

# Politeness in Proactive Library Chat Reference

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Libraries have increasingly turned to a “proactive” model of chat reference as opposed to a traditional “reactive” static model. It is well documented that proactive chat leads to an increase in usage, and prior research suggests question complexity increases with proactive chat as well. At this time, no study has investigated politeness in proactive library chat reference. By better understanding how politeness functions in chat reference, librarians will be able to adapt to a changing reference environment.

Since the start of the COVID-19 pandemic, libraries have seen an increase in the use of virtual reference services, particularly chat reference.<sup>1</sup> Traditionally, libraries have utilized a “reactive” static chat model in which “a chat box is embedded on a library website, and a user must take the initiative to navigate to it and ask a question.”<sup>2</sup> In recent years, a different model has gained popularity: proactive chat. A proactive chat box automatically appears after a set amount of time, asking if the user needs help. If the user selects “chat now,” they are prompted to ask a question, which is then sent to reference staff. From the staff side, there is no visual difference between static and proactive chat besides the name of the widget; all questions go to the same queue without mediation. It is imperative to note that while some libraries may make use of an automatic chat *bot*, proactive chat is not in and of itself an automated or artificial intelligence (AI) feature. In August 2023, the Herman B. Wells Library at Indiana University implemented a proactive chat widget on their library website in addition to the preexisting static chat service.<sup>3</sup> Since the introduction of the proactive chat, reference staff have anecdotally reported noticing differences in chats compared to previous years. The prevailing sentiment among staff was that it seemed as if patrons didn’t realize there was a person on the other end of the chat, as evidenced by the use of keywords or short phrases instead of full questions in the initial message, increased interactions where the patron never responded after sending an initial message, and a lack of common markers of politeness.

After experiencing this phenomenon and hearing similar stories from co-workers, the author decided to investigate the matter further. There is currently a gap within existing literature; at this time there has been no investigation into politeness in proactive library chat reference. This study asks the following questions:

- What differences can be found in reference interactions using proactive chat versus static chat?
- To what extent does politeness differ between proactive and static chat reference?

## Literature Review

### *Proactive Chat Reference*

Despite the “annoyingness” of proactive chat, it is well documented that the implementation of proactive chat leads to an increase in usage.<sup>4</sup> Several studies have attempted to explain this

increase, with differing results. One study looked to determine whether proactivity itself drove use and, using unplanned outages in a proactive chat service, found that usage dropped when the proactive service was unavailable.<sup>5</sup> A different study however found that, while their chat usage doubled after the introduction of proactive chat, there were still four times as many chats received through their static chat than their proactive chat, leading them to suggest that “proactive chat . . . supplements, but does not replace, embedded chat.”<sup>6</sup> Users themselves indicate that they would be more likely to use a proactive chat, with Imler et al. finding that while “only 16 per cent of study participants had used the ‘Ask a Librarian’ reference service . . . 83 per cent indicated that they would be more likely to use the Ask service if the widget appeared on the screen.”<sup>7</sup>

Question type and complexity has also been studied multiple times. Complexity, typically determined through the use of the READ (Reference Effort Assessment Data) Scale as well as classifying questions by type (e.g., reference vs. directional), has repeatedly been found to increase with proactive chat compared to static chat.<sup>8</sup>

### **Politeness**

One of the most prolific theories of politeness arises from sociolinguistics. In 1975, Grice introduced four guidelines, or maxims, for efficient communication. For the most efficient communication, Grice suggested that people be truthful (Maxim of Quality), clear (Maxim of Manner), concise (Maxim of Quantity), and relevant (Maxim of Relevance).<sup>9</sup> However, Brown and Levinson argued that communication is a face-threatening act that requires people to be polite in order to maintain face.<sup>10</sup> Face, they argued, is “the public self-image that every member [of a society] wants to claim.”<sup>11</sup> Given this requirement, people often communicate in manners that break Grice’s Maxims for Efficient Communication to be polite.

