

Understanding library users' preferences and expectations of online help

Tao Zhang, Ilana Stonebraker and Marlen Promann
Purdue University, West Lafayette, Indiana, USA

Received 9 December 2015
Revised 28 May 2016
Accepted 31 May 2016

Abstract

Purpose – Online help and tutorials are an important part of library services, yet they are often studied in specific contexts and disciplines like subject-specific research guides. The objective of this study was to examine users' common preferences and expectations of library help channels in general and online help in particular.

Design/methodology/approach – The authors conducted a qualitative survey with 45 library users. The survey asked users how they seek library help, their preferences and expectations of online help, content format and general help channels and later, a content analysis of survey responses was performed.

Findings – Results showed that survey participants have different prioritizations of library help channels. Half of the respondents preferred conceptual help that emphasizes concepts and underlying principles, while the other half preferred procedural (step-by-step) help or mixed. The survey also indicated reliance by participants on expert help, even when online help was available.

Originality/value – Based on the results, the authors identified users' behavioral preferences, attitudes and expectations toward library help channels and online help content. They also discussed the unique challenge of creating online help for libraries, as users have a dynamic range of help-seeking preferences and mixed expectations of help content depending on the context.

Keywords Libraries, User survey, Help channels, Help format, Online help, User preferences

Paper type Research paper

Introduction

Online help and tutorials are interactive, library-produced help systems with both static and dynamic content, as well as asynchronous and real-time communication channels between users and service providers. Over the last decade, online help has proliferated across libraries. For example, LibGuides, a popular help documentation platform (Springshare, 2016), powers over 430,000 guides across 66,000 libraries worldwide. Help documents like LibGuides are an important part of a library's online service for users to learn how to effectively use library resources.

Despite the advancement of technology, users may still encounter difficulties in their searching and information-seeking process with the library resources (e.g. discovery tools, catalogs, databases, e-books). For example, they may not understand the differences between databases and discovery tools; they may not be familiar with library jargon and certain databases (e.g. geographic information systems [GIS]) may require orientation for users without relevant background. In these situations, users often turn to librarian-curated online help systems, which may include library guides, tutorials, screencasts or digital reference.



Previous studies (Trenner [1989]) have shown that online help systems were often inadequately designed and did not offer effective assistance to novice and infrequent users, which in turn lead to users' unwillingness to use online help systems. To address this issue, online help should not be assembled just to make it available to users. A well-conceived online help should meet users' preferences and expectations of their help seeking. While much assessment has been done of online help from the content usage standpoint, there have been fewer studies examining users' preferences and needs of online help.

In this study, we explore and qualitatively analyze important determinants of help-seeking behavior for library resources, including users' preferences of different help channels, users' perceived importance of online help in the library context, users' preferences of help content format and features and their general preferences of help channels.

Help design principles and guidelines are seemingly dispersed in the literature and are sometimes inconsistent; therefore, it is necessary to establish empirical evidence from actual users to better inform online help design and integration with other library help channels. It is our intent not to prove that users prefer one system over another, but to understand more deeply how help-seeking preferences affect format preferences and vice versa. Understanding the different types of user preferences sheds light on the success, failure and peaceful cohabitation of different help systems, which may appeal to different types of users.

Related work

The library is still the first choice of study environment for students on campus for academics and research, as they need "a sort of universal service point, a physical Google" (Foster and Gibbons, 2007, p. 76). Because of the need for a centralized place to start, libraries usually offer multiple help channels for users, including face-to-face help desk, online chat, email, text messaging and online help documentation such as guides, frequently asked questions (FAQs) and tutorials. The availability of other channels may affect whether and when users choose to use online help. Previous surveys indicated that the majority of undergraduate students prefer face-to-face help in the libraries over virtual references like online chat and that graduates working outside the library may have a higher tendency to use online help (Granfield and Robertson, 2008). Another survey of undergraduate students found that respondents had a relatively strong preference for seeking help at a location that is convenient to them (not necessarily at the library). Respondents rated email as the most preferred channel to seek help rather than chat or texting, course page and social network sites like Facebook and Myspace (Ismail, 2010).

