EXECUTIVE SUMMARY

Currently, Sakai, the software offered to Indiana University and University of Michigan professors to manage their courses, requires the instructors and students to use library search tools separately, with few ways to effectively link resources into Sakai. The goal of this project has been to bring about closer integration between Sakai and the many resources available through the Indiana University and University of Michigan Libraries.

After the completion of phase one and with a working prototype in hand, the Sakaibrary development team identified eleven individuals from the University of Michigan and Indiana University communities to participate in a one and a half hour long usability testing session. The group included librarians, students, and faculty, most having prior experience with Sakai (see Participant Profiles below for additional information). During the session, participants were asked to create a citation list using the Sakaibrary tool by searching, selecting results, entering a citation manually, saving and viewing the list.

The data culled from this round of usability testing indicated the following:

**Value of Sakaibrary**

- Instructors see value in having an easy way for students to create and share citation lists within Sakai
- Instructors like being able to create “electronic reserves” themselves, manually finding and saving articles and then uploading them
- Librarians seem more skeptical, sometimes preferring native search interfaces and valuing the investments made in library websites
- Students see it as helpful in writing research papers

**Working within the context of the Sakai environment**

- A fair amount of intervention required – either training or improvements are required
- Trying to fit Sakaibrary functionality within the existing resources tool causes some confusion
  - Where do I go to create a citation list?
  - What is the title for?
  - What does “Add” do?
• On library sites, search and database selection are primary; in Sakaibrary, search is buried
• Because Sakaibrary is a new paradigm, some learning curve may be expected

Search Results

• Results returned by underlying metasearch services fall short of expectations
  o Google sets expectations
  o Users expect sorting by relevance and/or date
  o Users want ready access to abstracts and full text from search results
  o Users want a “full text only” option

These above issues are further detailed in the “Findings” section; while recommendations for improvement to the prototype are provided in the “Issues and Recommendations” section.
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PURPOSE

The purpose of this study was to evaluate the usability of the tool in order to better understand usage patterns for this type of application and make redesign recommendations. Goals of this usability test were two fold – to determine the usability of the prototype and problems users might encounter when creating a citation list and to assess the value of the tool from the perspective of faculty, students and librarians. In other words, do people find this tool easy to use and, if so, would it be valuable in a classroom situation?

PARTICIPANTS

Eleven participants were recruited by the Sakaibrary development team. Six participants were from the University of Michigan; five from Indiana University. As illustrated in the table below, participants had varying levels of satisfaction with Sakai (ranging from four to nine on a 10 point Likert scale, with 1 = “not helpful” and 10 = “extremely helpful) and varying levels of experience with full-text article searching. The group included four librarians, three students and four instructors.

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*Rating of Sakai (Michigan, “C-Tools”, Indiana, “Oncourse CL”) based on a 10-point Likert scale, with 1 = “not helpful” and 10 = “extremely helpful”.

METHODS

All test sessions were facilitated by members of the Sakaibrary working group. Eleven sessions were conducted, usually at the office or home of the participants. To begin the session, introductions were made followed by the review and signing of the consent form. The participants were given an overview of the Sakaibrary project and an overview of the testing activity. For the most part, participants performed the activities on computers and web browsers that were familiar to them.
After the purpose of the project and activity were covered, participants filled out a brief background questionnaire. Once this was completed, a card was given to each participant with the following text: “Please think about the last paper you wrote where you needed to conduct research and cite references in a bibliography. Using the ability to search library resources and build a citation list within CTools/OnCourse CL, search for resources relevant to your paper and create a citation list of at least four citations that would comprise a decent bibliography for your paper.” Participants were also asked to include a fifth citation that was written out in its entirety on the card. These citations were tailored to the subject expertise or field of study of the participants.

Once the participant was comfortable with the task and had no further questions, the facilitator opened a web browser and began the activity at the Resource Page within Sakaibrary (see Appendices section for screen shots of prototype). The facilitator took extensive notes about the session, paying particular attention to participant behavior, comments, interactions with the interface and the experience of the participant. The participant was encouraged to talk aloud as well as work independently. If they became stuck or totally confused, they were free to ask for assistance.