Brown and Levinson divided their politeness strategies into two categories: positive and negative. Positive politeness “is oriented toward the positive face of [the Hearer], the positive self-image that he claims for himself,” while negative politeness “is oriented mainly toward partially satisfying (redressing) [the Hearer’s] negative face.”<sup>12</sup> Positive politeness is further broken down into 15 output strategies, which are divided into three higher-order strategies: claim common ground, convey cooperation, and fulfill the Hearer’s want. Negative politeness includes ten output strategies divided into five higher-order strategies: be direct, don’t assume, don’t coerce, communicate desire to not impinge, and redress wants to the Hearer.<sup>13</sup>

### **Politeness in Chat Reference**

There has been limited research into politeness in library chat reference. Carlo and Yoo compared language use, particularly politeness strategies, in face-to-face and computer-mediated (chat) reference transactions. They found that both librarians and patrons used negative politeness strategies significantly more online than face-to-face, and librarians used significantly fewer positive politeness strategies online.<sup>14</sup> They also found that politeness markers such as “please” and “thank you” were used significantly more by both parties online.

Westbrook studied the use of formality markers in library chat reference. She examined both syntactic markers of formality such as contractions and slang, as well as content markers such as apologies, self-disclosure, and expressions of need. She found that, since users initiated the conversation, they set the initial level of formality. Furthermore, users tended to have the highest

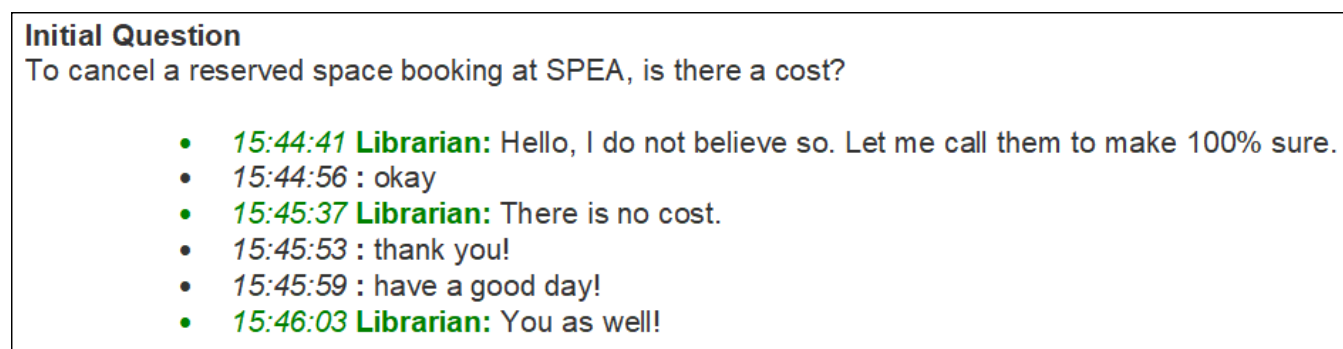
level of formality in the opening question.<sup>15</sup> Users were less formal than librarians, and librarians tended to follow the level of formality set by the user.

## Methods

This study employs an experimental research design to answer the research questions. It compares two data sets; one set is from before the introduction of a new feature (a proactive chat widget), and the other is from after. The sets are designed to be as similar as possible besides the new proactive widget. This study design is common in research into library chat reference and has been used to examine effects of proactive chat widgets.<sup>16</sup>

### Data Collection

Data was collected in October 2023 from Indiana University's Scholars' Commons Reference Desk online reference system (LibAnswers). LibAnswers automatically saves transcripts from chats along with details such as the time of the interaction, date, initiating webpage, widget, wait time, chatting duration, and message count. The author collected all transactions that took place Monday through Friday, September 12, 2022, through September 25, 2022, and September 11, 2023, through September 24, 2023. A purposeful sample was selected to be representative of typical reference transactions; by including the fourth and fifth weeks of the fall semester, the start of the semester, midterms, and finals are avoided. Any transactions that the author had been involved with were excluded. An additional two transactions between librarians were also excluded. A total of 73 transactions from 2022 and 170 from 2023 were analyzed. In 2022, there were 428 messages from librarians and 350 messages from patrons (including the initial question); in 2023, there were 937 messages from librarians and 761 messages from patrons (including the initial question). Figure 1 provides an example of one transaction that consists of four messages from the patron (the original message plus three more) and three messages from the librarian. After the initial question, each new message is indicated by a bullet point and the time.



