "online reference" or "digital reference" refer to the technology-dependent trends in reference services. From these terms, our literature has developed a focus on how traditional services can be transferred to the Web without fully taking advantage of the inherent benefits of the technologies being used. For example, let us examine Ross, Nilsen, and Dewdney's reference interview quick tip.[5] They begin with a patron suggesting a source to the librarian by asking something such as "Can I have an almanac?" They suggest ignoring that question to ask "What specifically are you looking for?" This is a standard of traditional reference practice that, though well-meaning, sounds like a challenge to the user. Indeed, it is liable to make the questioner feel like the reference supplicant described by Samuel Green in 1876, who discussed the need for instructing users in catalog systems because of their lack of knowledge.[6] Ignoring the original question devalues the experience that the patron brings to the reference interaction by assuming that they do not know what they want. In an online learning interaction, which does not have the time and face-to-face components basic to an effective reference interview, it is essential to build upon the student's prior knowledge in order to allow them to better learn what we are trying to instruct. As noted later in this essay, such a focus on building upon prior knowledge is inherent in constructivist approaches to online learning.

Rather, in an online interaction, we would suggest providing the user with the content requested, and then going an extra step: "Here you are. So you are probably looking for some statistics? If that doesn't contain quite what you were looking for, let me know, I'm happy to help you find articles and other resources that may answer your question." This provides an opening for more assistance without assuming that a patron cannot be expected to know what he or she wants and may prompt an immediate response from the patron for more assistance. This example agrees with Doherty, who, on the basis of his interpretations of the practices of librarians in an e-mail reference service, defines the process of responding to online reference questions similarly to those of the reference interview: evaluation, pre-searching, answering (here the provision of an answer to the question as asked), and suggestions (here providing the user with further options, assistance, suggestions, and instruction).[7]

For these reasons, we prefer to maintain an emphasis on technology in any definition of online reference. In this paper, online reference is defined as the provision of help resources such as FAQs, electronic databases, and other electronic content and/or asynchronous or synchronous computer mediated communications (CMC) such as e-mail or chat.[8] This definition further engages peripherally in CMC theory, with the understanding that CMC–based reference services allow for an examination of such concepts as social presence and media richness.[9] CMC theory is defined as communication that occurs via computer-mediated forms, such as e-mail between two or more individuals. In this paper we are focused on a single form of digital reference service: the e-mail interaction. We suggest, however, that the speed with which libraries have moved online, especially through services provided through the Internet, has resulted in a social disconnect between library users and librarians and a lack of focus on instructional interaction. However, by framing this discussion within distributed education theory, and in particular within the theories of transactional distance and interaction, we can add a lens missing from the literature.

The theory of transactional distance redefines distance education in pedagogical terms rather than geographic terms:

> Distance is determined by the amount of dialog which occurs between the learner and

the instructor, and the amount of structure which exists in the design of the course. Greater transactional distance occurs when an educational program has more structure and less student-teacher dialogue, as might be found in some traditional distance education courses.[10]

As can be seen, the concept of dialogue is important to this theory. However, in this instance dialogue emphasizes an interaction that seeks to develop a common level of understanding. It does not necessarily imply continued back-and-forth conversation. Paulo Freire suggests dialogue as an interaction that seeks to develop a common level of understanding when he speaks of the importance of a dialogic form of education in which pedagogy is developed and acted upon. Students and teachers, Freire says, should be learning from each other as opposed to an imposition of learning from one to another. He uses an analogy of banking to suggest that the educator deposits information in the mind of the student and rejects any empowerment in the transaction. Indeed, even terms such as "transaction" rhetorically refer to banking. However, for Freire, through a form of "problem-posing" education, learners are encouraged to communicate, to become conscious of their own consciousness: "People teach each other, mediated by the world, by the cognizable objects which in banking education are 'owned' by the teacher."[11] For example, instead of assuming that a user does not know what information is needed, here we are using Freire's concept of dialogue to suggest an equality of expertise, wherein the librarian assumes the more empowering role of partner as opposed to information guru. Instead of asking users to prove the worth of their research or research question, librarians should value the perspectives, experiences, and comfort level of the users as well as their own and work from both as a starting point.