There have been studies on help-seeking behaviors within various library contexts, such as online collaborative group work (Du *et al.*, 2015), adult social work students (Ismail, 2013) and mobile applications (Tsai *et al.*, 2015). Personal and contextual factors could influence a user's decision to use help (Fisher, 1983). Librarians have undertaken various studies to evaluate the effect of digital reference services (Pellegrino, 2012; Luo, 2014). While these studies are useful to libraries looking for best practices in designing online help, they focus on the behaviors of students and effectiveness of existing systems vs examining how the behaviors of students are reflected in users' preferences in online library help systems.

The design of online library help could benefit from research findings on technical help documentation. Both library and technical help systems provide users with information to identify problems, solve problems and perform tasks correctly. Regarding help documentation, [Novick and Ward \(2006\)](#) conducted in-depth individual interviews with 25 professionals using computer applications. They found that users generally prefer help documentation that is easy to navigate, provides explanations at an appropriate level of technical detail, enables finding as well as solving problems through examples and scenarios and is complete and correct. These preferences require a careful balance between coverage and precision of help content, as well as variations of technical complexity of explanation for different users. The study also suggested that professionals were generally reluctant to experiment and explore to solve their problems in using an application, possibly due to the perceived value of their time. Novick and Ward provided important themes for the design of help documentation, but their study was focused on professionals using business applications, which could be different from library users seeking help for using scholarly resources.

Studies on online technical help have explored user preferences of specific help formats. For example, [Purchase and Worrill \(2002\)](#) empirically tested and ranked a set of online help features (e.g. index, balloon help and graphical examples) and design principles (e.g. “the help system should be unobtrusive” and “help should be context sensitive”). They suggested that design improvements of help features could lead to major usability improvements of online help systems. However, majority of the design principles were based on a high level of abstraction, making them prone to individual interpretation and lack of design consistency in practice. It is thus important to develop guidelines for online help that are more specific to the library context.

In the library context, Iris Xie and colleagues have done a number of studies on users’ help-seeking behavior with help systems in digital libraries. [Xie and Cool \(2007\)](#) reviewed users’ requirements on help features, including search query examples, demos, context-sensitive help, tutorials and FAQs. They demonstrated that users prefer examples and step-by-step instructions as the least effort principle prescribes. Users also require help information to be specific, visual and interactive. [Xie \(2007\)](#) characterized the help features of six digital libraries, including types (explicit vs implicit), formats (texts, images, screenshots, multimedia materials and interactive formats) and presentation styles (descriptive, guided, procedural and exemplary). There could be correlations between these features. For example, guided styles were correlated to formats such as screenshots, multimedia materials and interactive formats, while procedural styles were frequently applied in FAQs. Moreover, there could be trade-offs between explicit and implicit help and general versus specific help, to provide help information for different levels of users and help all users achieve their task goals. These trade-offs were similar to Novick and Ward’s discussion about the balance between coverage and precision, as well as variations of technical complexity.

The format of online help could affect users’ learning performance, although there are mixed results from previous studies. [Craig and Friehs \(2013\)](#) compared two common types of online information – literacy tutorials for an undergraduate biology lab class: a video tutorial with animation and narration and an HTML-based tutorial with static images. The results showed that students in the video tutorial setup had higher scores on quiz questions and more confidence after learning than the HTML setup. On the contrary, [Mestre \(2012\)](#) found that students performed better after viewing static web

page tutorial than they did after viewing a screencast tutorial. Students preferred the HTML tutorial because it was easier to skim or jump to the sections they needed.

In summary, our review of previous research on online help and design principles shows that there is still a need to better understand users' preferences of library help in general and online help in the library context in particular. With the majority of online help supporting libraries' reference service, it is difficult to predict when and how users may encounter difficulties that require them to use the online help. Users often use the library resources during their study or research activities, making it challenging to plan meaningful observations in a limited time period. Therefore, in this study we chose the survey method to uncover user preferences and expectations, which are significant contributors to user satisfaction of online library help. The survey results may be less reliable than participatory evaluation and direct observation (Novick *et al.*, 2007), but the resulted user preferences and expectations could help designers and content creators develop better understanding of the design space and explore new content strategies.