After the task was completed, the facilitator would ask the participant to recreate the steps they took during the activity while soliciting additional feedback from the participants regarding what worked, didn’t work, potential pitfalls, and the overall perceived value of the tool. Lastly, they were thanked for their time and input into this project.

FINDINGS

Step One: Adding a Citation List Item

For the purpose of the usability test, the task of creating a citation list began at the “Resources” page within the Sakaibrary prototype. The participants had each been given a scenario involving the creation of a bibliography with four citations that they were to choose using the new search tool and one that they were to manually enter onto the list.

Of the 11 participants, two had no difficulty finding the “add” button to begin the process of adding a new item to Sakai. Eight participants had to be told how to begin the process and one participant when told that “a citation list is a new type of item that can be added” had no difficulty with adding an item. Of the eight participants who could not initiate the process on their own, the following comments and observations were recorded:

• “‘Where am I supposed to be finding the library resources?’ She did not understand the concept of “Add Item” type.”
• “Didn’t know where to go. Clicked on “Worksite Setup.” I took her back to Resources page and had her click on ‘add.’”
• “Started looking for the specific databases; a listing that included Web of Science. Asked if the “databases were hidden.” I prompted him to click on the add button.”
• “Did not understand the concept of “add” to create a citation list. She thought you would click on “Workspace Resources.” [This occurred in two separate sessions.]”

Once participants clicked on the “add” link on the Resources page, they were presented with the “Add Item(s)” page. Of the 11 participants, five immediately clicked on the drop down menu and selected “Citation List” to bring up the Citation List page. Six participants needed additional direction before being able to create a Citation List page. The following comments and observations were recorded during the usability testing:

• “We explained to her about the drop down box. She mentioned that someone would need to tell you that you would need to drop down to get to the citation list.
• “She then found the drop down box and selected “file upload.” She then clicked on the “Browse” button [She was used to working with Oncourse CL by adding files – ‘I’ve never used anything other than folder and file upload.’] I asked her to click on the drop down menu and look one more time for a possible selection. She then saw “citation list.””
• “Once she got to the “add item” page, she selected “simple text document” from the pull down menu. [ She explained later that she didn’t think she would need to click on a pull down menu – she was expecting to see a ‘list of citations or a library catalog.’] I mentioned to her to go back to the menu… only when I pointed it out to her did she see ‘citation list’ option. She said it was ‘at the bottom’ and she ‘didn’t see it.’”
• “He then selected “empty folder” and typed in a title ‘bibliography.’ I pointed out ‘citation list’ in the drop down menu. He said he had ‘no clue’ what that was. He later said that ‘citation list’ didn’t mean anything – bibliography would have been better.”
• She initially clicked on the pull down menu but didn’t see ‘citation list.’ She said ‘I need a title’ and entered a title on the ‘file upload’ page. I asked her to click on the drop down box… she said ‘when I saw ‘add item type’ I didn’t put it together.’”

Once the Citation List page had been created, five of the participants entered a title for their citation list [four of the five also included a description along with the title], five did not understand the concept and there was no data regarding the remaining one. Of the five who had difficulty, there seemed to be some confusion with regard to
the title field. Some of the participants thought that it referred to the title of an article and weren’t sure how to proceed. Comments included:

- "Understood the “title” and “description” field – ‘pretty self-explanatory.’"
- "She clicked in the “title” field and typed “Tony Blair.” She later explained that she thought that the title field was for a title of a journal article."
- "He thought the title field was a title of a citation. “…might more sense to have “Title of a Citation List” or “Label of a Citation List.”"
- "Started to type the title of the citation in the Title field of the Resources window. Then used the Description field for the other bibliographic information."
- "When asked about the alert message [participant had tried to add a citation list without a title], she said that ‘I didn’t know a title for a journal article so I didn’t put anything there.’ When asked about the description field, she said “I don’t know – didn’t pay any attention since I knew you had to have a title.” Later she mentioned that we might want to have “The title of my citation list is:"

**Step Two: Doing a Citation Search**

Once the Citation List page had been created and the participants were instructed to continue their task of finding citations to populate the page, all eleven immediately clicked on “Search Library Resources” button with no difficulty what so ever. One participant was surprised to see the Search pop up page appear. He was expecting “to see the IU Libraries resources page when he clicked on this button.” Another participant voiced frustration that he was unable to resize the Search window. He commented that losing control over size of window is “not typical web browser behavior.”