**Figure 1** .Transaction 22-05.

### Data Analysis

The data was analyzed using thematic content analysis. Transactions were imported into NVivo manually to remove identifying information. Transcripts were coded at the message level and the transaction level. The first round of coding was performed using a codebook informed by Brown and Levinson at the message level while the second round focused specifically on four markers of politeness at the transaction level (table 1). In the transaction level of coding, transactions were marked on a yes/no basis for inclusion of the markers. To compare the groups separately, all coded

**Table 1.** Codebook.

Code	Coding Level	Features	Example
Conventions	Message	Conventional markers of politeness Greeting Closing	"Hello" "Please" "Have a good day!"
Apologize	Message	Apologize	"Sorry!"
Common ground	Message	Compliment/show interest Use first name /nicknames Use emojis Raise or assume common ground/ common values, Joke	"I have a problem with that link too!" :)
Cooperation	Message	Suggest cooperation between both sides	"Let's take a look!"
Give	Message	Give something desired (sympathy, understanding, assistance)	"Let me see what I can find for you..."
Indirect	Message	Be conventionally indirect Create distance through past tense Pessimistic Hedging	"I wanted to know if I could check out a book."
Direct question/ start	Message	Directly ask question or state problem	"Can I check out a book?"
Greeting	Transaction	Extension of a greeting	"Hello!"
Gratitude	Transaction	Offers gratitude or responds to an offer of gratitude	"Thank you" "You're welcome"
Closing	Transaction	Explicit acknowledgement of the end of the interaction	"Have a good day!" / "You too!" "Is there anything else I can help with?" / "That's it!"
Please	Transaction	Includes a "please" in a request	"One moment please"

information was marked as either patron or librarian. Coding on the transaction level examined each exchange as a whole—for instance, consider figure 2.

Figure 2 shows one transaction containing eight messages (initial question plus seven further messages) from the patron and ten messages from the librarian. The patron thanks the librarian in messages 10:45:49, 10:47:47, 10:50:27, and 10:51:23; message level coding would code each of these for "conventions," while transaction level coding would only code for "gratitude" once.

## Results

### **RQ1: Differences Between Proactive and Static Chat**

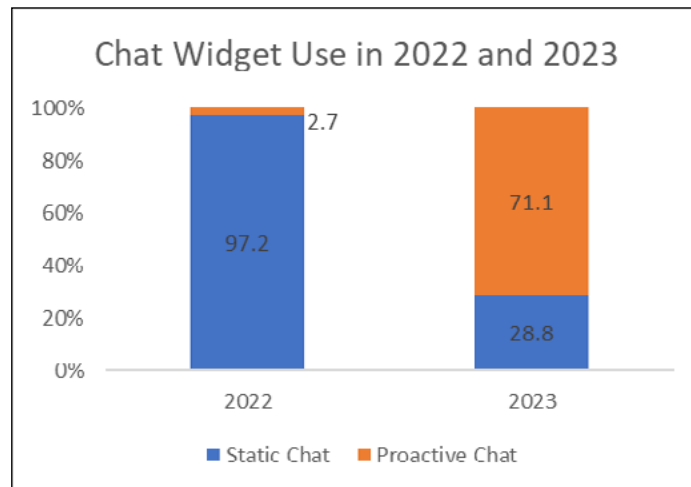
The number of chat transactions fitting the sample criteria increased from 73 in 2022 to 170 in 2023. In 2023, proactive chat largely overtook static chat as the predominant method of contact, however static chat continued to be used (figure 3).<sup>17</sup>

**Initial Question**

I wanted to know if I could check out a copy of a textbook?