Method

Forty-five participants (21 females and 24 males with mean age being 23.1 years and standard deviation being 7.9 years) were recruited online and randomly in the library space to answer a survey about their experience, preferences and expectations of library help. The majority of participants (39, 86.7 per cent) are undergraduate students, and the rest are graduate students and faculty. The detailed breakdown of participants' academic status is shown in Table I. Participants' majors ranged from engineering, science, liberal arts and history, to arts and humanities (Appendix 1). All participants reported familiarity of searching on the library website and using the online library help.

The survey took place in a computer lab inside the library space. Upon arrival, participants first signed a consent form and completed a demographic and background questionnaire regarding their experience of using the library website and online help. Participants were then instructed to open the survey using the computer in front of them and provide written answers to the questions in the survey. None of the questions in the survey were mandatory. The average time for participants to complete the survey was about 20 minutes. Participants were given lunch sandwiches after they completed the survey as a small token of appreciation.

The survey consisted of the following behavioral and attitudinal questions:

- Q1. What is your usual way to get help using library resources? (Ask at the desk? Ask your class instructor or another student? Use online help? Experiment on your own? Or other ways? Tell a recent story or give an example.)

Academic status	Count	Mean	SD	Minimum	Maximum
Freshman	4	19.8	2.2	18	23
Sophomore	17	19.6	0.7	18	21
Junior	10	22.2	3.9	19	31
Senior	8	23.4	2.7	21	29
Master's student	2	28.5	7.8	23	34
Doctoral student	2	27.0	1.4	26	28
Other (faculty)	2	54.0	14.1	44	64

Table I.
Descriptive statistics
for participants' age
(years) grouped by
academic status

-
- Q2.* In a “perfect library” or ideal situation other than what you have experienced, how would you get help?
- Q3.* If online help is developed to a point that would allow you to learn to use the library website efficiently, would you be inclined to use the help? If not, could you explain why?
- Q4.* When you get help, do you like it to be procedural (step-by-step) or do you prefer it be more conceptual (diagrams, concept maps)? What do you look for when you read help pages?
- Q5.* What are the channels you prefer to get help information from? (For example, do you like to be able to chat or talk to someone right then when you are confused, or do you prefer to read something static like Wikipedia? Other options include chat, phone, email, static web page, etc.)

Q1 and *Q2* were to discover how users are currently using the available help channels from the library and their expectations of library help channels. *Q3* asked users’ preferences of using online help and the importance of online help in their help seeking routine. *Q4* tapped into users’ preferences of specific formats for common library help content and their expectations of different help features. *Q5* examined users’ general help-seeking preferences and whether the library context affected their help-seeking behavior. To give participants a more specific context and help them better understand the questions, we provided examples or prompts for *Q1*, *Q4* and *Q5*. Those examples were not close-ended choices that participants had to select for their responses. We encouraged participants to respond to the questions exactly as how they would like to answer them in a face-to-face interview. We also asked participants to explain their initial answers and tell stories from their past experiences.

Results

Two researchers independently conducted an initial analysis of participant responses to the survey questions. We first identified common themes (i.e. categories) from the responses and then assigned categorical codes to each response. The initial analysis had 70 per cent agreement on the categories and 75 per cent agreement on the code assignment. The two researchers reviewed each other’s initial analysis result and then discussed the categories and codes assigned for each response. The final categories and code assignment reached 100 per cent consensus. Many responses were assigned with multiple categorical codes. In addition, the researchers identified potential connections between responses to different survey questions. A sample of the survey responses is shown in [Appendix 2](#).

The descriptive statistics for the coded responses to *Q1* are listed in [Table II](#). Asking the library help desk, experimenting and searching the library website are the top three most frequent choices for participants, while a smaller number of responses mentioned library FAQs or tutorials, Google and asking a particular librarian. In addition to individual channels, one prominent pattern emerged from the responses: when participants had difficulties using the library resources, they would first experiment on their own and then ask the library help desk, another peer user or an instructor if they could not solve the problem. A less prominent pattern is searching the library website or doing general web search using Google.

