Health Sciences Library Website Using LibGuides: a usability study

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Health Sciences Library Website

Abstract: The Health Sciences Library (HSL) serves the students, faculty, researchers and staff at the John A. Burns School of Medicine at the University of Hawai'i at Mānoa. The main functions of the HSL are to provide its patrons with the information they need to complete assignments, teach, and conduct research. The HSL specializes in collecting and subscribing to biomedical information. With the bulk of the library's collection being available online it is important that the library's website is easy to learn and use. For this usability study, the HSL website was consolidated to a single platform called LibGuides, and a new discovery tool/search interface was implemented. This usability study evaluates the learnability, efficiency, and users' satisfaction of the new website and search tool through online questionnaires and in-person think aloud sessions. Results from the usability study show that the new website is easier to use and participants rated a higher satisfaction with the new website compared to the old website.

Statement of the Problem

The Health Sciences Library (HSL) serves the students, faculty, researchers and staff at the John A. Burns School of Medicine (JABSOM) at the University of Hawai'i at Mānoa (UHM). The main functions of the HSL are to provide its patrons with the information they need to complete assignments, teach, conduct research, and facilitate patient care. With the bulk of the library's collection being available online it is important that the library's website is easy to learn and use. A new library website has been designed using the LibGuides platform. LibGuides is a web 2.0 library knowledge sharing system. It is a popular tool among libraries and is most commonly used to create online pathfinder guides to library collections and resources. The benefit to using LibGuides to host the new website is that the platform makes it easy to create, edit, and maintain pages with limited knowledge of coding. The old HSL website was split between two platforms (Appendix A); WordPress and LibGuides. The new website is now hosted completely on the LibGuides platform. The goal of centralizing the HSL website on the LibGuides platform is to streamline workflows for library staff, provide greater efficiency in information retrieval for library patrons, and improve engagement with the website.

There are other reasons for making LibGuides the sole website platform for the library. A review of the literature found that some students find the change in platforms confusing (i.e. landing on the WordPress homepage, clicking a link to get to a resource guide and finding themselves on a different platform with different navigation) (Conrad & Alvarez, 2016; Conrad & Stevens, 2019). Additionally, library websites are notoriously difficult to navigate with little usability testing done to evaluate the overall ease of use (Chow et al., 2014). In fact, many library websites and LibGuides are designed by library staff and implemented without testing and as a result websites tend to be too library-centric and ignore the needs of the actual end user (Almeida & Tidal, 2017). Cognitive load theory refers to how much of the working memory is being used to process information. If information is being presented in a way that users find the site difficult to navigate then short term memory is being overburdened and will hinder a users ability to use the website effectively (Pickens, 2017). As such, there is a definite need to investigate the functionality of the new website in an effort to reduce cognitive load.

In sum, there is a limited body of literature dedicated to library usability studies in general, but an even smaller number of studies specifically examine the usability of the LibGuides platform thus making this study unique. The HSL needs to know more about the usability and effectiveness of the new website to ensure that patrons can access the information they need. The purpose of this usability study is to determine the ease of use and navigation of the new Health Sciences Library LibGuide website for biomedical students and staff at JABSOM.

Literature Review

Library usability. The nature of library websites is to connect patrons with the information they need. More and more library collections are online, patrons are online and they expect to be able to access information instantaneously. The International Organization for Standardization defines usability as the "extent to which a system, product or service can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction..." (ISO 9241, 2018). There are a number of usability studies that examine library website usability specifically (Chow et al., 2014). Most of these studies are limited to single institutions and specific to their patrons but generalizations can be drawn to inform the design and presentation of information. However, there are a limited number of usability studies that specifically examine health sciences library websites and no articles that the author could find, that examine the use of LibGuides in a health sciences library setting.

Information Seeking Behavior. To understand how best to design the website it is important to first understand the patrons. A 2018 study at the University of Chicago

reported the frequency of information seeking among health sciences faculty (Aakre et al., 2019). The most common activities that facilitated information seeking were preparing for student lectures, conference presentation preparation, research and writing for publication, preparing for grant applications, research to remain current in their field, and clinical decision-making. A 2015 study at Dalhousie University in Canada surveyed medical students to assess their information seeking behaviors (O'Carroll et al., 2015). The study found that students most frequently used Google to facilitate searches and sources such as Wikipedia and the point-of-care tool, UpToDate. Students described their reasons for selecting the sources they used; ease of understanding and accessibility. This information is important to inform the design of the website. Library websites and library guides tend to be filled with jargon and overloaded with information, increasing cognitive burden on users. The information seeking behaviors of faculty and students emphasize the need for simplicity and immediate availability as many have become accustomed to a "Google-style" way of searching (Weinhold et al., 2014).

About LibGuides. The LibGuides platform is developed by a company called Springshare. The Springshare website states that LibGuides is a "Librarian first platform for a digital-first world" (*Springshare—The SaaS Platform For Libraries and Educational Institutions*, n.d.). Widely used in libraries, it is a platform that many library patrons have become accustomed to. The Springshare website states that the platform is deployed in 6,100 libraries in 82 countries. The LibGuides product was first released in 2007 and the newest version, known as LibGuides 2, was released in 2014. The first version of LibGuides was limited in customization so the LibGuides 2 version allows for greater flexibility and customization. For example, LibGuides 2 allows for a vertical navigation box oriented to the left instead of being limited to only a horizontal navigation banner. LibGuides 2 also allows for customization of the number of columns presented on a page and uses "boxes" to host multiple formats of content such as media, basic text HTML, and specially formatted book boxes.

Best Practices for LibGuide Website Design. Studies examining the usability of LibGuides have resulted in different conclusions in light of student preference. A 2017 usability study found that users preferred a left, vertical navigation as opposed to horizontal banner navigation, and they preferred a two-column layout over one and three column layouts (Thorngate & Hoden, 2017). Another 2019 study found that their patrons actually had a slight preference for horizontal tabbed navigation (Chan et al., 2019). These mixed conclusions illustrate the importance of conducting on-site usability testing with the library's target population.

Methodology

Research Questions/Goals. Based on the ISO definition of usability, this usability study will address the following research questions to assess the efficiency, effectiveness, and satisfaction of the new HSL LibGuide website:

1. Can patrons use the library website to access the information they need with minimal clicks to facilitate quicker access to information?
2. How much are users satisfied with the new library interface and the presentation of content?

Content Analysis. The investigator conducted content analysis on the existing WordPress HSL website using a checklist of seven key design elements for user engagement (Appendix B). The seven key elements for design are navigation, graphical representation, organization, content utility, and purpose (Garett et al., 2016). Garrett et al., (2016) describe what each of the seven elements entails as follows; 1) effective navigation is the presence of consistent navigation menus and limited clicks, 2) engaging graphical presentation means the website includes a logo, images and proper use of color, fonts, and text size, 3) organization entails a cognitive structure with information categorization through the use of keywords, meaningful labels, headings, and titles, 4) content utility means that the users perceive the information as useful and meeting their needs, 5) purpose refers to how the website communicates its identity and that it is clear to users what the website is intended for, 6) simplicity in a website means the website is easy to use and that information is easily finable, the layout is uncluttered, and that there is consistency in design throughout the website, and 7) readability means that the website is easy to read, well-written, and at an appropriate reading level for the content and intended audience. While the HSL intends to address each of these seven design elements, this usability study will focus on improving navigation, graphical representation, organization, and simplicity.

To evaluate navigation and organization on the current HSL website the investigator created a site map of the old HSL homepage (Appendix C). Branches appearing in purple are pages within the WordPress site. Branches appearing in green represent content that lives on the LibGuides platform. Branches appearing in yellow are links to databases and websites outside of the HSL and beyond the scope of this usability study. By consolidating the website to a single platform, LibGuides, the purple branches became green branches and thus provided consistency in layout and menus/navigation bars, addressing issues in organization and navigation. The consolidation to LibGuides also addressed graphical representation by providing consistency in logos and banners throughout the new website. Overall, the consolidation to a single platform addressed simplicity by providing consistency throughout the site pages and minimizing redundant

and confusing features (e.g. search bar in WordPress searches the WordPress pages, a search bar in LibGuides searches only LibGuide pages).