- 10:44:22 **Librarian:** Hello, you possibly can! Can I please have the title and I will see the library has a loanable copy for you?
- 10:44:34 : Yes of course! algebra for college students (7th, seventh edition) - by gustafson and frisk
- 10:44:38 : That's the name
- 10:45:38 **Librarian:** Okay, I think there might be a copy on reserve at the Sciences Library (which means it can only be used in the Sciences Library). But I'll take a look now. One moment please.
- 10:45:49 : thank you!!
- 10:47:22 **Librarian:** Okay it looks like we only had one copy and it is currently checked out.
- 10:47:37 **Librarian:** I'll check to see if it is available through ILL
- 10:47:47 : Thank you!
- 10:49:51 **Librarian:** It looks like there are two requestable copies in [UBorrow](#).
- 10:50:10 **Librarian:** If you go to that link, you should be able to request a copy through your library account
- 10:50:27 : Thank you! If I don't have a library account I should create it right
- 10:51:09 **Librarian:** If you are an IU student and you have a Crimson card, you should already have a library account. It's not something you have to create yourself.
- 10:51:23 : oh okay okay! I didn't know that thank you
- 10:51:30 **Librarian:** No worries at all!
- 10:51:48 **Librarian:** And of course! Please feel free to message back if you have more questions.
- 10:52:47 : I just entered the link and it said " library symbol is missing please contact your ILL staff"
- 10:54:21 **Librarian:** Try going to this [link](#) and click on UBorrow from there. Once you get to UBorrow, do a search for the textbook and you should be able to find the requestable copies.

**Figure 2.** Transaction 22-01.



**Figure 3.** Percentage of chats received through static and proactive widgets.

Between 2022 and 2023, there was an increase in transactions where one side was nonresponsive (table 2). On the patron side, this refers to transactions in which the patron did not respond after sending their initial message, while on the librarian side it refers to transactions in which the librarian opens the chat but never responds. In 2022, there were eight transactions with nonresponsive patrons (10.8% of all transactions) and zero transactions with nonresponsive librarians; this increased to 27 transactions with nonresponsive patrons (15.9% of all transactions) and two transactions with nonresponsive librarians (1.2% of all transactions) in 2023.

**Table 2.** Transactions containing zero messages from either the patron or the librarian (excluding the initial message)

	2022	2023
Nonresponsive patron	8	27
Nonresponsive librarian	0	2

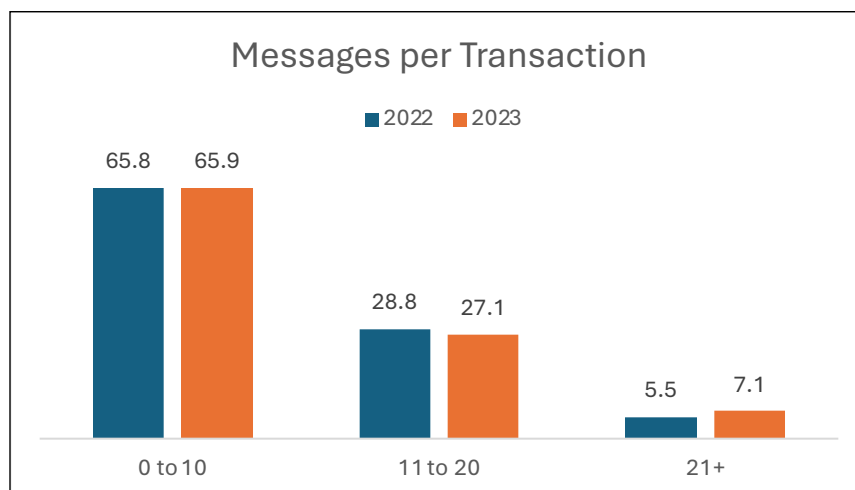
The mean number of messages per transaction (excluding the initial question) decreased from 2022 to 2023, on the part of both the librarian and the patron; given the increase in messages in which at least one side was non-responsive, the means were calculated including all transactions as well as excluding non-responsive transaction. However, the mean number of messages decreased in both modes. The mean number of messages per transaction is shown in table 3; this table shows the total number of messages per transaction and the mean number of messages per transaction. To account for the increased number of nonresponsive transactions, the total and mean were calculated for all transactions (including nonresponsive) and for transactions excluding the nonresponsive ones. When the nonresponsive transactions are excluded, there are still slight decreases in the mean number of messages. In 2022, there were an average of 10.6 messages per transaction, of which 4.3 were from patrons and 6.3 were from librarians. In 2023 this decreased to an average of 10.3 messages per transaction, 4.1 of which were from patrons and 6.1 from librarians.