In transactional distance theory, dialogue is placed in a continuum with structure in any online interaction. The reference interview is traditionally defined as a structured conversation between the user and the librarian. While such a definition implies a dialogue, it is hampered by the structure imposed by the tradition of the reference interview. Saba and Shearer, however, have reframed the theory of transactional distance slightly in terms of learner control, and this is applicable to a new theory of reference interaction in the online environment:

An increase in the level of *learner control* increased the rate of *dialogue*, which in turn decreased the level of *transactional distance*; an increase in the level of *instructor control* increased the rate of *structure*, which in turn increased the level of *transactional distance*.[12]

In other words, as structure increases, dialogue decreases, and transactional distance becomes a barrier to learning. Therefore the structured reference interview in an online setting (and, arguably, also in a face-to-face setting) may increase transactional distance between the user and the librarian.

It is important to stress that the concept of dialogue in this paper is not the standard dictionary version that emphasizes the back-and-forth of a face-to-face transaction. This study draws on both Freire as noted above, but also on the idea of dialogue discussed in distributed learning theory, in which communication may not be synchronous or even back and forth. Such a definition does not require a response from the user, and indeed the e-mail reference service examined here assumes the user will not respond after the initial contact. The librarian then compensates for this absence of response by trying to develop an asynchronous interaction that anticipates some of the dialogue.

This is borne out in Doherty's related interpretive study that examined the process of librarians as participants responding to a user's e-mail reference question. All participants reflected upon the specific user's question. As a part of the study, a stimulated recall interview asked participants questions as they reviewed a user's question. At times these questions moved beyond simple evaluation of the content to more specific issues about serving the user appropriately. For example, when the content of the user's question did not automatically suggest a referral, there was still some second guessing that went into the ultimate decision to refer. One participant was particularly concerned at what was thought to be an inappropriate referral, noting that the referral itself lacked some content that would have at least helped to get the user started on some research. All participants saw a referral as a potential time waster for the user. Once an interaction was referred further interaction was no longer considered specifically the responsibility of the digital reference service.[13]

INSTRUCTIONAL INTERACTION

Moore notes that one way of dealing with issues of transactional distance is through what he terms interactions.[14] Wagner defines this as

an event that takes place between a learner and the learner's environment. Its purpose is to respond to the learner in a way intended

to change his or her behavior toward an educational goal. An instructional interaction is effective when the environmental response changes the learner's behavior toward that goal. *Instructional interactions have two purposes: to change learners and to move them toward an action state of goal attainment.*[15]

Moore further writes of three dialogical dimensions of instructional interaction: learner to learner, learner to instructor, learner to content.[16] Gunawardena and McIsaac add another dialogical dimension of instructional interaction specific to the online environment: learner to technology interactions.[17]

Learner control is paramount to reducing the negative effects of transactional distance. In an online interaction with users, librarians should be specifically focused on the dimensions of learner to instructor, learner to content, and learner to technology. Instructional interaction occurs when the implicit emphasis of the interaction is placed on enhancing the learner's control over the interaction. A dialogue is encouraged in which the learner's knowledge is emphasized over the librarian's expertise in a collaborative online learning environment. In this study, it is assumed that instructional interaction implies intent because the responder seeks to instruct the user.

Much of the literature about online reference services includes learner-to-technology and learner-to-content interactions.[18] Berge contends that only through well-designed interactions within the contexts (as well as the limitations) of both the learning activities and the delivery system can interpersonal interactions be developed to support effective learning.[19] Moore specifically suggests that the learner-to-instructor interaction provides the learner with instructor feedback, motivation, and dialogue. Further, Moore implies a constructivist instructional framework, where the instructor is responding to the learner's own creation of new knowledge.[20]

For the librarian in the online learning environment, this can be interpreted as a response to the structural limitations of the reference interview, where it is not always possible to respond to the learner's creation of new knowledge. Instead of assuming that a user does not know what information is needed, the instructional interaction would be a dialogue of equals wherein the librarian assumes the more equal role of partner as opposed to expert.