**Search Set**

Once participants were presented with the Search page, seven participants had no difficulty selecting a search set. Four were confused by this option. Comments included:

- “She later explained that she was confused by the category box. Wasn’t sure what ProQuest meant. She thought it would be helpful to have more help features and assistance in choosing a search set.”
- “One participant entered “Web of Science” in the search term box. Clicked the Search Button. Looked at search results and remarked ‘I don’t get this.’ Looked at search interface again, noticed drop down menu and stated ‘Oh, there they are.’”
- “… had no idea about the different search sets. Was hesitant in using any of them [including the General Interest set.]”
- “She also didn’t know what the categories were. She said ‘you don’t need to call these like this – more like “Music Journals” and “Science things.”” She
said she picked Academic Search Premier because it had the words ‘academic’ and ‘search’ in the title.”

- “She selected ‘Academic Search Premier.’ She said that you can ‘usually combine databases in the library interface.’”

**Search Term**

All the participants understood that they needed to type in a search term in the search term text box. Three participants mentioned that they did not know if Boolean searching was supported or not. One participant mentioned that they needed to know if they could search by author [Wanted some sort of prompt as to what searches were valid. He tried to do what he thought was a valid author search three times…]. One suggestion was to give a sample search or have a help feature so users could know how to search. One participant mentioned that the phrase “search term” was ‘weird and confusing.’ She would have preferred to have seen “keyword” or “subject.”

**Search button**

Most participants clicked the “Search” button after selecting their category and typing in their search phrase. Some participants appreciated the “Searching” red message as they knew the computer was doing something.

**Next Page/Show # of items**

Six of the participants used the “Next page” and “Show # of items” features. Two participants did not notice this feature and did multiple searches because of it [“During debriefing user commented that she refined her search as she couldn’t find more than two citations to add to her list. She did not see that there were more pages of search results.”]. One participant mentioned that it might be helpful to have the “Next page” feature at the bottom of the list of citations as well as at the top.

**Add/Remove buttons**

All participants understood the concept behind the “Add” button and liked the simplicity of the design. One user commented that he liked the “spartanist of the Add/Remove Button and that color highlights the citation.” There was some confusion as to where the citations were being added. Some participants thought they were adding them to a “shopping cart” or “bookmarking” the citation; while others saw that something was “happening” on the page underneath.

One user had to perform his search over again after accidentally closing the search box. He had already added some citations to his citation list. When he performed the same search over again, he noticed that the citations he had already added didn’t have the highlighting or the “Remove” button. It had the “Add” button beside it as if he hadn’t added it before.
Also, another user mentioned that it would be helpful to have a “safeguard” when he clicked the remove button. “A ‘are you sure’ step before the citation is deleted.”

Search Results

Six of the eleven participants wanted additional information about the search results. They wanted to click on the title of the citation and see an abstract of the article in order to decide if they would add it to their list or not. One participant wanted to see the full text of the article before deciding. Most of the participants liked getting the “bare bones” citation information initially. They just wanted to see more information by clicking on the title of the journal article.

Four of the participants mentioned the fact that the citations were not sorted in any particular order. Comments included:

- “At a minimum, the user ‘needs to know how the results are sorted.’ He would like to see “by relevance” noted by “Search Results.” Recommended having options for sorting.”
- “Would like to search sort results. At the very least know what order they are in.”
- “He assumed the citations were sorted by most recent. He suggested having a feature where he could change the sort to date or relevance.”
- “Wanted to know how results are sorted. List didn’t make sense to him. Would have liked to resort results.”

Two users commented that they would only want citations that led students to full-text articles. One user mentioned having a “Full text only” option on the search page.

Three users commented on having different formatting options for the citations. One user recommended having a “Print out your bibliography and choose your format” button on the read-only view of the citation list. One student commented “If I have to work up a citation list, I’m going to make one I can actually turn in. It would be nice to have it in the correct format.”

Done Button/Close Box

Some participants clicked on the “Done” button; others clicked on the close box. Everyone seemed to understand that their citations were being saved using either option.