Despite the mean number of messages decreasing, there was an increase in longer transactions. This is visualized in figure 4, which shows that the percentage of transactions with more than 21 messages increased from 5.5% in 2022 to 7.1% in 2023.

**Table 3.** Number (total and mean) of messages, excluding the initial message, in all transactions and excluding transactions in which one side was non-responsive.

Messages	Total all transactions	Mean all transactions	Total excl. nonresponsive	Mean excl. nonresponsive
All 2022	705	9.7	689	10.6
Patron 2022	277	3.8	277	4.3
Librarian 2022	428	5.9	412	6.3
All 2023	1,521	9.0	1,465	10.3
Patron 2023	588	3.5	588	4.1
Librarian 2023	933	5.5	878	6.1

The number of words in the initial message also decreased in 2023. In 2022, the mean number of words in the initial message was 29 and the median number was 21; in 2023 the mean was 21.5 and the median was 17. Additionally, the percentage of initial messages containing a single word doubled from 4.1% in 2022 to 8.8% in 2023.



**Figure 4.** Chart showing the number of messages per transaction (excluding initial question), expressed as percentage of total.

The decreased number of words in the initial message parallels the change in initial message type. Greetings and words/phrases both increased, as did requests/statements, while questions decreased (table 4). The decrease in initial messages containing a question was statistically significant. Figures 5 through 8 provide examples of each type of initial message.

**Table 4.** Initial message type, expressed as percent of total.

Initial Message	2022	2023	Z-score
Greeting	2.7%	8.2%	-1.58
Question	67.1%	54.1%	1.88*
Request/statement	27.4%	34.1%	-0.94
Word/phrase	2.7%	4.1%	-0.52

Sig. (\*<.05; \*\*<.01)

**Initial Question**  
 Hi, I have created a WSJ account through IU which I used a ton last year. I just logged on and it wont let me view articles. It says im signed in, but it says I am not a subscriber and do not get unlimited articles.

- 10:00:55 System: You are now chatting with Reference Desk Department.
- 10:01:23 Librarian: Thank you for reaching out. Let me take a look into this.
- 10:02:49 Librarian: In order to retain access to WSJ, you will need to validate your account every 90 days.
- 10:02:58 Librarian: <https://libraries.indiana.edu/wall-street-journal-online>
- 10:03:14 Librarian: This link contains more useful information on IU access to WSJ

**Figure 5.** Transaction 23-02, an example of Request/Statement.

**Initial Question**  
 what type of source is an IGO?

- 11:09:11 **System:** *You are now chatting with Reference Desk Department.*
- 11:09:46 **Librarian:** Could you please give me more information on what you're referring to?

**Figure 6.** Transaction 23-06, an example of Question.

**Initial Question**  
 Hi

- 15:05:14 **System:** *You are now chatting with Reference Desk Department.*
- 15:05:19 **Librarian:** Hello.
- 15:05:33 **Guest30888738:** is there a hard copy of this book at the library <https://vaclavsmil.com/2023/08/28/materials-and-dematerialization/>
- 15:05:46 **Guest30888738:** I see e books.. but not hard copies
- 15:06:01 **Librarian:** One moment and I'll double-check...
- 15:06:36 **Guest30888738:** Thank you!
- 15:09:19 **Librarian:** You're correct; we have only e-book access. If you'd like a print copy, you could submit an interlibrary loan request: <https://libraries.indiana.edu/interlibrary-loan> (You could note in your request that you specifically want a print copy.)
- 15:09:47 **Guest30888738:** ok thank you!
- 15:09:53 **Librarian:** You're welcome!