Recruitment and Participants.   The target audience of the Health Sciences Library were the students, faculty, and staff of the John A. Burns School of Medicine (JABSOM) and tangentially the students, faculty, and staff of the wider University of Hawaiʻi at Mānoa campus. The target audience (here on out referred to as "patrons") are ethnically diverse with ages spanning generations. There is also a diverse range of technical ability, education levels, and varying levels of information and digital literacy amongst patrons. Overall, JABSOM patrons visit the HSL website to find biomedical resources and tools to enhance their learning and solve complex problems. The nature of information that patrons seek is in itself complex and thus it is important for the library website to reduce cognitive load through an easy to navigate design.

The sample population of this usability study were the students and faculty at JABSOM. This study attempted to recruit participants from all aspects of JABSOM's population. JABSOM's student body is comprised of graduate students in various master's and doctoral programs. The entering medical school classes tend to have an average age of 24 with an age range of 21-45 years old (Office of Admissions, 2019). Data concerning the demographics of all other graduate programs at JABSOM is mixed in with the greater University of Hawaiʻi at Mānoa data. Worth noting, the University of Hawaiʻi at Mānoa campus is known for being one of the most diverse universities in terms of students and faculty alike (University of Hawaiʻi at Mānoa, 2019). JABSOM faculty may have instructional or clinical duties and researchers are similarly also teaching classes or may be strictly bench scientists with lab duties.

Evaluation Instruments.   This study used a combination of measures to assess the learnability, efficiency, and satisfaction of the redesigned HSL website. Participants completed an initial questionnaire to gather demographic data and information about their prior use of the website. Participants then completed an in-person think aloud session at the Health Sciences Library at JABSOM with the librarian/instructional designer. Participants were then asked to complete a number of tasks specific to their role at JABSOM (e.g. medical students will complete tasks specific to medical students, faculty will complete tasks specific to faculty) in addition to completing a series of basic tasks relevant to all audiences. At the conclusion of the think aloud, participants were asked to complete an exit questionnaire to gather data about their experience and satisfaction.

Project Design Strategies. Taking into consideration the diversity of the target audience of the HSL website, there will inevitably be a diverse range of learning styles to accommodate. Learning styles are based on how we use our senses to take in information and can be visual, auditory, read/write, and/or kinesthetic. A 2013 study (Kharb, Samanta, Jindal, & Singh, 2013) investigating the learning styles of first-year medical students found that a majority of students prefer multimodal learning which indicates that students prefer multiple modes of information presentation (e.g. text and video). As such, the redesign on the HSL website seeks to accommodate multimodal learning preferences by incorporating elements to stimulate multiple senses; images, text, and video/audio.

Additionally, the project design was based on how many patrons prefer to search. The single box, "Google style" search has become commonplace and users expect to find the answers they need with a single search. The wireframe website was designed to feature a larger search area (Appendix D) to mimic the "Google style" search.

Procedures. Recruited participants were all affiliated with the John A. Burns School of Medicine, the target audience for the library website (Appendix E & F). The usability study included three rounds of testing with a total of ten participants (*Table 1*). Rounds one and two consisted of three participants each, round 3 consisted of four participants. Edits were made to the website at the conclusion of each round of testing. The edits made on the website were based on the feedback received from participants in each round. The feedback collected in round one informed the edits made to the website that the round two participants tested, etc.

The investigator obtained approval to conduct the usability study from the University of Hawai'i at Mānoa's Institutional Review Board (Appendix G). Consent was obtained from each participant prior to testing (Appendix H). Once the form was signed, participants completed a pre-questionnaire via Google Forms to collect demographic information and prior experience and knowledge of the website (Appendix I). For the think aloud sessions, the investigator followed a script/protocol based on Steven Krug's, Rocket Surgery Made Easy (Appendix J) (Krug, 2009). Observation data and notes were collected by the investigator via Google Forms (Appendix K). At the conclusion of the think aloud session, participants completed a post-questionnaire to rate their satisfaction and ease of use of the new website (Appendix L).

Nine sessions were conducted in person, in private, in the Health Sciences Library in the investigator's office or in a hospital office of the clinical faculty and one session was conducted virtually via Zoom. Testing was conducted on a MacBook Air using the Chrome internet browser. Screen recordings were captured using QuickTime screen recordings. Screen recordings were then uploaded to YouTube with the "Private" privacy setting. Transcripts of the screen recordings were obtained via YouTube.

Table 1

Background Information on Usability Study Participants

Participant	Usability Round	University Affiliation	University Dept./Program	Frequency use of old website
1	1	Student	Medicine	Daily
2	1	Student	Medicine	Daily
3	1	Student	Medicine	Weekly
4	2	Faculty	Anatomy	Daily
5	2	Student	Comm. Sci.	Weekly
6	2	Student	Medicine	Daily
7	3	Faculty	Tropical Med.	Daily
8	3	Clinical Faculty	Pediatrics	Weekly
9	3	Faculty	Tropical Med.	Daily
10	3	Clinical Faculty	Orthopaedic Surgery	Less than once a month

Participants completed a series of ten tasks on the new website (Figure 1 and Appendix M). At the conclusion of the task, participants rated their perceived difficulty of completing the task where one is easy, two is somewhat easy, and three is difficult. This rating scale also corresponded to the number of clicks it took the participants to accomplish a task; one click, two clicks, and three or more clicks to accomplish a task. The less clicks the easier the perceived ease of use in finding information.

Task	Description
1	Locate the student guides
2	Find a textbook
3	Find a journal
4	Cite a textbook
5	Locate a database
6	Locate a research guide
7	Locate alternative databases
8	Locate a help guide
9	Locate library contact information
10	Locate library services
Optional	Locate after hours form

Figure 1. Description of think aloud tasks.

Results
Iteration One
All three participants in round one reported an overall positive experience with the new website. They liked the updated design and layout of the website and noted the use of the UHM green throughout the site. Participants had no problems completing tasks one, four, five, and seven, with all three participants rating the task easy (Table 2). The most challenging tasks for participants were tasks two, three, six, eight, nine and ten (Table 2).

Table 2

Summary of Participants Ratings from Round One for Ease of Completing Tasks

Participant	T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8	T 9	T 10
1	1	3	1	1	1	1	1	2	1	3
2	1	3	3	1	1	3	1	3	3	1
3	1	3	3	1	1	3	1	3	1	2

Note: *1 = very easy, 2 = less easy, 3 = difficult*

There were major usability issues for task two, participants were given the title of a book and asked to find the book and none of the participants were able to complete the task. To complete the task easily, participants should have used the OneSearch tool by typing in the title and searching. Interestingly, none of the three participants chose to use the OneSearch tool despite the larger, "Google-style" appearance (Appendix N). One participant commented that they had been so disappointed in the past with the results that they did not trust using it.

For task three, participants were given the title of a journal and asked to find it. To complete the task the participants should have used the "ejournals" link located in the horizontal navigation bar. One participant was able to complete the task. The two other participants clicked into various other areas of the website and were unable to complete the task. The two participants unable to complete the task reported that the link in the horizontal navigation was not obvious (Appendix N).

For task six, participants were given the scenario that they needed to learn more about how to search the PubMed database. This particular research guide was classified under the "Research Guides" icon. To complete this task participants should have clicked on the "Research Guides" icon and they would have seen the list of various research guides. One participant was able to complete the task and rated it easy. The other two participants rated the task difficult. One participant was unable to complete the task and when shown the solution commented on the name of the "Research Guides" icon, stating she did not think "Research Guides" were meant for her because she is a student. The third participant was eventually able to find the information after clicking around in various parts of the website. The third participant also commented on the name of the "Research Guides" icon, stating that the intention of the icon was unclear. For task eight, participants were presented with a scenario that required them to locate a "How-To" guide using the "How-To Guides" icon. Two of the three participants were unable to complete the task and rated it difficult, again commenting on the confusing names of the icons. In task nine, participants were asked to locate the library contact information and while all participants were able to locate the information, one participant could not find a "Contact Us" link anywhere and was not satisfied and thus rated the task difficult. In task ten, participants were asked to locate library services. To complete the task they should have clicked on the "Services" link in the horizontal navigation but only one participant successfully completed the task. The other two participants were either confused by the label "Services" or did not understand what was being asked of them.