Miscellaneous Comments

During one usability session, there was a long wait time for citations to be displayed. The participant said “there are no controls to stop the search when it takes so long.” Another participant wondered why there wasn’t a “cancel search” button.
One participant made the comment after changing the “Show number of items” feature from 20 to 30 that “with no numbers, I don’t know where number 20 is since that’s as far as I got last time and I know I added it.” He would like numbers for when he changes the number of citations displayed so he could see where he was.

Step Three: Adding Citation Manually

Ten of the twelve participants immediately clicked on the “Create New Citation” button to begin adding a citation manually. One participant said she wasn’t sure if she should click on “Create New Citation” or the “Add” button at the bottom of the page. She then clicked on “add” and said “I’m curious why I’m getting this list.” She was completely lost at this point. The tester told her to click on the “Create New Citation” button. There was no recorded data for the other participant.

All participants entered the given data correctly except for the pages field. There was confusion on the part of most participants concerning the “pages”, “start page”, and “end page” fields. Other fields that were confusing to participants included: citation, rights, DOI, date retrieved, abstract.

One participant mentioned that it would be helpful to “hover over the fields” and get an explanation or some form of help if you didn’t know what a field label meant.

All participants clicked on the “Add Citation to List” to save their citation.

Step Four: Saving/Adding the Citation List

Of the eleven participants, five were able to successfully add their citation list; four had to be instructed how to add their list and there was no documentation for two participants. Most of the comments from those who did not understand how to proceed involved changing the label of the “Add” button to something along the lines of “Save Citation List” or “Post Citation List.” There was also confusion on the part of three participants regarding the Properties and Optional Properties headers.

Comments and observations included:

- “He commented that he would like to see an “Add Resource” button not just “Add” as he thought that would add optional properties.”
- “She mentioned that at first she thought this page was an “in between” spot – she wondered if “I need another step to save citations.” The boxes by the citations were confusing to her. She wondered if she “needed to add them [citations] again.” “If boxes weren’t there at all, it would be much less confusing.” The “Add” button at the bottom of the page was confusing. She mentioned that “Save Citation List or something like this” would be helpful.”
- “After doing his search, he was unsure of what to do next. “I don’t know – I need to save it somehow – maybe go down to “add.”” He hit “Add” but did not see the alert message saying that he needed a title. He then hit “Cancel.” We informed him that he had lost his work. We then went back to the page
and mentioned the alert message. He hadn’t seen it at first and couldn’t understand why the page hadn’t done anything after he hit “Add.” He thought the title field was a title of a citation. He mentioned that it might make more sense to have “Title of a Citation List” or “Label of a Citation List.” He recommended having a button “Post It” or “Save It.”

- “Would have liked to see button labeled as “Add Citation” instead of “Add.”
- As we were going through the testing, she mentioned that after adding citations and returning to the page, the refreshing to the top of the page was confusing. She “didn’t know where the citations went.” She recommended having a tab structure with one of the tabs being “My Citation List” so you could click back and forth between the list and the “add item” page. She mentioned that she had clicked on the “add” button on this page thinking that she was adding her citations not creating the list. She thought having a button like “Export to my citation list” as an option.
- She then said “I don’t know if I need to finalize by hitting “Add.”” She scrolled down the page and said “yes, I need to hit “Add.”” She recommended having “Save this list” instead of “Add.” She commented that “only having these choices, I figured I had to add.”
- When she returned to this page after adding a citation manually, she said “I need to save – maybe update?” She didn’t feel it was “particularly intuitive.” “I wasn’t sure what I was updating because I thought it was already updated.” [She had already inadvertently “saved” the citation list so was getting an “Update” button.] She recommended using the phrase “Save changes and update list.” She said that when she clicked on “Save changes” in the “Revise Citation” window, she assumed that she saved my list. She then said that “I’d close the window [the citation list page – thereby losing all changes] thinking I’d saved it already.” She recommended move the “Update” button to the bottom of the listing of citations with the phrase “Update your List” or “Update to Complete.”

Step Five: Read Only View of Citation List

Five participants went on to view the Read Only view of the Citation List. One participant commented that when he clicked on the citation title in the read only view that he was expecting it to show up in a new window – not append to the read only list [this may just be a bug with the prototype]. He also pointed out that all the links looked as if they had been visited once he clicked on one link.