Table III shows the distribution of codes for responses to Q2 (ideal way of getting help). Similar to Q1, the frequent channels for participants to find help include asking a librarian at a reference desk, help from librarian or expert (not necessarily at reference desk) and finding information on their own. Less frequent channels mentioned in the responses include online chat or text messaging, online help portal, centralized search, etc. Some of the responses are essentially participants' requirements of help information or service from the library, including physical closeness, availability, efficiency, ease of use and clarity of information.

The majority of respondents (32, 71.1 per cent) expressed willingness to use online library help mainly because of the advantages of online help information: efficiency to learn, convenience, easy to access and availability. The rest of the participants were inclined to one-on-one personal help or had mixed preferences (Table IV).

Regarding the question of whether respondents prefer procedural (step-by-step) or conceptual (i.e. diagram, concept map, etc.) help information, relatively more

Table II.
Responses to Q1
(current ways to get
help using library
resources; 70 codes
applied to 42
responses)

Code	Frequency
Ask at a library help desk	23
Experiment on my own	17
Search the library website/discovery tool	15
Ask instructor/professor	13
Ask another student/friend/colleague	12
FAQs/tutorials on the library website	5
Google	4
Ask a particular librarian/library worker	3
Don't use library help	1

Table III.
Responses to Q2
(ideal way of getting
help; 77 codes
applied to 43
responses)

Code	Frequency
Ask a librarian at a reference desk	12
Knowledgeable librarian/expert	8
Finding information on my own	8
Librarian always available to help	7
Chat/text	6
Efficiency	4
Online help portal	4
Help person physically nearby	4
Central search for all formats and media	3
Systems/resources easy enough to use on own	3
Through the library website	3
Advanced technology	3
Google	2
Help balloons over links and sections	2
Location information would be clear	2
Help not needed	2
Virtual librarian	1
24/7 availability	1

RSR 44,3	Code	Frequency
	<i>Yes (32 responses)</i>	
	Efficiency/easy to learn	13
	Convenient for users	8
	No specific comment	8
368	Needed for study/research context	4
	Easy to access	3
	Preferred method	3
	Always online	3
	<i>No (5 responses)</i>	
	Prefer personal help one-on-one	2
	Already know how to use	1
	Not applicable	1
	No specific comment	1
	<i>Mixed (5 responses)</i>	
	Prefer personal help one-on-one	1
	Not applicable	1
	Only want contextual information	1
	Convenient for users	1
	Easy to access	1
	Needed for study/research context	1

Table IV.
Responses to Q3
(willingness to use
online library help;
53 codes applied to
42 responses)

respondents (21, 46.7 per cent) preferred procedural help and 11 (24.4 per cent) respondents preferred conceptual help (Table V). As the frequencies of personal preferences in Table V show, personal preference is the most significant factor influencing the responses. Participants first answered their preferences (i.e. procedural, conceptual or mixed), and then they listed important factors influencing their preferences. Participants perceived procedural help as being contextualized, efficient and easy to learn. Similarly, a few responses mentioned conceptual help as facilitating exploratory research and easy to learn. There are a considerable number of participants (8, 17.8 per cent) with mixed preferences. In addition to personal preference, those participants listed contextualized help, ease of learning, efficiency, one-time versus repeated needs and time limit as the influencing factors of their preferences.

Q5 asked participants their preferred channel for help information, and the distribution of responses is shown in Table VI. The most preferred channel is a Wiki or help website that allows users to search and read relevant information. Online chat or text messaging, face-to-face help and email were also frequently mentioned in the responses. Other channels mentioned in a few responses include FAQs, Wikipedia, asking a professor or expert, phone call and video tutorials.

The coding analysis revealed two connections among responses of the same participants:

- (1) Preference of procedural help and visiting static help website without interactive features (15 participants).
- (2) Preference of visiting help website and avoiding direct communication with other people (7 participants).