To address the usability issues with tasks two and three, a "Books" icon and a "Journals" icon were added to the icon area of the website. To address the usability issues with task six and task eight, the "Research Guides" and "How-To Guides" were consolidated all under "How-To Guides." To address task nine, a "Contact Us" link was added to the horizontal navigation bar. For task ten, the investigator was unsure how to address the issue and decided to leave it unchanged to see how subsequent participants interpreted the task. See Figures 2 and 3.
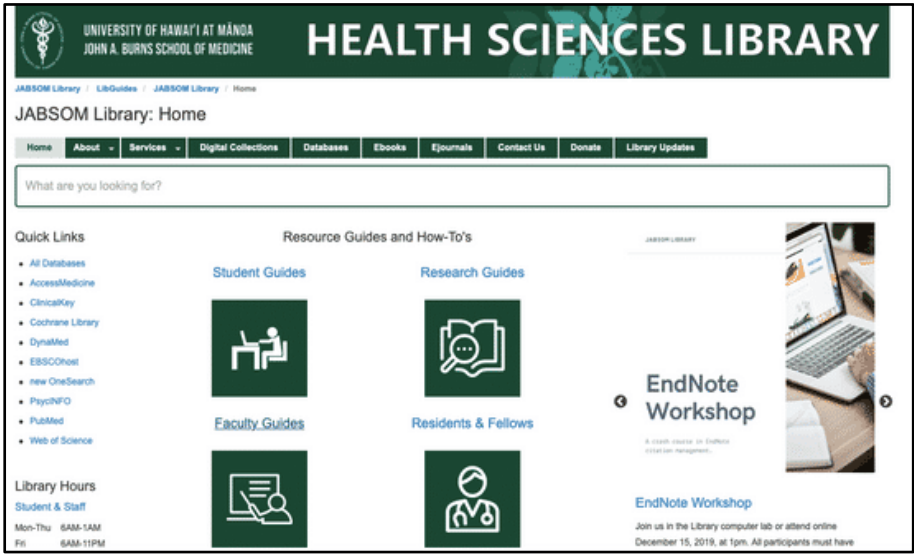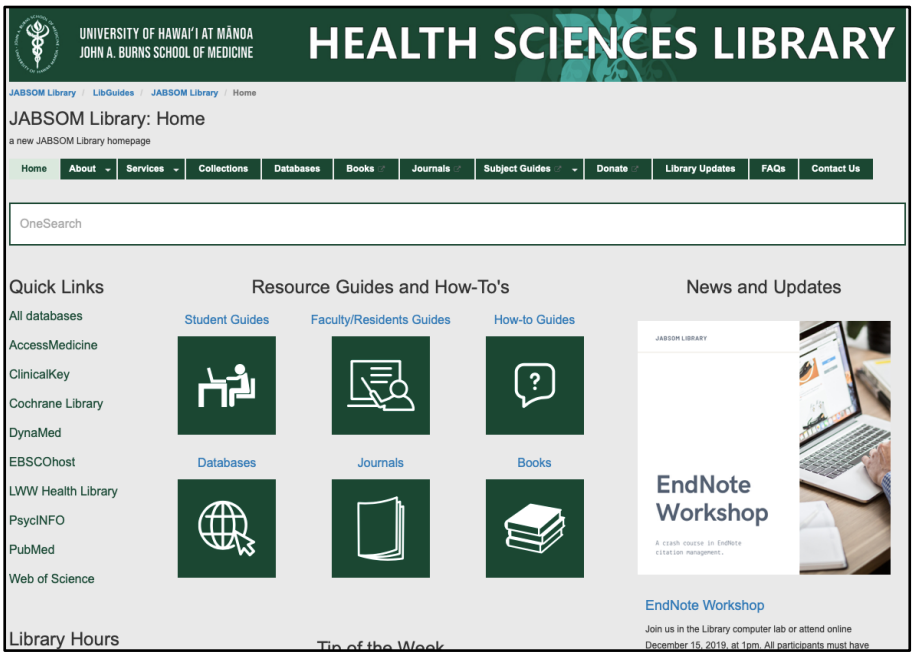
Figure 2. Before edits.

Figure 3. After edits.

Iteration Two

Feedback from round one participants led to improved usability on the second iteration of the website (Appendix O). Participants in round two also reported an overall positive

experience. They commented on the simplicity and organization of the website. There was an improvement in usability in all tasks that were previously problematic (Table 3). Participants were able to complete all tasks so there were no major usability issues in the second round of testing. For task two, find a book, two participants chose to use the OneSearch toolbar to complete the task and one participant chose to use the "Books" icon. Two participants rated the task very easy and one participant rated the task less easy because she had issues searching within OneSearch. Despite her issues searching OneSearch, she still arrived at the place she needed to complete the task in one click. For task three, find a journal, two participants chose to use the "Journals" icon and rated the task very easy. One participant rated the task as less easy citing that she did not notice the icon. Task four, citing a book using OneSearch, one participant rated the task less easy, commenting on how the path to complete the other tasks thus far had been more obvious and intuitive compared to this task in OneSearch (Appendix P). The participant was still able to eventually complete the task so there was no major usability issue.

Table 3

Summary of Participants Ratings from Round Two for Ease of Completing Tasks

Partici pant	T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8	T 9	T 10	Op.
4	1	1	2	1	1	1	1	1	1	1	2
5	1	1	1	2	1	1	1	1	1	1	2
6	1	2	1	1	1	1	1	1	1	1	N/A

Note: 1 = very easy, 2 = less easy, 3 = difficult

In this round, two of the three participants were from programs outside of Medicine. Everyone at JABSOM is issued a keycard to access various areas in the school. The library is open without keycard access Monday through Friday from 8AM to 5PM. After hours, students in the Medicine program are still able to access the library with their keycards. Students and faculty in the non-MD tracks are not given automatic access to the library after hours with their keycards. Instead, there is a library after hours form that they must have their department chair sign off on to grant after hours access. There was an optional task to locate this form for participants outside of the Medicine to complete. Both participants rated the optional task as less easy, stating that it was less intuitive to locate the form. To complete this task, participants could have located the form in the FAQ link or Hours link in the horizontal navigation. Both participants commented that

the FAQ link was not clear. This was not a major usability issue since both participants were able to eventually complete the task however, the investigator wanted to make the task more intuitive and chose to address it by adding an "FAQ" icon to the icon area navigation. To add the additional icon, all other icons had to be resized to accommodate a third row of icons. To complete the row the investigator chose to add a "Services" and "How-To" video icon (Appendix Q).

Iteration Three
Round three consisted of two teaching faculty and two clinical faculty. All participants commented on the icons with one participant stating it looked like there would be fewer clicks to access information and another participant commenting that they liked that all of the information appeared "up front." Notably, a number of participants in this round also commented on the task scenarios they were asked to complete, stating that the tasks were not realistic or did not make sense to them. Overall, there was still an improvement in ease of use ratings compared to round one testing (Figure 4 and Table 4).
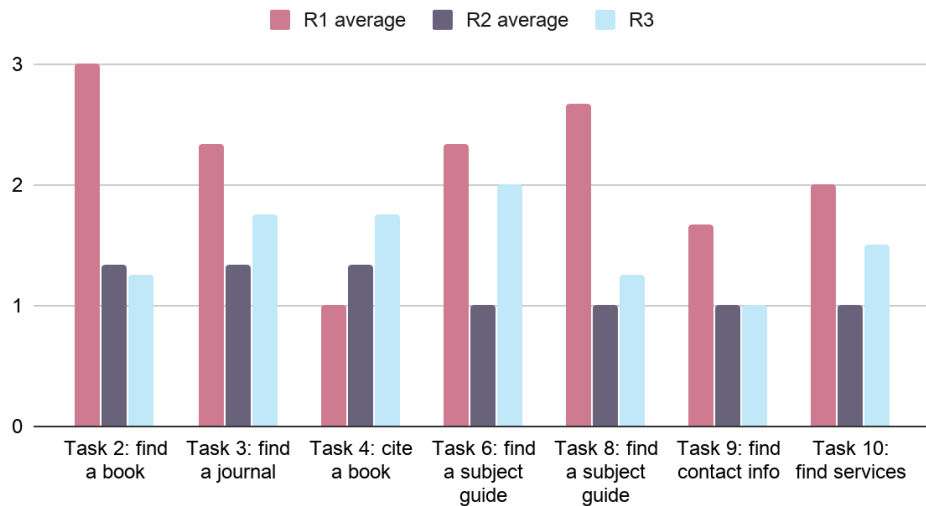

Figure 4. Average ease of task completion for all three rounds.