Another participant mentioned that she “did not like new windows.” She would have preferred to have had the Read Only view come up in the same window and she would just use her back arrow to navigate. She looked over the citations and said “Is this in any particular style like APA or MLA? She said it would be “super cool” to be able to change the style of the citations.

When the third participant saw the read only list, she said she wanted to “make it into a word document – how am I supposed to edit this?” She was very much aware of
citation formats like APA and MLA and mentioned that the citations were not in any kind of format. “If I have to work up a citation list, I’m going to make one I can actually turn in. It would be nice to have it in the correct format.”

Lastly, one participant tried clicking on the title of the article and wanted to see the full text version of the article. He was very frustrated that none of the citations he had selected were full-text. Another participant echoed this sentiment when she said “I expected to see a document when clicking on the title.”

Miscellaneous Observations by Page:

Resources Page:

Two participants were unsure of the function of the “duplicate” link.

Citation List page:

Most of the participants understood the links underneath the citations. One participant commented that “if this [the IU~link] was an SFX button, it would be clearer to me.” Two participants clicked in the check box and then clicked on a link. They thought they needed to click in the box in order to “do some operation on it.”

Two participants stated that the export option was not obvious at all. They didn’t know that checking the check box resulted in the export link becoming active. Suggested moving the export link down to the gray bar area. One person noticed that the list inverted whenever he did an action on the list. He did not like this at all as he would like to put the list in a specific order for the end result to send out to students.

One librarian mentioned that “Reading List” might be more intuitive than “Citation List.”

Look and Feel:

- “The appearance looks very “bare bones.”
- One participant commented that the page was “sparse.” The interface should be more “transparent.” Wanted more prompts.
- One participant was frustrated with the pop-ups. He “recommended having more functionality in the Sakai “drop-down” presentation style.”
- One student mentioned that it would be “cool if you have steps – step one: create a title for your list, etc.”
**Functionality:**

- “Absolutely useful.” He mentioned that he has known about the project for a few months. He had seen a demo of it before. He liked the fact that he could create electronic reserve lists with no middle person. It would make the reserve system more responsive. He said that it would help “push info back and forth between professors and students. They could build citation lists for discussions and it would be much easier than sending an email to all students.”
- “Thought the interface was “pretty easy.” She really liked the idea of it and thought it was really helpful for writing a paper.”
- One professor commented that “if the full text is available for the articles, he’s happy. If not, it’s not as helpful.” He also made the comment that it needs to “act like Google for me to be happy with results.” Another professor said that she would only be interested in full-text articles and wondered if there was a way to limit to only full text from the Search Resources page. She “didn’t want any non-full-text articles.”
- One participant mentioned that “as a librarian, she would use the individual databases themselves instead of going through this tool. Provides more robust searching (author, title, searching in citation/abstract).”
- One professor mentioned that this “was a worthwhile tool that would save me from having to save the article, copying it and saving it to Word.”
- A librarian commented that this tool “duplicates resources available on the Library website – “Resources by Subject.” It might work just to direct them to “Resources by Subject.”

**ISSUES AND RECOMMENDATIONS**

Many of the issues below may be at least partially addressed by providing salient online help or a tutorial document.

The importance of each issue is categorized as follows.

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<tr>
<td>Medium</td>
<td>Issue is a major inconvenience but workarounds exist; issue may discourage pedagogically important student or instructor behaviors.</td>
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<td>Feature Request</td>
<td>Issue arises from a feature users desire but which we have not implemented yet.</td>
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**Resources Page**

1. **Confusion with the process of adding an item [medium]**

   The majority of participants had difficulty understanding the concept of “add item” when creating a citation list. When presented with the Resources page, they were unfamiliar with the “add” link and found it somewhat counter intuitive. This was surprising given that all but one participant mentioned that they were a Sakai user. Also two of the participants, in an attempt to create a Citation List, clicked on “Upload-Download Multiple Resources” link on the Resources page. Given its prominence under the “Resources” header, they were under the impression that this was how they were to create a citation list.