Code	Frequency	Expectations of online help
<i>Prefer procedural help (21 responses)</i>		
Personally prefer step-by-step	20	
Contextualized/concise/easy to learn	11	
One time need/efficiency	3	
Follow the correct procedure (flowchart)	2	
Video tutorials	1	
<i>Prefer conceptual help (11 responses)</i>		
Personally prefer diagrams/concept maps/screenshots with explanation	9	
Personally prefer conceptual information	5	
Exploratory research	2	
Contextualized/concise/easy to learn	1	
<i>Mixed preference (8 responses)</i>		
<i>Procedural</i> : Prefer step-by-step	3	
<i>Conceptual</i> : Prefer diagrams/concept maps/screenshots with explanation	3	
<i>Procedural</i> : Contextualized/concise/easy to learn	2	
<i>Procedural</i> : One time need/efficiency	2	
<i>Procedural</i> : Time limit	1	
<i>Conceptual</i> : Repeated need	1	
<i>Conceptual</i> : Exploratory research	1	
<i>Conceptual</i> : Contextualized/concise/easy to learn	1	
N/A	1	

369

Table V.
Responses to Q4 (procedural or conceptual help preference; 69 codes applied to 40 responses)

Code	Frequency	Expectations of online help
A Wiki/help site (read for an answer)	22	
Online chat/text	18	
Face-to-face help	12	
Email	11	
Immediate help	10	
FAQs	6	
Wikipedia	6	
Ask a professor/expert	3	
Phone	2	
Tutorials	1	
Video sites like YouTube	1	
Book	1	
N/A	1	

Table VI.
Responses to Q5 (preferred channels of help information; 94 codes applied to 42 responses)

The first connection can be illustrated by the following comments from the same participant:

- “I prefer it (library help) to be more step-by-step so I can solve the immediate problem, but I like that to be contextualized within the framework of the site as a whole”.
- “I prefer something static when searching for help information”.

For the second connection, the tendency of avoiding direct help from other people could be due to the effort needed to form a clear description of the difficulty and the task goal, which may create additional pressure for the participant. This can be demonstrated by the following comments from another participant:

- “I only use help for technical questions, so I prefer it to be procedural. I just want to know how to get from Point A to Point B in the library system”.
- “I prefer to get help from a comprehensive, static website. I like to solve my problems without the involvement of other people. [...] It’s a little uncomfortable to talk to someone I don’t know over chat or phone, even if it’s more efficient”.

Furthermore, there are several common requirements of library help information across the responses: responsive to users’ information-seeking needs; easy to access; comprehensive (e.g. help information that guides users to a subject area); contextual to current problem or needs (e.g. help information embedded in search interface and results list); participatory (e.g. crowdsourced help like Quora and StackOverflow); and efficient for finding answers.

Discussion and conclusion

In this survey study, we measured participants’ current help-seeking preferences, expectations of future library help, acceptance of online help, preferences of help format (procedural vs conceptual) and the use of different help delivery channels. When seeking help about library resources, participants were divided into distinct groups, including asking the library help desk, independent experimentation, searching the library website and asking an instructor or peer. Participants carried this preference across questions and prioritized help channels according to their help-seeking preferences.

Many participants would consider the library help desk and online help as the last resort after experimenting on their own. The availability of knowledgeable librarians or subject experts was considered the most important factor, even when an online help could help participants in their tasks (*Q2*), which shows the importance of librarians’ contribution to the creation of library help including both one-on-one references and online help content. If online help were to be developed to meet respondents’ requirements on efficiency, convenient access and context relevancy, it would be used by the majority of participants.

Near half of the respondents preferred procedural or step-by-step help information (e.g. how to do a search within an e-book), while the other half either preferred help with better conceptual explanation (e.g. how the table of contents and index can help navigate within an e-book) or had mixed preferences between procedural and conceptual help. In addition, factors such as time limit and frequency of the obstacle could affect the choice of procedural versus conceptual help. Online help website or Wiki was considered the top choice for participants to read help information (*Q5*). Other important channels mentioned in the responses include online chat or text messaging, face-to-face communication and email. Although in *Q5* the order of different options in the responses does not completely match the responses to *Q1*, both show that most respondents have established working strategies of incorporating experimentation, online help and direct interaction with the library reference desk.

Many of the survey findings reflect the general patterns reported by previous studies on technical help documentation and library help features. More importantly, the survey

results show the unique challenge of creating online help for libraries, as users have a dynamic range of help-seeking preferences and mixed expectations of help content (e.g. procedural or conceptual) depending on the context. The survey participants showed a high degree of reliance on librarians and subject experts, even when online help could potentially solve their problems. This reliance on subject experts suggests that librarian support needs to be integrated with online help. Librarians and other subject experts would be able to understand the problem context, help users correctly identify the source of a problem and lead users to the online help content with appropriate level of explanation and presentation format. As libraries keep expanding their scholarly resources, it is important to design an integrated, cross-channel help experience that involves both librarian touch points and the online help content.