In task two, find a book, participant number seven was able to find the book he was asked to find but took issue with some of the lack of functionality in OneSearch (e.g. being unable to search the contents of the book through OneSearch) and thus rated the task less easy. For task three, to find a journal, two participants were able to easily locate a journal using the "Journals" icon. The other two participants had problems completing the task because they chose to search the OneSearch tool instead of using the "Journals" icon.

Participant seven eventually found the icon and was able to complete the task and commented that using the icon was much easier than searching OneSearch. Participant eight struggled to understand the task scenario and stated the task was not realistic for them and was unable to complete the task. In task four, citing a book in OneSearch, again two participants struggled to complete the task. Task six again presented problems for participants although all participants were eventually able to complete the task. Participant seven took issue with the list stating that the font was too small. Participant eight stated that they simply missed the "How-To Guides" icon and instead only saw the "How-To Videos" icon and suggested that the content in both icons be consolidated to one place. Participant nine took issue with the task scenario and stated they would not use the website to complete the task, they would search elsewhere (e.g. go straight to the source and use the PubMed database help documentation). In task eight, finding a different "How-To" guide, only one participant rated the task as less easy, stating that some of the names of the icons were confusing. For task ten, locating library services, two participants rated the task as less easy despite the addition of the "Library Services" icon. Participant seven initially clicked on the "FAQ" icon and then the "Library Services" icon. Participant eight did use the "Library Services" icon but took issue with the wording of some links (e.g. did not like the use of the term "instruction" to describe library workshops). Lastly, for the optional task to find the after hours form, participant seven was able to easily locate the form using the "FAQ" icon. Participant nine clicked in the "Student Guides" icon and did not see the form anywhere and was unable to complete the task.

Table 4

Summary of Participants Ratings from Round Three for Ease of Completing Tasks

Participant	T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8	T 9	T 10	Op.
7	1	1	2	1	1	2	1	1	1	2	1
8	1	2	3	3	1	2	1	1	1	2	N/A
9	1	1	1	1	1	3	1	2	1	1	3
10	1	1	1	2	1	1	1	1	1	1	N/A

Note: 1 = very easy, 2 = less easy, 3 = difficult

Overall, participants rated the ease of use for the new website and its components high. Edits made to the website based on feedback from all rounds resulted in a positive change (Figure 4). There was an improvement in participants' perceived ability to find information quickly with the average rating in round one being 4.67 and the average rating in round 3 being 4.75 (Table 5). There was a perceived improvement in participants' use of the subject guides with the average rating in round 1 at 4.34 and the average in round 3 at 5. In both rounds one and two participants rated the ease of use of the OneSearch tool as 5 however, the average ease of use for round three participants was a 4.5. The lower average ease of use for round three could be attributed to the participants lack of prior knowledge of OneSearch compared to participants in previous rounds (Figure 5).

Table 5.

Ease of Use Average Rating for New Website and Companion Components

Round	Able to find information quickly on new site	OneSearch tool is easy to use	Subject guides are easy to use
1	4.67	5	4.34
2	5	5	5
3	4.75	4.5	5

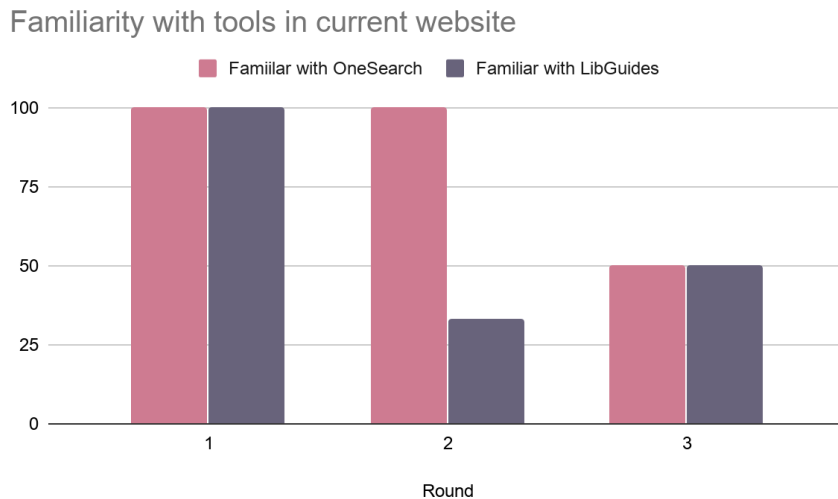Note: Likert scale 1 = strongly disagree, 5 = strongly agree

Figure 5. Participants prior knowledge of tools in old website.

Overall, there was an improvement in the participant's ratings in satisfaction and ease of use of the new website (Table 6). Participants rated their satisfaction on a 5-point Likert

scale where 1=strongly disagree and 5=strongly agree. The overall average satisfaction rating with the old website was a 4.1 and the overall average rating for the new website was a 4.6. More notable, participants' average rating of ease of use for the old website was 3.6 and the average for the new website was 5.

Table 6.

Pre and Post Comparison Between Satisfaction and Ease of Use for Old Website and the

New Redesigned Website.

	Pre: Satisfaction with old website	Post: Satisfaction with new website	Pre: Ease of use for old website	Post: Ease of use for new website
Round 1	4	4.33	2.67	5
Round 2	4	4.67	3.67	5
Round 3	4.25	4.75	4.75	5
Overall Average	4.1	4.6	3.6	5

Discussion

The investigator initially embarked on this project under the assumption that the library's use of multiple platforms (WordPress and LibGuides) to host content was confusing and that inconsistencies in navigation and layout were disorienting to users. Usability testing showed this was not the case and in fact, most users were unaware of a change in platform and they were able to eventually adjust to multiple means of navigation. In fact, the average rating in satisfaction with the old website was 4.5 on a 5 point scale (Table 6). Based on comments made by participants, it became clear that they were more concerned with their ability to find information fast (e.g. with minimal clicks).

Another interesting finding of the testing were the comments from multiple participants about the disconnect between the task they were asked to perform. Multiple participants indicated that the tasks presented to them were not the way they would actually look for information. To truly design a functional and intuitive website and library discovery tool

more information first needs to be known about the information seeking behaviors of the population.

Conclusion

Usability testing of the redesigned HSL website proved to be very beneficial. The investigator gained valuable insight into the target population at JABSOM that can be used to further help the library improve their website and services. In the future, the investigator plans to continue to refine the new website to address feedback received from the round three participants and the website will go live in the summer of 2020.

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       Options in LibGuides 2. *College & Research Libraries*, *78*(6).

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       evaluations of online library services. *Libraries in the Digital Age (LIDA)*

       Proceedings, *13*, 10.