METHOD

This study examines instructional interaction in online reference through an analysis of the content of answers to questions in a currently active e-mail service.[21] The study examined data stored for interactions that occurred between October and November 2004, 2005, and 2006. The complete database stored questions and answers from the inception of the service (June 2002) to the present. It should be noted that this study is focused on the librarian side of the interaction. Analysis of the user side of the interaction was not possible because of confidentiality restrictions that deleted user information from all interactions.

Two previous internal analyses (conducted by the co-authors and based on an emergent design methodology) suggest that the sample periods chosen for this study is representative of a calendar year's worth of data. In the first of these studies, which examined and coded the entire database of stored questions and answers during its first year (June 2002 through June 2003), it was noted that February–March and October–November were the busiest periods, corresponding to the middle of the Spring and Fall semesters respectively. Further examination noted that the online service was reflective of the face-to-face interactions in number and content. Finally, it was reported that the diversity of content was similar across all months and that the October and November period was the busiest of the academic year. The second study, conducted at the end of the following academic year, agreed with these conclusions with the exception that while the online service remained consistently balanced between directional versus instructional questions, the face-to-face service desk started to see an increase in the ratio of former over the latter. This second study further confirmed that the October–November period was an excellent snapshot of the entire academic year.

In keeping with the theoretical orientation explored earlier, within this e-mail service there is no presumption that the user is not quite sure of the question, supported in part by Grogan's conclusion that "most of the library users who put questions to the librarian know exactly what they need and ask for it clearly" and by Janes' suggestion that this self-awareness is also mediated by lack of comfort in sharing too many details.[22]

The interaction in this service begins through a public online Web form (see figure 1). The first of the aforementioned internal analyses shows that many of the questions could easily fall into one of a series of categories. As an outcome of this first analysis, the service was redesigned to allow for a more phenomenological coding of the answers into the categories suggested in the study. Also, this new design allowed for the development of standard canned response forms to be used for

the category thus coded. The Appendix details the canned response forms used in 2004, 2005, and 2006. Due to changes in services, these forms have been revised on an ongoing basis, resulting in the deletion of some forms and the additions of others. The internal analyses suggest that the response was usually appropriate and detailed enough to conclude the interaction, although such a conclusion should be qualified in that the studies did not directly seek out user satisfaction.

This service does not engage in an interview with the user, but users do have the option of replying to the librarian and, according to internal data, overwhelmingly choose not to. What the service does do is encourage the library staff responding to the query to take the question at face value or make some a priori assumptions in respect to the information need of the user. While this latter approach is itself quite loaded in sociological terms, it is at least a first step in placing value on what the user has expressed, especially if the librarian states this assumption in the response.

Instructional versus Procedural

During the period the data were recorded for the current study, librarians were asked to select from a list of customizable responses to use in their response to the user (see the appendix). Straw notes the value in using canned messages, especially because it can release the responder from some of the more onerous procedural tasks in drafting a response.[23] We argue that such a procedural focus on the canned response functionally limits the role of the librarian. While there is certainly value in standardizing the response and especially the language, *customization of the canned response implies intent on the part of the librarian to instruct the user*. Therefore the first step in this study was to examine the canned response forms and code them as either instructional intent (hereafter instructional) or procedural.

For example, as is seen in the appendix, nineteen canned response forms from 2005 are coded as procedural, while eight are coded as instructional. The definitions for these codes are based on the aforementioned definition and purpose of instructional interaction. The researchers independently analyzed the canned response forms used in all the periods of the study and coded each form as either Procedural or Instructional. In other words, if a review of the question suggested that instruction is intended by the librarian-responder, then it is categorized as instructional. We then came together to triangulate our individual codes and the appendix reflects our collective codes.