**Figure 7.** Transaction 23-29, an example of Greeting.

**Initial Question**  
 19th century European art

- 15:14:40 **System:** *You are now chatting with Reference Desk Department.*
- 15:14:55 **Librarian:** Hello! Are you just trying to search for this?
- 15:15:08 **Guest79054642:** yeah, just books on the topic or relating to
- 15:15:19 **Guest79054642:** hopefully a collection on floor 9 or 10
- 15:16:09 **Librarian:** <https://iucanet.iu.edu/catalog/1889932>
- 15:16:26 **Guest79054642:** Thank you!
- 15:16:26 **Librarian:** <https://iucanet.iu.edu/catalog/2768907>
- 15:16:35 **Librarian:** Happy to help!
- 15:16:59 **Guest79054642:** Have a nice day!
- 15:17:00 **System:** *Patron ended chat.*

**Figure 8.** Transaction 23-50, an example of Word/Phrase.

Interestingly, there was an increase in the number and range of ratings left. When a patron ends a chat, they are given the opportunity to leave feedback. This includes the selection of a rating (great-4/4, good-3/4, so-so-2/4, or bad-1/4), a place to leave comments, and options to be contacted for follow-up or email themselves a copy of the chat transcript. The rating option is not highly utilized by patrons; in 2022, only 13.7% of chats received a rating. This increased to 21.1% in 2023.



Furthermore, while 100% of the ratings received in 2022 were either "great" or "good," in 2023 only 91.6% were rated "great" or "good" while 2.8% were rated "bad" and 5.6% were rated "so-so."

**RQ 2: Extent of Differences in Politeness Between Proactive and Static Chat**

Politeness was measured on two levels: transaction and message. To account for the difference in data set sizes, results are reported as frequencies.

**Politeness at the Message Level**

There were five relevant codes for patron politeness and seven relevant codes for librarian politeness. In most cases, there were only small differences between 2022 and 2023 (table 5). On the patron side, there was a noticeable increase in the use of common ground strategies and slight increases in the incidence of accidental or spam messages, apologies, and directness. There was also a noticeable decrease in the use of indirect language and a slight decrease in the use of conventions. None of the differences in patron politeness were statistically significant. On the librarian side, there was a slight increase in the use of conventions and a noticeable increase in giving. There were noticeable decreases in apologies, use of common ground strategies, cooperation, and use of indirect language and a slight decrease in directness; these differences were all statistically significant.

**Table 5.** Results of coding on the message level, expressed as percentage of total messages (including initial patron question).

	2022	2023	Z-scores
<b>Patron</b>			
Apologize	1.14	1.58	-0.57
Common ground	1.14	4.20	-1.11
Conventions	40.86	39.82	0.28
Direct	16.29	16.69	-0.19
Indirect	12.29	10.78	0.72
<b>Librarian</b>			
Apologize	4.91	1.28	2.54*
Common ground	7.94	5.02	-0.03
Conventions	31.07	31.38	-6.03*
Cooperation	2.34	0.43	2.24*
Direct	17.52	17.08	-3.62*
Give	28.27	32.87	-7.68*
Indirect	18.93	11.10	0.50

Sig. (\*<.05; \*\*<.01)

**Politeness at the Message Level**

For the transaction level, there were four factors looked at for both the patron and librarian: greeting, gratitude, closing, and please (see table 6). For patrons, the inclusion of a greeting increased in 2023, however the inclusion of gratitude, closings, and use of please all decreased; none of these changes were statistically significant. For librarians, the inclusion of greetings,

gratitude, and closing all decreased, but the use of please increased; changes in greetings and gratitude were statistically significant.

**Table 6.** Results of coding on the transaction level, expressed as percentage of total transactions.

	2022	2023	Z-scores
<b>Patron</b>			
Greeting	46.58	49.41	-0.41
Gratitude	79.45	68.24	1.78
Closing	31.51	20.0	1.94
Please	10.96	8.24	0.68
<b>Librarian</b>			
Greeting	87.67	65.29	3.56*
Gratitude	60.27	38.82	3.08*
Closing	49.32	40.59	1.26
Please	20.55	30.0	-1.52

Sig. (\*<.05; \*\*<.01)

## Discussion

There are clear differences that can be observed between proactive and static chat, both overall and in terms of politeness. Based on prior literature, it would be expected that the volume of chats would have increased in 2023 with the introduction of proactive chat. It could also be expected that chat reference in general may contain more negative politeness strategies (e.g., be conventionally indirect, apologize) and fewer positive politeness strategies (e.g., common ground, give) and a higher number of "please" and "thank you"<sup>17</sup> than in person reference; however, there is no current research that would suggest there would be differences in politeness between static and proactive chat. Thus, the expectation would be for these strategies to remain stable across the two years. Some differences between 2022 and 2023 reflect the expected changes seen with proactive chat, however there are others that are less expected based on prior literature. It is possible that the overall differences influenced the levels of politeness.