APPENDICES

Appendix A
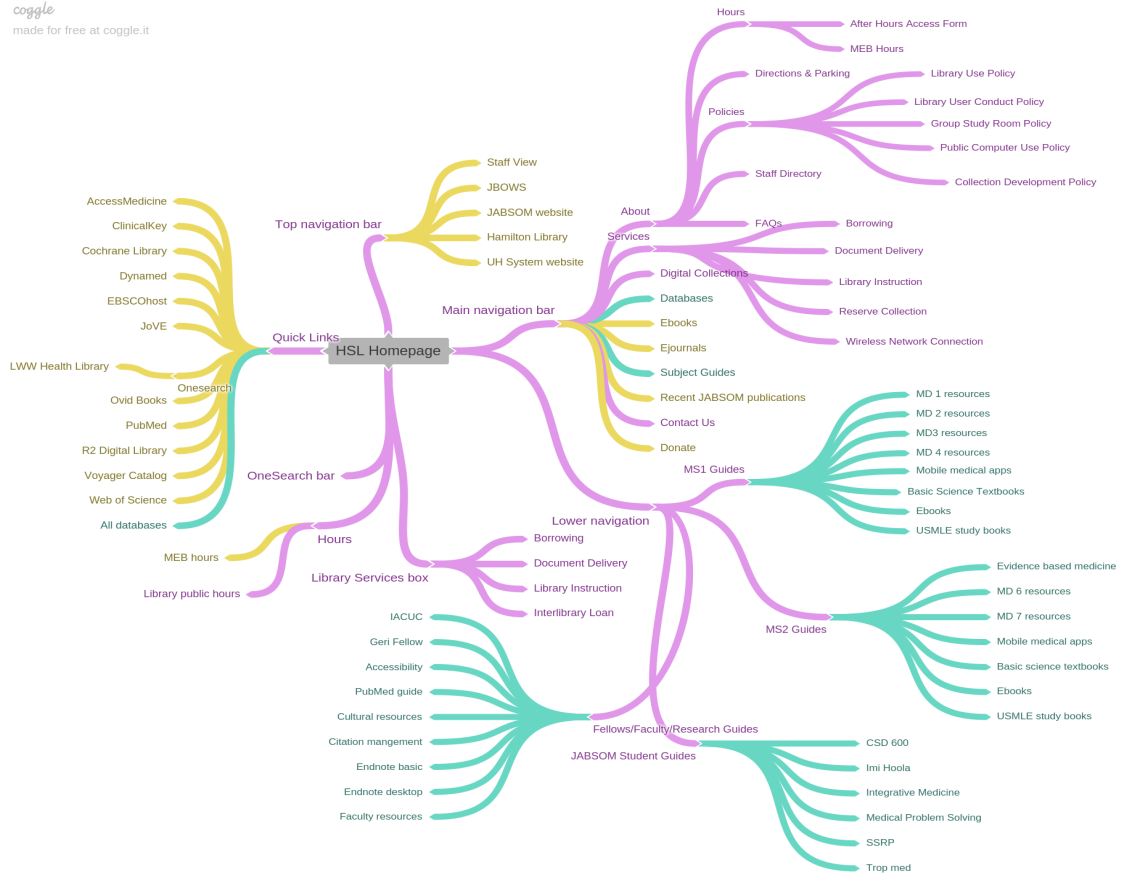Screenshot of old HSL website homepage and LibGuides subject guides page
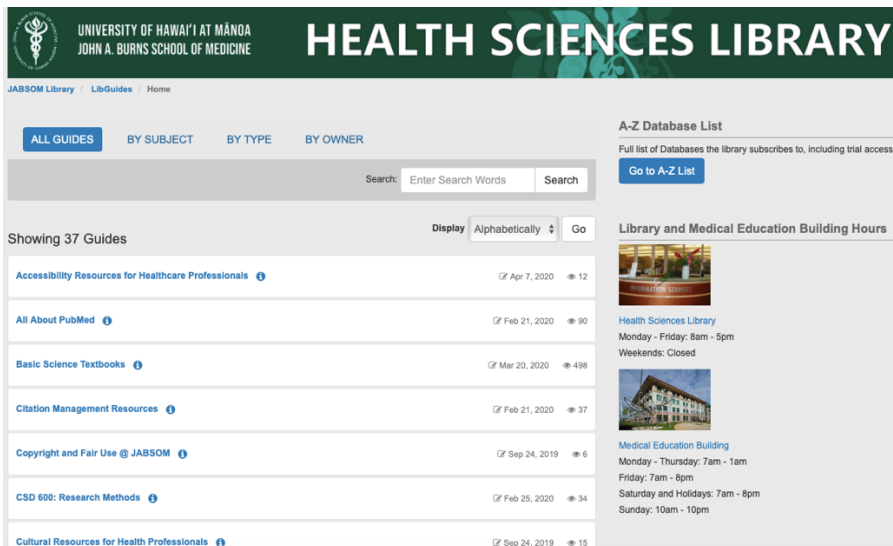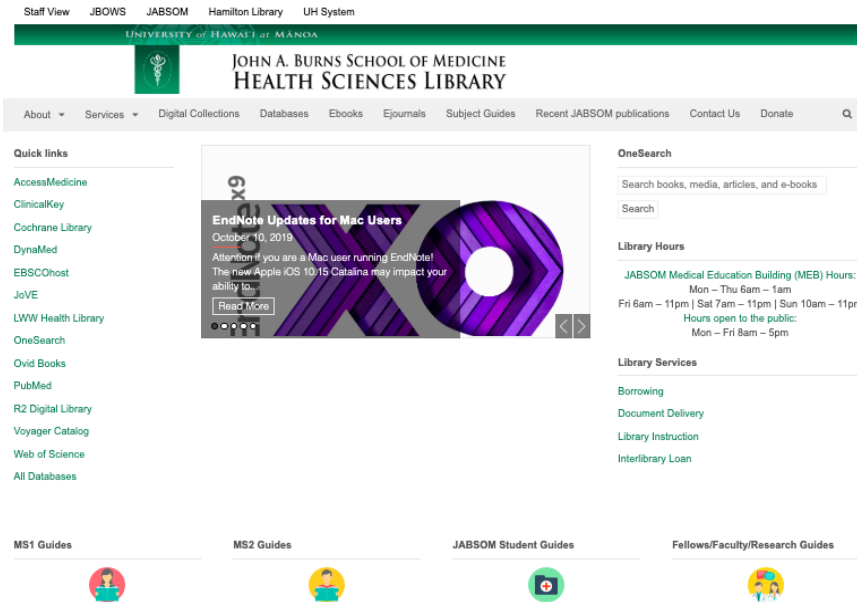
Appendix B
Standards of key design elements from Garett, Chiu, Zhang, & Young, 2016

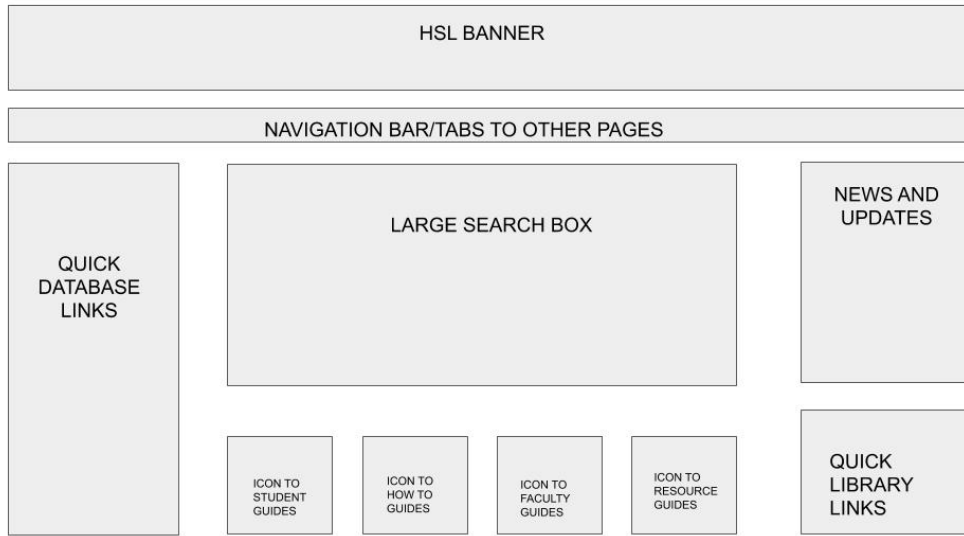| Key elements		New site
Navigation	- Salient menu/nav bar - Consistency of navigation - Aids for navigation (visible links) - Easy access to web pages (no excessive clicks and multiple pathways) - Search features - Users feel in control/ease of managing	Challenge in LibGuides (LG) will be consistent navigation; library home page navigation will be gone once they are in a different subject guide.
Graphical representation	- Inclusion of images - Size and resolution of images - Multimedia content (video) - Color, font, size of text - Distinct logos and icons - Visual attactiveness/layout - Color scheme - Effective use of white space to avoid visual overload - Minimal loading time for visual elements	1. Add more images and videos to meet multimodal VARK preferences (Kharb) 2. Standardize logos and banners across platforms, LG and Primo will have same logos 3. Wordpress had a different banner from LG, with just LG the banner will become standard with a standard color scheme
Organization	- Logical organization - Consistency - Meaninful labels/headings/titles - Keywords	Use of LG will provide more consistency in organization because it will all be on one platform with one overarching information architecture.
Content utility	- Sufficient amount of info to attract repeat visitors - Arousal/motivation (keep people interested) - Content quality - Current and up to date - Relevant to the purpose of the site	N/A

	- Users' needs and requirements/perceived utility	
Purpose	- Visible brand/contact and organization information - Information about service policy	N/A
Simplicity	- Simple headings - Reduced search time - Website optomized for multiple size screens - Uuncluttered layout - Consistency in design throughout site - Ease of use for first timers - Minimize redundant features - Easily understandable features/functions	Use of LG platform will provide more consistency.
Readability	- Easy to read - Well-written - Gramatically correct - Understandable - Appropriate amount of content on each page/readable blocks - Reading level appropriate for content	Ensure appropriate reading level, check readability scores.