We acknowledge that these decisions could be seen as both binary and arbitrary. It can be argued that there is a continuum of instruction occurring in this online reference service, and that this continuum is likely reflected in the canned response forms. In saying this, the literature does not really

Figure 1. Public Interface to E-Mail Reference Service
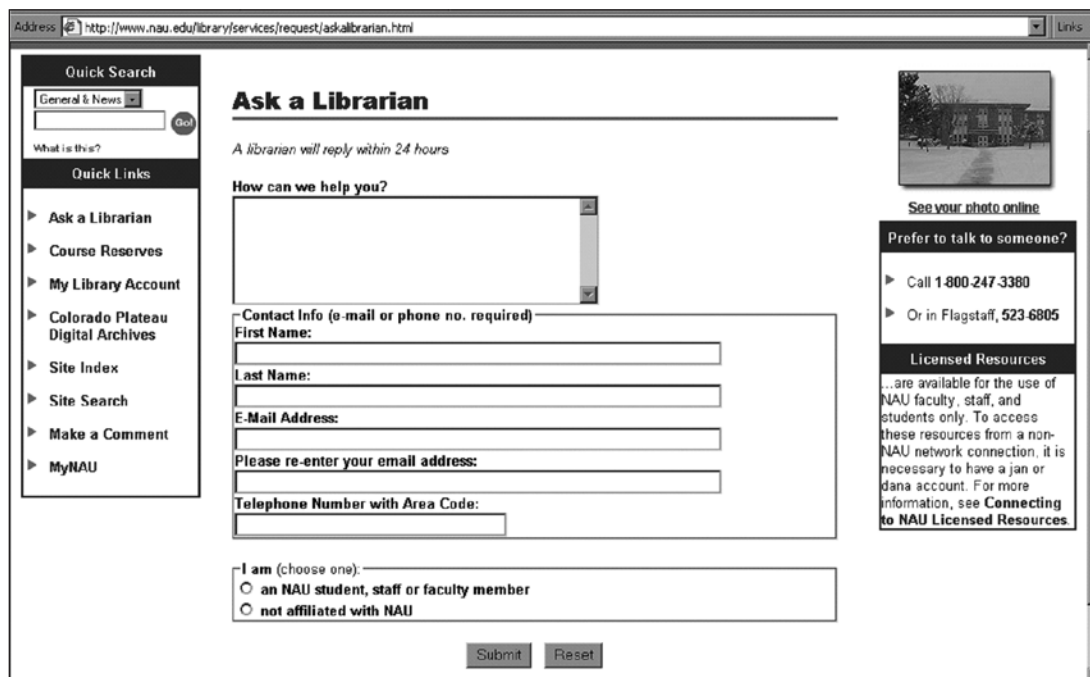
discuss whether or not instruction occurs in any online reference services. The use of canned messages (what is hereafter referred to as the base answer forms) can affect how the librarian responder interacts with the user and whether this interaction reflects an instructional intent of the librarian. The question of whether learning is actually occurring is the basis for another study in which the user's point of view is included. This study, however, is evaluating whether instructional intent is present for the librarians serving this single e-mail reference service.

As one reviews the text of the base answer forms one can see that they are broadly procedural and directional responses versus more abstract responses that begin to suggest some cognitive action by the user.[24] It is this latter sense of intending cognitive action that is categorized as instructional. For example, if one reviews the text of the base answer form labeled "Search Articles Webfeat Advanced," one can see areas where the librarian is expected to provide the user with information that is cognitively based. Appropriate resources are suggested, keywords are shared, Boolean operators are suggested and explained, and information about accessing databases is given. Also, words such as "may include" rhetorically imply that the user should look further than the examples provided. In terms of the theory being developed in this study, it would be in these areas that more customization should occur. The underlying, latent goal of the instructional answer forms is to provide the user with tools appropriate to a constructivist-based learning environment.

Looking at the procedural forms, however, there are no learning expectations implied. For example, the base answer form we have labeled as "Circulation Referral" is a simple response to the user that refers them to another library unit. This form is usually chosen when the user's question specifically refers to issues that can only be handled by that unit, such as book renewal or questions about due dates. This response seems to be classified as directional but may also be instructional because it could change user behavior in any future interaction (i.e., the user would contact that unit directly for similar future questions). The Ask A Librarian service under study here, however, has been intentionally developed to be the major point of contact between all library units and library users. In other words, there is little expectation with this response that the user will learn to contact the circulation unit directly in the future. The same nonexpectation is applied to most of the other base answer forms that are categorized as procedural. However, by using the previous argument to uncover the assumptions of this answer form, it can be seen that, again, there is no clear expectation on the user to learn to do this without assistance next time.