   Recommendations:
   - Provide some online help for how to create and work with citation lists.
   - It appears that this page is very much dictated by Sakai and would require universal changes that may be outside the purview of the Sakalibrary project. One small change that might facilitate the process would be to add the word “item” to “add.” The link beside the “My Workspace Resources” folder would then read “Add Item.” While this phrase did not seem to completely resonate with participants, it might assist in the short term.
   - Is the Upload-Download Multiple Resources” page on par with the Site Resources page? Or a “how to” page? If a “how to” page, perhaps it makes sense to put it at the bottom of the page after the listing of files or to indent it under the “Site Resources” button to indicate to users the relationship of the two pages?

**Add Item – Citation List Page**

1. **The Title and Description field [medium]**

   Half of the participants did not understand the purpose of the title and description field. Most were under the impression that it was the title of a citation, not the citation list.

   Recommendations:
   - Use “Title of Citation List” as a label instead of just “Title.”
   - For the description field, replace “Description” with “Description (text will be displayed above the list of citations)” or something like that—say how it will be used/visible. For most resource types, the description is NOT seen unless the user picks “revise.”
2. Confusion with the pull down menu [medium]

Six of the eleven participants had difficulty understanding the concept of the drop down box. Some did not know to click on the menu; others clicked on the menu, but did not see “Citation List” at the bottom. Still others selected other options: File Upload, Simple Text Document, Empty folder.

Recommendations:

- A simple solution short of restructuring the pull down menu model would be to replace the text “File Upload” with “Select an item you wish to add.” This will clue users into the fact that there are multiple items to look through and to choose wisely.
- Another quick fix would be to add some assistance in the form of a link beside the box “don’t know what type of item to add?” or “can’t find your item type?” This might instruct users who are truly lost.
- Also, as you click on an item type to add and the page changes for that item type, some explanatory text under the Add Item Type box might help – “File Upload – this page allows you to upload files into your Workspace folder. To create new text documents, please use the HTML page or Simple Text Document options.” These could be tailored to those items that get most confusing.

3. The Add Button [medium]

Four of the eleven participants were confused about saving or adding their citation list. Some did not understand that they needed to save or add this page. One participant stated that she thought she could close this window without adding thinking that the list was already created.

Recommendations:

- Change the “Add” button to “Add Citation List” or better yet “Save Citation List.”
- Put the “Add Citation List” button directly under the citation list in addition to at the bottom of the page.
- Collapse the “Properties” feature similar to the “Optional Properties” feature so the buttons appear closer to the citation list.

4. Understanding the concept of the “Add Item – Citation List” page [high]

A few participants thought there were additional steps to adding citations even after returning to the “Citation List” page. One participant mentioned that she thought she was book marking or creating a shopping list of citations by clicking on the
“Add” button in the Search window. Another user thought the checkboxes beside the citations on the Citation List page were an additional step to adding [she clicked in the boxes and clicked on the “Add” button which brought her back to the Resources page – she was confused at this point]. Along this same line, some participants became disoriented when the Citation List page refreshed to the top of the page thereby “burying” their list of citations. Some scrolled down and found them serendipitously; others didn’t know what to do.

Recommendation:

- In earlier versions of the project, we had headings for the different steps involved in creating a citation list. These headers included: Describe the list, Add citations and Review List (see Gaurav’s PowerPoint presentation at http://issues.sakaiproject.org/confluence/pages/viewpageattachments.action?pageId=20543). Headings, or a step by step model (Step one, Step two…), can help convey to users that they are in the process of creating the citation list and there are multiple steps involved.
- Maintain the scroll position of a page when the page refreshes.

5. Export Option and Check boxes [medium]

Two participants commented on the “export” option. He mentioned that “it was not obvious at all – didn’t know that checking check box resulted in the export link becoming active.” Another participant commented that the check boxes were confusing to her. She thought she needed to check and add her citations once more. Two other participants clicked in the boxes and then clicked on an action link underneath the citations.

Recommendation:

- Use a button instead of a link, and find a way to move the button closer to the list.

6. Citation List Order Stability [bug]

The citation list order can change arbitrarily—the order needs to be easily predictable by the user.

Recommendation:

**Search Page**

1. **Search Set/Category [feature request]**

   Four participants were confused by the category option on the Search page. They were unfamiliar with databases listed and wanted more layperson friendly terms.