Appendix C
Site map of the old HSL website homepage

coggle
made for free at coggle.it

HSL Homepage

- Top navigation bar
  - Staff View
  - JBOWS
  - JABSOM website
  - Hamilton Library
  - UH System website

- Quick Links
  - AccessMedicine
  - ClinicalKey
  - Cochrane Library
  - Dynamed
  - EBSCOhost
  - JoVE
  - LWW Health Library
  - Ovid Books
  - PubMed
  - R2 Digital Library
  - Voyager Catalog
  - Web of Science
  - Onesearch
    - All databases

- OneSearch bar

- Hours
  - MEB hours
  - Library public hours

- Library Services box
  - Borrowing
  - Document Delivery
  - Library Instruction
  - Interlibrary Loan

- Main navigation bar
  - About
    - Hours
      - After Hours Access Form
      - MEB Hours
    - Directions & Parking
    - Policies
      - Library Use Policy
      - Library User Conduct Policy
      - Group Study Room Policy
      - Public Computer Use Policy
      - Collection Development Policy
    - Staff Directory
    - FAQs
  - Services
    - Borrowing
    - Document Delivery
    - Library Instruction
    - Reserve Collection
    - Wireless Network Connection
  - Digital Collections
  - Databases
  - Ebooks
  - Ejournals
  - Subject Guides
  - Recent JABSOM publications
  - Contact Us
  - Donate

- Lower navigation
  - MS1 Guides
    - MD 1 resources
    - MD 2 resources
    - MD3 resources
    - MD 4 resources
    - Mobile medical apps
    - Basic Science Textbooks
    - Ebooks
    - USMLE study books
  - MS2 Guides
    - Evidence based medicine
    - MD 6 resources
    - MD 7 resources
    - Mobile medical apps
    - Basic science textbooks
    - Ebooks
    - USMLE study books
  - Fellows/Faculty/Research Guides
  - JABSOM Student Guides
    - IACUC
    - Geri Fellow
    - Accessibility
    - PubMed guide
    - Cultural resources
    - Citation mangement
    - Endnote basic
    - Endnote desktop
    - Faculty resources
    - CSD 600
    - Imi Hoola
    - Integrative Medicine
    - Medical Problem Solving
    - SSRP
    - Trop med

Appendix D
Wireframe for new website

HSL BANNER

NAVIGATION BAR/TABS TO OTHER PAGES

QUICK DATABASE LINKS

LARGE SEARCH BOX

NEWS AND UPDATES

ICON TO STUDENT GUIDES

ICON TO HOW TO GUIDES

ICON TO FACULTY GUIDES

ICON TO RESOURCE GUIDES

QUICK LIBRARY LINKS

Appendix E
Recruitment email

Aloha JABSOM students, faculty, and staff! This is your librarian from the JABSOM library, Melissa Kahili-Heede. The library has been working on a new website in hopes of improving your ability to access the information you need but we need your help to test the new website.

I am contacting you to ask if you would be interested in participating in a usability study. The purpose of the usability study is to determine the ease of use and satisfaction of a new JABSOM Library website. Your participation is voluntary and will take approximately 1 hour to complete.

How it works:

- o   Must be a JABSOM student, faculty, or staff to participate
- o   Usability study will take place, in private, at the JABSOM Library
- o   Complete 2 surveys and a "think aloud" session
- o   All participants will receive a Starbucks gift card

Please contact me, Melissa Kahili-Heede if you have any questions or wish to enroll at mkahili@hawaii.edu.

Note, Principle Investigator – Curtis Ho, PhD., curtis@hawaii.edu

UH IRB 2019-01008

Appendix F
Recruitment Flyer
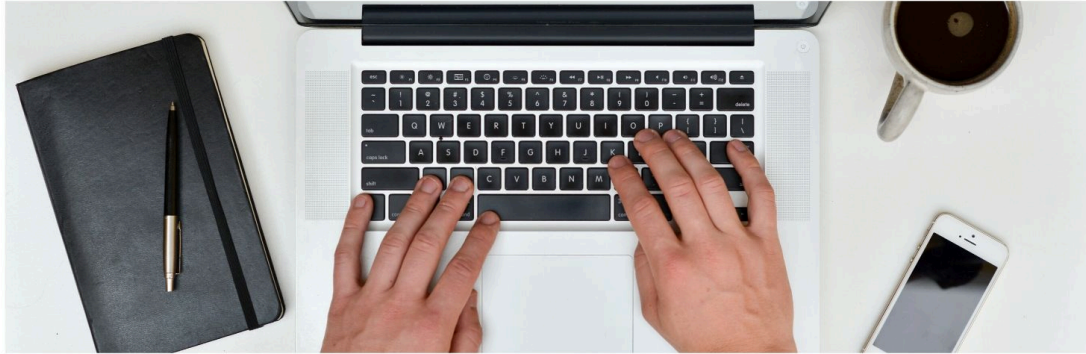
Usability Study – Health Sciences Library Website

Are you student, faculty or staff at JABSOM? Do you use the library's website to access databases and/or online resources? If so, you are invited to participate in a usability study.

The purpose of this usability study is to determine the ease of use and satisfaction of a new Health Sciences Library website.

HOW IT WORKS
- Must be JABSOM student, faculty, or staff
- Usability study will take place at the JABSOM Library
- Complete 2 surveys and a think aloud session at your convenience
- All participants will receive Starbucks giftcards

To learn more about the study or to enroll, contact Melissa Kahili-Heede at mkahili@hawaii.edu
Principle Investigator: Curtis Ho, PhD, curtis@hawaii.edu
UH IRB Approval: 2019-01008

Appendix G
CITI Training Certificates

This is to certify that:

Melissa Kahili-heede

Has completed the following CITI Program course:

Information Privacy Security (IPS) (Curriculum Group)
Exempt Researchers and Key Personnel IPS (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

University of Hawaii

Completion Date 25-Sep-2017
Expiration Date 24-Sep-2020
Record ID   24760743

Not valid for renewal of certification through CME. Do not use for TransCelerate mutual recognition (see Completion Report).

Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w6ec2e9b2-fafc-43bd-b31c-d38ca3b007a4-24760743

CITI PROGRAM

Completion Date 27-Jul-2017
Expiration Date 26-Jul-2020
Record ID   22979554

This is to certify that:

Melissa Kahili-heede

Has completed the following CITI Program course:

Not valid for renewal of certification through CME. Do not use for TransCelerate mutual recognition (see Completion Report).

Human Subjects Research (HSR)   (Curriculum Group)
Exempt Researchers and Key Personnel (Course Learner Group)
1 - Basic Course   (Stage)

Under requirements set by:

University of Hawaii

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w79b7c545-257d-4a45-97aa-4a76d489e150-22979554

Appendix H
Consent Form

Consent to Participate in a Research Project
Prinicple Investigator: Curtis Ho, PhD.
Other Investigator: Melissa Kahili-Heede, MLIS
Project Title: Usability Study – Health Sciences Library Website

Aloha JABSOM Library patron! It's Melissa Kahili-Heede here, your JABSOM Librarian, and I am inviting you to take part in a usability study to evaluate the ease of use of the new JABSOM Library website. I am doing this usability study as part of the requirements for earning my graduate degree in Learning Design and Technology.

What am I being asked to do?
If you participate in this project, you will be asked to fill out a web-based online questionnaire, take part in a face-to-face think aloud in which you will be asked to complete a series of tasks via the JABSOM Library website, and finally you will be asked to complete a web-based online post-test survey.

Taking part in this study is your choice.
Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss to you.

Why is this study being done?
The purpose of this project is to evaluate the ease of use of the JABSOM Library website. I am inviting you to participate in this usability study because you are an actual user of library website. The data collected will be used to improve the user experience of the website.