Instructional Interaction

The operational definition of instructional interaction for this study is the level of customized content. In a procedural response, it is expected that there will be less customized content. In other words, there will be more dependence on the base answer form and its prepared content to answer the user's question. Returning to the transactional distance theory outlined earlier and our concept of dialogue, one would expect to see the structure of the base answer form adapted in which expertise is neither assumed nor given. In other words, more customized content suggests more instructional interaction in sociocultural terms.

Each of the answers in our sample ($n = 1557$) were analyzed and coded in terms of how much the content differs in word count from that of the base answer form used. Differences in word count imply greater customization; instructional responses would be more customized than procedural responses. This suggests the use and analysis of descriptive statistics, especially mean and median scores of the customized content and the average level of customization in procedural responses compared to that in instructional responses. Further, a Mann-Whitney U test was performed to statistically compare the mean scores of customized content for instructional versus procedural. The theory developed here suggests that there would be statistically significant higher expected customization in instructional responses than in noninstructional responses, thus validating this operational definition.

STATISTICAL ANALYSIS

Figure 2 reports the descriptive statistics, including the range of difference of the word counts of instructional responses ($n = 769$) versus procedural responses ($n = 788$). A Mann-Whitney U test was conducted using SPSS 15 to evaluate the hypothesis that the answer forms would be customized more for instructionally related responses versus procedurally related responses (see figures 2–4). The results of the test were in the expected direction and significant: $z = -4.429$, p < .000. Instructional responses had an average rank of 830.08, while procedural responses had an average rank of 729.16. Figure 5 shows the distributions of the word differences between the base response forms

Figure 2. Descriptive Statisticsww

	N	Mean	Std. Deviation	Minimum	Maximum
Difference	1,557	31.45	88.57	-421	620
IorP	1,557	1.51	.50	1	2

Figure 3. Ranks

	IorP	N	Mean Rank	Sum of Ranks
Difference	Instructional	769	830.08	638,328.50
	Procedural	788	729.16	574,574.50
	Total	1,557		

versus the actual response for the two groups.

DISCUSSION AND CONCLUSION

The statistical test therefore suggests that the librarians working on this Ask A Librarian service customize their user responses more when they intend to provide some level of instruction to the user. Also, procedurally oriented answer forms do not always need much in the way of customization. This latter point is very evident in the distribution of the word difference shown in figure 5.

However, there is a concern with the outlier data shown in figure 5. It could easily be assumed that these may be due to data entry error. But a review of the actual responses versus the base forms show that these data sets are accurate. In many of the instances, the customized responses were credited to one or two individuals who tended not to use the answer forms. Indeed, Doherty discovered that some librarians preferred to ignore the forms completely because of their perceived impersonal nature.[25]

Further, our statistical analysis alone does not suggest causation. While there is a statistically significant difference in the word count means between instructional and procedural answers, this does not necessarily correlate to the librarian's instructional intent causing such a significant customization. However, returning to our theoretical frame outlined previously, the analysis is suggestively supportive of this causation. To be sure, a more interpretive study should be performed in which case-study or ethnographically informed methods could uncover the actual intent of the librarians.

One major concern of this study has been the

Figure 4. Test Statistics[*]

|	Difference
Mann–Whitney U	263,708.500
Wilcoxon W	574,574.500
Z	-4.429
Asymp. Sig. (2-tailed)	.000

[*] Grouping Variable: IorP

usage of the generic answer form. It was used 181 times during the October–November 2004 period, 196 times during the same period in 2005, and fell to 118 in 2006. These numbers are consistent with internal studies that suggest this form is used about 25–30 percent of the time. In many instances, the content of the generic responses had to be examined to divine the intent of the librarian responder. A similar process was used here as was used previously to code the other entries as instructional or procedural.