### **Differences Between Proactive and Static Chat**

As has been observed before, there was a massive increase in the number of chats received in 2023; the number of chats increased by 133%, with the majority of the chats coming from the proactive widget. While previous studies have found proactive chats to be more complex than static chats, it is undetermined whether that is true here. However, there are some indications that proactive chats were not more complex than static chats based on the number of messages. It would be expected that a more complex reference question would lead to a higher number of messages than a simple question. While there was a small increase in the percentage of transactions with more than 20 messages, the mean number of messages per transaction decreased. This could partially be explained by the increase in questions in which one side was nonresponsive, however the decrease in mean messages was still present when nonresponsive transactions were excluded. This potentially indicates that there was not a change in complexity. However, this does confirm anecdotal evidence that there was an increase in the number of chats in which the patron never responded after their initial question. Interestingly, it is possible that these

patrons are still receiving what they need. Of the 26 chats in which patrons didn't respond past their initial question, 11.5% were given a 4/4 "great" rating; 10% of all 4/4 ratings were given to chats in which the patron didn't send any additional messages.

There were also noticeable changes in the initial message. There were large increases in the percentage of greetings, request/statements, and word/phrases, which caused a corresponding decrease in the percentage of questions. This also confirms anecdotal evidence of the increase in single word or phrase initial questions. This is a possible indication that patrons are confused by what proactive chat is, leading them to test the waters with a greeting or to use it like a search bar and send a word or phrase.

Finally, there was an increase in the number and range of ratings. The increase in negative ratings could possibly be caused by the "annoyingness" of proactive chat; while patrons are more likely to use it, they may also be more likely to leave a bad rating if they aren't happy. In one notable transaction, a patron thanked the librarian and said they were helpful, and then left a 2/4 "so-so" rating. However, this is still a minority of the ratings left. More than 90% of the ratings were positive. It is possible that patrons are more likely to leave a positive rating if they feel like they did not impose on the librarian, but were instead invited to ask their question.

### ***Extent of Differences in Politeness Between Proactive and Static Chat***

Differences on the message level are smaller, perhaps since chats with more messages could contain higher use of politeness strategies, which could obscure overall trends. The slight increase in patron's accidental or spam messages could potentially be explained by the intrusiveness of the proactive widget. Both directness and indirectness are (sometimes conflicting) politeness strategies. According to Brown and Levinson, when people are asking for something, they are conflicted between giving on-record delivery (directness) and giving redress to the hearer's negative face (indirectness.)<sup>19</sup> In other words, politeness compels people to be indirect so as to minimize the imposition of their request, and leave room for the other person's face if they are unable to meet the request. On the patron side, it's possible the decrease in indirectness may be influenced by the intrusiveness and visibility of proactive chat; they may feel less need to leave room for the other side to not meet the request because they feel they've been invited to ask a question, rather than seeking out help. On the librarian side, the decrease in directness and indirectness could be related to the increase in giving; for the librarian, the use of directness and indirectness is often seen in the act of the reference interview. If patrons are being less indirect, librarians may be increasingly responding immediately with what the patron needs, as opposed to performing a longer reference interview.

The greater differences observed between proactive and static chat are found at the transaction level. Patrons increased their inclusion of greetings, but decreased gratitude, closing, and use of please, while librarians increased their use of please, but decreased greetings, closings, and gratitude.