What will happen if I decide to take part in this study?
You complete an initial questionnaire, then participate in a "think aloud" session and then complete a post-usability questionnaire. The initial questionnaire will take approximately 5 minutes to complete; it serves to collect demographics about you the participant. The think aloud will take approximately 1-hour to complete; you will meet, in-person, with the librarian and be asked to complete a series of tasks on the library's website. The think aloud session requires that you verbally express all your thoughts as you complete various tasks. An example of a task would be to locate a particular database or resource. The post-usability questionnaire will be completed at the end of the think aloud session and will take approximately 10 minutes to complete. The post-test survey will collect your thoughts and opinions of the old site versus the new site and ask you to rate your satisfaction with the new website and the ease of use of various aspects of the JABSOM Library website using a 5-point Likert scale. Examples of questions you will be asked are, did you have any problems with the new website?

With your permission, I will audio-record the think aloud so that I can later transcribe the interview and analyze the responses.

What are the risks and benefits of taking part in this study?

Consent Form – version 3

Consent to Participate in a Research Project
Prinicple Investigator: Curtis Ho, PhD.
Other Investigator: Melissa Kahili-Heede, MLIS
Project Title: Usability Study – Health Sciences Library Website

I believe there are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life for example; some questions may cause emotional discomfort such as stress. If you do become stressed or uncomfortable, you can skip the question or take a break. You can also stop participating at any time or withdraw from the project altogether.

There will be no direct benefit from participating in this survey. However, your responses may inform the design of the Library's website.

Privacy and confidentiality:
I will keep all study data secure in a locked filing cabinet in a locked filing cabinet in a locked office/encrypted on a password protected computer. Your Google survey answers will be sent to a gmail.hawaii.edu account where data will be stored in a password protected electronic format. The survey does collect identifying information such as your name and email address. Only the Principle Investigator and I will be able to access the information. Other agencies that have legal permission have the right to review research records. The University of Hawaiʻi Human Studies Program has the right to review research records for this study. After I transcribe the interviews, I will destroy the audio-recordings. When I report the results of project, I will not include any identifying information. At the conclusion of the project (i.e. once I have satisfied my degree requirements) all data will be destroyed.

Compensation:
You will receive a $5 gift card to Starbucks for your time and effort in participating in this research project.

Future research studies:
Identifiers will be removed from any identifiable private information you provide and after removal of identifiers, the data may be used for future research studies or distributed to another investigator for future research studies and we will not seek approval from you for these future studies.

Questions:
If you have questions at any time about the study or the procedures, you may contact Melissa Kahili-Heede at 808-692-0825 (office number) or via email at mkahili@hawaii.edu. You may also contact my advisor and Prinicple Investigator, Dr. Curtis Ho at 808-956-7771 or curtis@hawaii.edu.

You may contact the UH Human Studies Program at (808) 956-5007 or by e-mail at uhirb@hawaii.edu to discuss problems, concerns, and questions, obtain information, or offer

Consent Form – version 3

Consent to Participate in a Research Project
Prinicple Investigator: Curtis Ho, PhD.
Other Investigator: Melissa Kahili-Heede, MLIS
Project Title: Usability Study – Health Sciences Library Website
input with an informed individual who is unaffiliated with the specific research protocol. Please visit http://go.hawaii.edu/jRd for more information on your rights as a research participant.

If you agree to participate in this project, please sign and date the following signature page and return it to Melissa Kahili-Heede, MEB office 104F. Keep a copy of the informed consent for your records.

Signature(s) for Consent:

I give permission to join the research project entitled, "*Usability Study – Health Sciences Library Website.*"

Please initial next to either "Yes" or "No" to the following:

_____ Yes   _____ No   I consent to be audio-recorded for the interview portion of this research.

Name of Participant (Print): _____

Participant's Signature: _____

Signature of the Person Obtaining Consent: _____

Date: _____

Consent Form – version 3

Appendix I
Data Collection Form

Usability data collection

1. Email address *

   _____

2. Date

   _____

3. Subject

   _____

4. What are your first impressions of the new website?

   _____

   _____

   _____

   _____

   _____

5. What information do you think you can find here?

_____

_____

_____

_____

_____

6. What are your initial thoughts on the layout? Color? Graphics?

_____

_____

_____

_____

_____

7. What are your initial thoughts on OneSearch?

_____

_____

_____

_____

_____
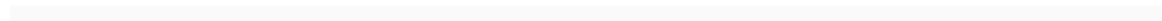
8. What do you think you can find here?

_____

_____

_____

_____

_____

9. What are your initial thoughts on the layout? Color? Graphics?

_____

_____

_____

_____

_____

Tasks

10. Task 1: You are a medical student. You've just finished PBL, you have your learning issues and you're ready to get started with researching your LIs. Find the resource guide for [unit] to access one of the suggested resources. OR You're working on an assignment for class and y want to access some of the library's online textbooks. You recall the librarian showing you a class guide with quick links to some textbooks relevant to your classes. Locate that guide through the library's website.

_____

_____

_____

_____

_____

11. Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult

12. Task 2: Follow-up to 1: You've gone through the [unit] guide and used some of the e-textbool listed in the guide but you're looking for something else that isn't listed in the guide. Navigate the library website to find a book that isn't listed in the [unit] guide [Hint: Lippincott's Illustrat Reviews: Biochemistry]. Locate the book in electronic and physical format. Or, how would yo find an anatomy textbook if you didn't know the name of the book you were looking for? OR You notice there is only one anatomy textbook linked in the Trop Med guide, you want to finc additional anatomy books. Use the library website to locate a different anatomy book [hint: clinically oriented anatomy]. Locate the book in electronic and physical format.

_____

_____

_____

_____

_____

13. Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult

14. Task 3: You heard a story on the news today that referenced a recent article in the Journal of the American Medical Association (or JAMA). You want to read the actual article for yourself Locate the latest issue of JAMA. Follow-up: Locate journal search through OneSearch (if the went through the website) or Website (if they went through OneSearch)

_____

_____

_____

_____

_____

15. Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult

16. Task 4: You need to cite a textbook or article, locate the item in OneSearch and generate a citation. Follow-up: thoughts on the labels? Record display? Easy to understand/navigate? Difficult?

_____

_____

_____

_____

_____

17.   Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult

18.   Task 5: You need to do a literature search and you think PubMed is the best place to start
      searching. Locate/access PubMed.

_____

_____

_____

_____

_____

19.   Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult

20.   Task 6: You want to learn more about how to search PubMed, find the guide for searching PubMed.

_____

_____

_____

_____

_____

21.   Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult

22.   Task 7: You've searched PubMed but you aren't finding quite what you need. You want to see what other databases are available, find JABSOM's list of databases.

_____

_____

_____

_____

_____

23.   Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult

24.   Task 8: You've been collecting articles through different assignments and research. You hear about Zotero from others so you downloaded and installed it but you have questions about how to use it. Locate the guides that can help with citation management.

_____

_____

_____

_____

_____

25.   Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult
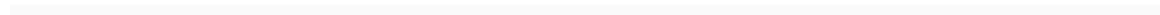
26. Task 9: You've looked through the guide, but you think you need additional help and want to meet with a librarian for one-on-one assistance, locate the library's contact information.

_____

_____

_____

_____

_____

27. Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult

28. Task 10: In addition to the citation management guide, you've heard that the library offers classes on how to use Zotero. Locate the library's instruction offerings.

_____

_____

_____

_____

_____

29. Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult

30. Optional: You want to be able to study late in the library after hours. You need to request access to have your card updated. Located the after hours access form.

_____

_____

_____

_____

_____

31. Rate the level of finding information

	1	2	3	
very easy	◯	◯	◯	difficult
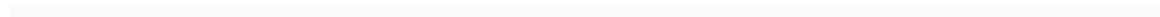
32.   Any other questions or comments?

_____

_____

_____

_____

_____

Google Forms
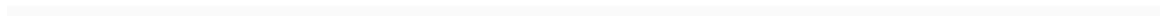
Appendix J
Pre Questionnaire

Pre-Usability Questionnaire   5/4/20, 12:13 PM

Pre-Usability Questionnaire
* Required

About You

1. What is your JABSOM affiliation? *

   Mark only one oval.

   ◯ Student

   ◯ Faculty

   ◯ Staff

2. Which category below includes your age?

   Mark only one oval.

   ◯ 18 - 20

   ◯ 21 - 29

   ◯ 30 - 39

   ◯ 40 - 49

   ◯ 50 - 59

   ◯ 60 or older

3. What department are you affiliated with or what degree program are you in? *

   _____

4. How often do you use the JABSOM Library website? *

    Mark only one oval.