Our data reveals that customization of canned responses occurs in this one online reference service. We suggest that there could be similar results in other such services examined by comparing the amount of customization that goes into the actual response sent to the user. Where possible, we encourage libraries to gather such data and thus begin to uncover some basic assumptions about their online reference services. Such studies would add to the empirical testing of the theories we have developed.

One assumption of the present service that this study revealed is the importance of customization.

Figure 5. The Distributions of Word Count Differences (Customization) for Instructional and Procedural Responses
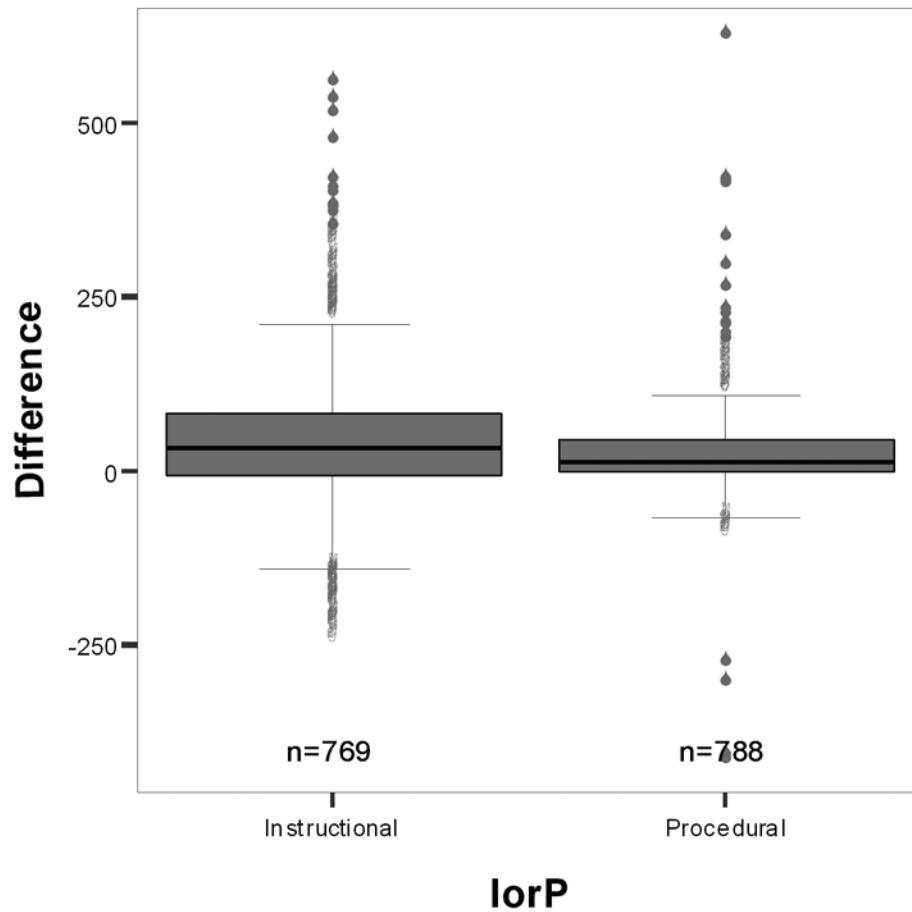
Anecdotal evidence suggests that librarians use the built-in ability to edit all responses to meet the query of the user as best as possible. Without the ability to conduct the traditional reference interview, the customized response becomes more essential as the librarian responder makes certain presumptions about the needs of the user and also tries to proactively anticipate potential unexpressed needs. Janes, supported by Doherty's conclusions, implies that librarians in online reference are selectively applying the orthodox procedures of the reference interview.[26] We believe our analysis shows that the librarians involved with this e-mail reference service have drawn on the limitations of the technology to critically engage in an examination of the reference interview in favor of a dialogical interaction.

In conclusion, our research shows that the academic librarians involved in this particular e-mail reference service intend to provide some form of instruction in just over half of the interactions examined here. It is this instructional intent on the part of the librarian that is deliberately designed to overcome the negative issues of transactional distance in the online learning environment. In other words, the librarian seeks to provide the user with an appropriate and relatively immediate response.