Most of the change on the librarian side could likely be explained by changes on the patron side; gratitude is seen most often from librarians as a response to "thank you." If patrons don't express gratitude, there are fewer opportunities for the librarian to respond in kind. Similarly, while both the patron and librarian can (and do) initiate closings, chats can be ended before librarians think they are over, thus preventing the use of a closing. The increase in chats with zero patron messages could support this. It is more difficult to explain the decrease in greetings on the librarian side, considering the increase in patron greetings. It is possible that the increase in shorter initial questions, librarians

are more likely to open immediately with a clarifying question. Alternatively, it is possible that if patrons are more direct in their initial question, librarians are more likely to simply send the patron what they ask for without engaging in polite pleasantries. Finally, if librarians perceive that patrons are feeling frustrated or being less polite (as anecdotal evidence suggests), it is possible that they may increase their own use of the word “please,” in an attempt to raise the overall politeness of the interaction.

The increase in patrons including a greeting could be explained in part by the increase in greetings as the initial question. If patrons are potentially unsure of the function of the proactive chat, they may choose to send a greeting instead of a full question, for instance, in figure 7. The decrease in the other three areas, particularly gratitude and please, could be interpreted as a lower level of politeness. It is possible that the intrusiveness and “annoyingness” of proactive chat makes patrons less likely to engage in polite pleasantries. Similarly, they may be less inclined to say please or thank you if they feel they are being offered help as opposed to seeking it out; after all, these are inclusions that are added to protect face and soften imposition. It’s possible that proactive chat lessens the feeling of imposition, and thus reduces the need to redress or protect face. It is also possible that patrons believe proactive chat is instead an AI chatbot, thus reducing their need to engage politely. An example of this can be seen in figure 5. Interactions such as this can be frustrating for practitioners, as we can’t be sure if we actually helped the patron.

These results have strong implications for librarians and other reference workers. Librarians at institutions that opt to use proactive chat should be aware that there will likely be an increase in the volume of chats, however they should also be aware that there may also be an increase in patrons who don’t fully understand the service or may believe the chat is a search bar. An unfortunate result of this is a limited potential for an in-depth reference interview. For instance, looking back at figure 8, there was the missed opportunity for a reference interview. At the same time, however, the result was a satisfied patron—this chat received a 4/4 rating. Compare this to figure 6, for example, where the patron never responded to a clarifying question. Thus, librarians face a dilemma in their practice. Given a medium that lends itself to quick questions and seemingly a desire for quick answers, how many clarifying questions should we ask before offering a resource?

Perhaps the most vital implication for our practice is the need to change our mindsets. I have seen colleagues be understandably frustrated when they feel as if they’re being treated like a chatbot. The most important thing to take away might be renewed patience and understanding that our patrons are being trained by the majority of customer service chats to interact with bots before they reach a human. We may lose some patrons when we offer our human assistance, and we need to accept that and know we’re all doing our best navigating new technologies.

## Limitations and Future Directions

An obvious limitation of this study is the relatively small sample size that only represents two weeks from each period; it’s possible the sample does not adequately represent the entire semester’s reference transactions. Additionally, the two periods were used as proxies for static and proactive chat, since the 2023 set included both types, though the majority of chats were proactive. It’s possible that comparing static and proactive chats from 2023 would produce different results than comparing 2022 and 2023 chats.

There are many potential avenues for future research. One important future direction would be to interview patrons and librarians about their perceptions of proactive chat. While transcript data can

demonstrate a difference between proactive and static chat, only the participants themselves can confirm the reasons for differences in their behavior.

## Conclusion

This study asked whether there are observable differences between static and proactive chat widgets in an academic library, and to what extent politeness differed. Analysis showed that there are demonstrable differences, including with regards to politeness. Differences are difficult to observe on the message level, however they are apparent on the transaction level. These findings have significant implications for librarians and library services. An increase in use and positive ratings suggests that patrons are using the service and are satisfied with the service, however the decrease in politeness and lower levels of interactions could be damaging to librarian morale. It is undeniable that proactive chat widgets have become a common part of library websites, however it will be up to libraries to decide how they might humanize these services to keep all parties satisfied.

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18. There were two chats from 2022 that were labeled in the system as originating from the proactive chat widget. These are believed to be a system glitch, as there is no known testing of the proactive widget during the sample period.
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