In summary, we have identified users' preferences, attitudes and expectations toward library help channels and online help from the survey. We expect the survey results to better inform improvement of existing help content and to provide opportunities to expand help content in various contexts and formats. A limitation of the study is that we provided examples or prompts for some of the open-ended questions. The wording of survey questions could be improved so that they are neutral and do not suggest possible answers for participants. Even though the survey encouraged participants to provide additional comments after the given questions, participants may not be motivated to write down other related thoughts. This was a trade-off we made to collect more responses in a relatively short time. We will plan a follow-up study with interviews and observations of users using library resources and librarians helping users solve problems. We expect the interviews and observations to validate the survey results, and more importantly, to map the detailed process of users interacting with librarians and the online help.

References

- Craig, C.L. and Friehs, C.G. (2013), "Video and HTML: testing online tutorial formats with biology students", *Journal of Web Librarianship*, Vol. 7 No. 3, pp. 292-304.
- Du, J., Xu, J. and Fan, X. (2015), "Help seeking in online collaborative groupwork: a multilevel analysis", *Technology, Pedagogy and Education*, Vol. 24 No. 3, pp. 321-337, available at: <http://search.proquest.com/docview/1698869356?accountid=13360>
- Fisher, J. (1983), *New Directions in Helping: Recipient reactions to Aid*, Elsevier, Amsterdam.
- Foster, N.F. and Gibbons, S.L. (2007), *Studying Students: The Undergraduate Research Project at the University of Rochester*, Association of College and Research Libraries, Chicago, IL.
- Granfield, D. and Robertson, M. (2008), "Preference for reference: new options and choices for academic library users", *Reference & User Services Quarterly*, Vol. 48 No. 1, pp. 44-53.
- Ismail, L. (2010), "What net generation students really want: determining library help-seeking preferences of undergraduates", *Reference Services Review*, Vol. 38 No. 1, pp. 10-27.
- Ismail, L. (2013), "Closing the gap: determining the library help-seeking preferences of adult learners in a graduate social work program", *Reference & User Services Quarterly*, Vol. 53 No. 2, pp. 164-173, available at: <http://search.proquest.com/docview/1512201290?accountid=13360>
- Luo, L. (2014), "Text a librarian: a look from the user perspective", *Reference Services Review*, Vol. 42 No. 1, pp. 34-51, available at: <http://search.proquest.com/docview/1507675384?accountid=13360>

- Mestre, L.S. (2012), "Student preference for tutorial design: a usability study", *Reference Services Review*, Vol. 40 No. 2, pp. 258-276.
- Novick, D.G., Elizalde, E. and Bean, N. (2007), "Toward a more accurate view of when and how people seek help with computer applications", *Proceedings of the 25th Annual ACM International Conference on Design of Communication – SIGDOC'07*, ACM Press, New York, NY, p. 95.
- Novick, D.G. and Ward, K. (2006), "What users say they want in documentation", *Proceedings of the 24th Annual Conference on Design of Communication – SIGDOC'06*, ACM Press, New York, NY, pp. 84-91.
- Pellegrino, C. (2012), "Does telling them to ask for help work?: investigating library help-seeking behaviors in college undergraduates", *Reference & User Services Quarterly*, Vol. 51 No. 3, pp. 272-277, available at: <http://search.proquest.com/docview/963550699?accountid=13360>
- Purchase, H.C. and Worrill, J. (2002), "An empirical study of on-line help design: features and principles", *International Journal of Human-Computer Studies*, Vol. 56 No. 5, pp. 539-566.
- Springshare (2016), Libguides Community Site, available at: <http://libguides.com/>
- Trenner, L. (1989), "A comparative survey of the friendliness of online help in interactive information retrieval systems", *Information Processing & Management*, Vol. 25 No. 2, pp. 119-136.
- Tsai, C.W., Shen, P.D. and Fan, Y.T. (2015), "Investigation of student learning assistance through online academic help-seeking and a mobile application: a quasi-experimental approach", *International Journal of E-Adoption*, Vol. 7 No. 1, pp. 1-16, available at: <http://search.proquest.com/docview/1689292109?accountid=13360>
- Xie, H. (Iris) (2007), "Help features in digital libraries: types, formats, presentation styles, and problems", *Online Information Review*, Vol. 31 No. 6, pp. 861-880.
- Xie, H.I. and Cool, C. (2007), "Toward a better understanding of help seeking behavior: an evaluation of help mechanisms in two IR systems", *Proceedings of the American Society for Information Science and Technology*, Vol. 43 No. 1, pp. 1-16.