There are instances of significant customization of responses over the base standard answer form. As noted above, this suggests a strong sense of instructional interaction. The librarian has stepped outside of the structurally bound, standardized response to engage more directly with the user and to acknowledge the experience and intent the user brings to the interaction.

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References and Notes

1. John J. Doherty, *Facilitating Interaction: A Case Study on the Role of the Reference Librarian in Online Learning Environments* (Saarbuecken, Germany: VDM, 2008).
2. Joseph Janes, *Introduction to Reference Work in the Digital Age* (New York: Neal-Schuman, 2003); Susan McGlamery and Steve Coffman, "Moving Reference to the Web," *Reference & User Services Quarterly* 39, no. 4 (2000): 380–86; Catherine Sheldrick Ross, Kirsti Nilsen, and Patricia Dewdney, *Conducting the Reference Interview: A How-To-Do-It Manual for Librarians* (New York: Neal-Schuman, 2002).
3. Janes, *Introduction to Reference Work in the Digital Age*, 30.
4. Ibid.
5. Ross, Nilsen, and Dewdney, *Conducting the Reference Interview*, 22
6. Samuel S. Green, "Personal Relations between Librarians and Readers," *American Library Journal* 1, no. 2/3 (1876): 74–81. Janes also frames online reference services within the original contexts of reference as first promulgated by Green. While Janes acknowledges the inherent patriarchy in Green's work, this work has nonetheless formed the basis of much of the development of reference theory since. Indeed, Janes comments that he is still impressed by the contemporary feel of Green's observations (*Introduction to Reference Work in the Digital Age*, 8).
7. Doherty, *Facilitating Interaction*, 62–77.
8. Ardis Hanson and Bruce Lubotsky Levin, eds. *Building a Virtual Library* (Hershey, Pa.: Information Science, 2003): 95–120.
9. Ibid., 98.
10. Lani Gunawardena and Marina McIsaac, "Theory of Distance Education," in *Handbook of Research for Educational Communications and Technology*, ed. D. H. Jonassen (New York: Simon and Schuster Macmillan, 2003): 361.
11. Paulo Freire, *Pedagogy of the Oppressed* (New York: Continuum, 1993): 80.
12. Farhad Saba and Rick L. Shearer, "Verifying Key Theoretical Concepts in a Dynamic Model of Distance Education," *American Journal of Distance Education* 8, no. 1 (1994): 54.
13. Doherty, *Facilitating Interaction*, 62–92.
14. Michael G. Moore, "Distance Education Theory," *The American Journal of Distance Education* 5, no. 3 (1991): 1–6; Michael G. Moore, "Three Types of Interaction," *The American Journal of Distance Education* 3, no. 2 (1989): 1–6.
15. Ellen D. Wagner, "In Support of a Functional Definition of Interaction," *American Journal of Distance Education* 8, no. 2 (1994): 8.
16. Moore, "Three Types of Interaction," 1–6.
17. Gunawardena and McIsaac, "Theory of Distance Education," 355–95.
18. See, for example, R. David Lankes, "The Digital Reference Fallacy," *The Reference Librarian* 38, no. 79/80 (2003): 35–44; Jeffrey Pomerantz, Scott Nicholson, Yvonne Belanger, and R. David Lankes, "The Current State of Digital Reference: Validation of a General Digital Reference Model through a Survey of Digital Reference Services," *Information Processing & Management* 40, no. 2 (2004): 347–63; Jeffrey Pomerantz, Scott Nicholson, and R. David Lankes, "Digital Reference Triage: Factors Influencing Question Routing and Assignment," *Library Quarterly* 73, no. 2 (2003): 103–20.
19. Zane L. Berge, "Active, Interactive, and Reflective eLearning," *Quarterly Review of Distance Education* 3, no. 2 (2002): 181–90.
20. Moore, "Distance Education Theory;" Moore, "Three Types of Interaction."
21. For more on the history and development of this service, see Tina M. Adams and R. Sean Evans, "Educating the Educators: Outreach to the College of Education Distance Faculty and Native American Students," *Journal of Library Administration* 41, no. 1/2 (2004): 3–18. Refer especially to pages 8–9. This service has since evolved to be the generic online place for the public to ask questions of the Cline Library. While many users are students at a distance, more and more are local users that choose not to come to the building.
22. Denis J. Grogan, *Practical Reference Work* (London: Library Association, 1991): 63; Janes, *Introduction to Reference Work in the Digital Age*, 53.
23. Jack E. Straw, "Using Canned Messages in Virtual Reference Communication," *Internet Reference Services Quarterly* 11, no. 1 (2006): 39–49.
24. See http://oak.ucc.nau.edu/jjd23/Forms.htm for text of the base answer forms.
25. Doherty, *Facilitating Interaction*, 81–82.
26. Janes, *Introduction to Reference Work*; Doherty, *Facilitating Interaction*.