    ( ) Never

    ( ) Less than once a month

    ( ) Weekly

    ( ) Daily

5. What are some of the most common reasons you use the JABSOM Library website? Please describe below. *

    _____

    _____

    _____

    _____

    _____

6. Are you familiar with the library search tool, OneSearch?

    Mark only one oval.

    ( ) Yes

    ( ) No

7. Are you familiar with the library's subject guides (e.g. MD1 Resource guide, PubMed guide, Zotero guide)?

Mark only one oval.

◯ Yes

◯ No

8. Rate your satisfaction with the current website

Mark only one oval.

	1	2	3	4	5	
Not satisfied	◯	◯	◯	◯	◯	Very satisfied

9. Rate the ease of use of the current website

Mark only one oval.

	1	2	3	4	5	
Very easy	◯	◯	◯	◯	◯	Very difficult

10. Describe any issues/dislikes you have with the current website.

_____

_____

_____

_____

_____

Appendix K
Post Questionnaire

Post-Usability Questionnaire

1= Strongly disagree
5= Strongly agree

1. What did you like best about the website and/or it's features?

_____

_____

_____

_____

_____

2. What did you like least about the website and/or it's features?

_____

_____

_____

_____

_____

3. Overall, I found the new library website easy to use.

	1	2	3	4	5	
Strongly disagree	◯	◯	◯	◯	◯	Strongly agree

4. On the new website, I could quickly find the information I needed.

	1	2	3	4	5	
Strongly disagree	◯	◯	◯	◯	◯	Strongly agree

5. Rate your satisfaction with the new website

	1	2	3	4	5	
Not satisfied	◯	◯	◯	◯	◯	Very satisfied

6. Describe the problems (if any) that you had with the library homepage.

_____

_____

_____

_____

_____

7. I found the OneSearch tool easy to use.

	1	2	3	4	5	
Strongly disagree	◯	◯	◯	◯	◯	Strongly agree

8. Describe the problems (if any) that you had with OneSearch.

_____

9. I found the subject guides easy to use.

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

10. Describe the problems (if any) that you had with the subject guides.

_____

11. Any other comments or questions?

_____

Appendix L
Usability Protocol

Health Sciences Library Website Usability Study
Usability Protocol with Preliminary Questions and Task
Based Scenarios

Script adapted from Krug, Steve. Rocket Surgery Made Easy
(Voices That Matter) (p. 147-153). Pearson Education.
Kindle Edition.

WEBSITE URL: https://libguides.jabsom.hawaii.edu/library

Introduction

**Hi, _____. My name is Melissa, and I'm going to be
walking you through this session today. Before we begin, I
have some information for you, and I'm going to read it to
make sure that I cover everything.**

**Why you are here: I am asking JABSOM students, faculty, and
staff to test out various aspects of a new JABSOM library
website to see if it works the way it is intended to. The
session should take about an hour.**

**The first thing I want to make clear is that we're testing
the site, not you. You can't do anything wrong here. As you
use the website, I'm going to ask you as much as possible
to try to think out loud: to say what you're looking at,
what you're trying to do, and what you're thinking. This
will be a big help for me. Also, please don't worry that
you're going to hurt my feelings. I am doing this to
improve the website, so I need to hear your honest
reactions.**

**If you have any questions as we go along, ask them. I may
not be able to answer them right away, since I am
interested in how people do when they don't have someone
sitting next to them to help. But if you still have any
questions when we're done, I'll try to answer them then.
And if you need to take a break at any point, just let me
know. With your permission, I would like to turn on the
screen recorder to record the movement of your mouse on the
screen and our voices as you think out loud. The recording
will only be used to help me figure out how to improve the
website, and it won't be seen by anyone except the people**

working on this project. And it helps me because I don't have to take as many notes.

First, I'm going to have you review your consent form to ensure that everything is in order. Please take a look at it now and review your consent.

Do you have any questions?

The usability study has three parts: Preliminary Questionnaire via Google Forms, Task-Based Scenarios where you will think out loud as you perform different actions on the website and an exit questionnaire again via Google Forms. The purpose of the preliminary questionnaire is to collect basic information about you and how you typically use the current website. The exit questionnaire will ask you to rate how your experience on the new site was. Your comments are very valuable for this study. Each survey should take no more than 5 minutes to complete. Your responses are confidential and will only be used for research purposes. You can stop answering the questions at any time if you do not feel comfortable. Any questions?

Have participant complete the Pre-usability questionnaire now.

[START THE RECORDING NOW]

Preliminary questions: Before we start the task, I would like you to take a look at the new website and share your thoughts aloud with me. I will ask you at times, "What are you thinking?" Just share exactly what it is you're thinking.

1. What are your first impressions of the website?
2. What information do you think you can find here?
3. What are your initial thoughts on the layout? Colors? Graphics?

CONTINUE FOR 3-4 MINUTES.

Thanks. That was great! Now I'm going to ask you to try doing some specific tasks. I'm going to read each one out loud and give you a printed copy. And again, as much as possible, it will help me if you can try to think out loud as you go along.

Task-Based Scenarios
- Hand the participant the first scenario and read it aloud.
- Allow the user to proceed until it's NOT producing any value, or the user becomes very frustrated.
- Repeat for each task or until time runs out.

THANK YOU_____, that was very helpful.

Post Usability Protocol Interview Question
- Do you have any questions or comments that you would like to share?
- Any other comments? Questions?

[STOP THE RECORDING NOW]

Have participant complete the Post-usability questionnaire now.

Thank you for participating in my usability research study. I greatly appreciate it!

Appendix M
Task scenarios for think-aloud session

Tasks for medical students:
You've just finished PBL, you have your learning issues and you're ready to get started with researching your LIs. Find the resource guide for [unit] to access one of the suggested resources.

Follow-up: You've gone through the [unit] guide and used some of the e-textbooks listed in the guide but you're looking for something else that isn't listed in the guide. Navigate the library website to find a book that isn't listed in the [unit] guide [Hint: Lippincott's Illustrated Reviews: Biochemistry]. Locate the book in electronic and physical format.

Or, how would you find an anatomy textbook if you didn't know the name of the book you were looking for?

Tasks for other graduate students:
You're working on an assignment for class and you want to access some of the library's online textbooks. You recall the librarian showing you a class guide with quick links to some textbooks relevant to your classes. Locate that guide through the library's website.

You notice there is only one anatomy textbook linked in the Trop Med guide, you want to find additional anatomy books. Use the library website to locate a different anatomy book [hint: clinically oriented anatomy]. Locate the book in electronic and physical format.

You want to be able to study late in the library after hours. You need to request access to have your card updated. Located the after hours access form.

Tasks for on-campus/clinical faculty:
You heard the library has resource guides for students, you want to check them out for yourself, locate those student resource guides (for MD4 or Trop Med specifically)

You're preparing for a lecture and you want to find a specific image from the textbook, Berne and Levy Physiology, to reference in your slides, find the electronic textbook.

Tasks for all:
   • Browse journals
You heard a story on the news today that referenced a recent article in JAMA. You want to read the actual article for yourself. Locate the latest issue of JAMA through the library's website.
   • Generate citation from OneSearch
You need to cite a textbook/article, locate the item in OneSearch and generate a citation.
   • Access the database, PubMed.
You need to do a literature search and you think PubMed is the best place to start searching. Locate/access PubMed.

- Find a research guide.

You want to learn more about how to search PubMed, find the guide for searching PubMed.

- Find additional databases.

You've searched PubMed but you aren't finding quite what you need. You want to see what other databases are available, find the list of all health science databases.

- You want to learn more about citation managers, find the citation management guide.

You've been collecting articles through different assignments and research. You heard about Zotero from others so you downloaded and installed it but you have questions about how to use it. Locate the citation management guide.

- Library contact info.

You've looked through the guide but you think you need additional help and want to meet with a librarian for one-on-one assistance, locate the library's contact information.

- Locate the instruction services that the library offers.

In addition to the citation management guide, you've heard that the library offers classes on how to use Zotero. Locate the library's instruction offerings.

For other grad/faculty: You want to be able to study late in the library after hours. You need to request access to have your card updated. Located the after hours access form.

Appendix N
Redesigned website homepage at round one testing

Appendix O
Redesigned website homepage at round two testing

Appendix P
Task 4 – Using the OneSearch citation generation tool

Appendix Q
Redesigned website homepage at round three testing