Corresponding author

Tao Zhang can be contacted at: zhangtao2000@gmail.com

Appendix 1**Expectations
of online help**

Major	Frequency
Accounting	1
Actuarial science	1
Aeronautical engineering	2
Agricultural economics	1
Agriculture communication	1
Animal sciences	1
Anthropology/public health promotion	1
Apparel design	1
Aviation management	1
Chemical engineering	1
Civil engineering	2
College of engineering	1
Computer engineer	1
Computer graphic technology	1
Electrical engineering	1
Economics	1
Engineering	1
English, film and video studies	1
Food/culinary science	1
History	2
Horticultural science	1
Hospitality and tourism management	1
Hospitality and tourism management	1
Law and society	1
Liberal arts	1
Library and information science	1
Nursing	3
Organizational leadership	1
Pharmacy	1
Professional flight	1
Psychology	1
Psychology and history, Japanese minor	1
Secondary English education	1
Social studies education	1
Statistics	1
Turf science and management	1
Visual communication design	2
(NA)	2

373**Table AI.**
Frequency of
participants' major

Question	Responses
1. What is your usual way to get help using library resources?	<p>“My usual way to get help using library resources would be to experiment on my own and then ask another friend or instructor. I am the type of person that likes to go ask for help when I can’t figure things out myself so going to a library desk or anything else would be the last thing I would want to do. I like to teach myself”</p> <p>“Usually if I need help I ask my instructor and if they direct me to the library, I ask the front desk where to go from there. When I am writing papers, I start at the website and use the search box to browse for relevant information”</p>
2. In a “perfect library” or ideal situation other than what you have experienced, how would you get help?	<p>“Through the library web page, without having to talk to anyone. All the information should be in one place with step by step instructions or advice for students to read over any questions or concerns we have”</p> <p>“Ideally, I would be able to chat online with a representative if I had a quick question, and get it answered quickly and without having to interrupt what I am working on, and continue on the path that I was before”</p>
3. If online help is developed to a point that would allow you to learn to use the library website efficiently, would you be inclined to use the help? If not, could you explain why?	<p>“I probably would, many times information is needed for things that are fairly repetitive from week to week, so if the library website was reliable to where I knew I could easily use help and find what I was looking for, I would be likely to check back week to week and search using these tools”</p> <p>“Yes, I would be more inclined to use the help. I like using the library, but only when it is most convenient. So the more convenient the help and services are, the more likely I am to use them”</p>
4. When you get help, do you like it to be procedural (step-by-step) or do you prefer it be more conceptual (diagrams, concept maps)? What do you look for when you read help pages?	<p>“Step by step, I look for a detailed list of what I need to do because although I am a visual learner pictures can sometimes be confusing as to where words can be clearer. However it would be best if there was a combination of both and I feel like that would really benefit the student”</p> <p>“At first I will try to figure out everything by myself and look up conceptual diagrams and read instruction. But in some situation, such as I can’t find what I need or I am in a hurry, I will want to see step-by-step instruction so that I don’t need to spend more time on looking up the functions”</p>
5. What are the channels you prefer to get help information from?	<p>“I would prefer to chat with someone online. Usually having someone who experienced those problems before and invested some time to address them will help me save time in finding what I am looking for”</p> <p>“In general, I always try to research my question online as a first step. If Wikipedia and Google cannot help me, it really helps to have a one-on-one conversation with someone. These people definitely need to be available as a backup and last resort method for solving problems”</p>

Table AII.
Selected survey
responses