APPENDIX: ANSWER FORMS

2005–6 Answer Forms Base Word Count

Number	Name	Count	I or P
1	Generic	10	*
2	Circulation Referral	52	P
3	Book and Media Renewal	97	P
4	Database Problems	44	P
5	DDS Referral (Interlibrary Loan)	70	P
6	DDS Renewal	52	P
7	Course Support Referral	30	P
8	Request Material	115	P
9	Electronic Reserves	102	P
10	SCA Referral (Special Collections)	80	P
11	Search Books	163	I
12	Search Peer-Reviewed Articles	33	I
13	Search Periodicals	200	I
14	Search Videos (General)	220	P
15	Search Videos (Specific)	195	I
16	SCA Hours	93	P
17	SCA Policy Information	146	P
18	SCA Digital Archives Copy Information	170	P
19	Course Reserves Referral	51	P
20	Media Services Referral	52	P
21	Team Referral	48	P
22	Unit Referral	43	P
23	Schedule Media	75	P
24	WebFeat Find Articles	259	I
25	Search Articles WebFeat Advanced	301	I
26	Search Articles Browse Resources	287	I

2004–5 Answer Forms Base Word Count

Number	Name	Count	I or P
1	Generic	10	*
2	Circulation Referral	49	P
3	Book and Media Renewal	85	P
4	Database Problems	44	P
5	DDS Referral	70	P
6	DDS Renewal	74	P
7	Course Support Referral	30	P
8	Request Material	85	P
9	Electronic Reserves	107	P
10	SCA Referral	80	P
11	Search Articles	294	I
12	Search Books	161	I
13	UNUSED		
14	Search Peer Reviewed Articles	260	I
15	Search Journals	380	I
16	Search Videos (General)	187	P
17	Search Videos (Specific)	157	I
18	SCA Hours/Location	93	P
19	SCA Policy Information	146	P
20	SCA Digital Archives Copy Information	170	P
21	Reserves Referral	51	P
22	Media Services Referral	52	P
23	Team Referral	43	P
24	Individual Referral	43	P
25	Schedule Media	75	P

2006 Answer Forms Base Word Count

Number	Name	Count	I or P
1	Generic	10	*
2	Circulation Referral	52	P
3	Book and Media Renewal	101	P
4	Database Problems	44	P
5	DDS Referral	70	P
6	DDS Renewal	77	P
7	Course Support Referral	30	P
8	Request Material	117	P
9	Electronic Reserves	160	P
10	SCA Referral	71	P
11	Search Articles	286	I
12	Search Books	171	I
13	UNUSED		
14	Peer Reviewed Journals	33	P
15	Search Journals	202	P
16	Search Videos (General)	231	P
17	Search Videos (Specific)	205	I
18	SCA Info	84	P
19	SCA Hours	137	P
20	SCA Digital Archives Copy Information	161	P
21	Course Reserves Referral	51	P
22	Media Services Referral	52	P
23	Team Referral	48	P
24	Unit Referral	43	P
25	Schedule Media	75	P
26	WebFeat Find Articles	259	I
27	Search Articles WebFeat Advanced	301	I
28	Search Articles Browse Resources	287	I
29	RefWorks	509	P
30	Vista—Student	64	P
31	Vista—Faculty	70	P