   Recommendation:
   - Have a help feature beside the pull down menu (“don’t know which category is best?” or “need help?” – with a link to a page describing the databases).
   - This problem should be reduced when we integrate subject categories into the search page.

2. **Search Terms [medium]**

   Three participants mentioned that they wanted to know what type of searching was supported.

   Recommendation:
   - Describe to the users what type of searching is supported in this tool via an “advanced search.”
   - Provide some examples under the search text box (e.g., cat and dog, cat or dog, dog in au (author field))

3. **Next page/Show # items per page [medium]**

   A couple of participants did not notice the “Next page” feature and did multiple searches because of it.

   Recommendations:
   - Move the “Viewing 1 - 10 of 8,815” label, which is not very salient, from above the page controls into the gray bar that says “Search Results.” (see Fig. 1).
   - Put the “Next page” arrows at the bottom of the citation list as well as at the top where it will be more prominent as a user scrolls to the bottom of their search results.
4. **Search Results – Additional Information [high]**

Most participants wanted to see additional information about the citations before adding them to their list.

Recommendation:

- Make the abstract and additional information of the article available by clicking on the citation title within the search results list.

5. **Search Results – Sorting [high]**

They also wanted to be able to sort the list or, at the very least, know in which order the list was presenting itself.

Recommendation:

- Give options for sorting or convey to the user the method of sorting. For example, in the gray bar on the search result page, add the text “Search results sorted by….

6. **Search Results – Full-text option [medium]**

Also, two instructors wanted to limit by full-text because they were not interested in any article that was not full-text.
Recommendation:

- Give a “Full-text only” option for search results.

7. Search Results – Miscellaneous [medium]

One participant became frustrated with the amount of time a search was taking. He wanted to stop the search. Another participant was confused when he changed the “Show Item #” and lost his place within his citation list.

Recommendations:

- Add a “Cancel Search” button so that users can cancel the search when it appears to be hung up.
- Add numbers to the citations in the Search Results so that when users change the “Show items per page” they know where they left off.

Adding a Citation Manually Page

1. Field Labels [medium]

There was confusion regarding some of the field labels including “rights”, “citation”, “pages”, “start page”, “end page”, and “DOI.”

Recommendations:

- Clarify terms with help feature (question marks by the field labels with a link to explanatory text).
- Have the more pertinent fields at the top of the page (journal title, title of article, volume, pages, etc.) with the more esoteric labels toward the bottom or under an “Advanced Properties” feature, hidden until clicked on (like “Optional Properties” on the Citation List page).

Read Only View Page

1. Clicking on Title of Citation [medium]

When you click on the title of a citation in the Read Only View, it appends to the page. One participant was not expecting this and the links on the page all turned to the color of “visited.”
Recommendations:

- Clicking on the title of the citation should open the citation details in a new window.
- Clicking on a citation title should only turn that link to the visited color.

2. **Style Formats [feature request]**

A couple of participants voiced an interest in being able to change the format of the citations to meet the requirements of APA or MLA.

Recommendations:

- Provide a way to display and save the citations in a particular style format within the Read Only View or the revise citation list page.

**General Issues**

1. **The Term, “Citation List” [medium]**

Some participants were confused by the term “citation list” and recommended using a different phrase such as “Bibliography” or “Reading List.”

Recommendations:

- Consider changing terminology from “Citation List” to “Bibliography”.
  But then, what do we call an individual citation?

2. **Lack of Google-Likeness [high]**

Participants commented on their frustration with clicking on the title of a citation within the search results list and having it go nowhere. Two professors mentioned that they would only be interested in using this tool if they could provide access to full-text articles and so wanted to limit their searching to “full-text articles only” to save time and effort. And lastly, participants were very interested in how citations were sorted. Most assumed they were sorted by relevance “like Google.”

Recommendations:

- Clicking on the title of a search result needs to lead somewhere.
- The harder it is to get to full text, or find out whether there is full text, the less useful this tool will appear to many people. Do what we can to address the full-text issue better.
- Work with content providers so that we can get ordering of search results that make sense, full abstracts, better information about full-text, etc.
3. Visual Appeal [medium]

Most of the participants were challenged by the initial pages of Sakaibrary. The Resources and Citation List page were not intuitive for most participants. Comments were also made about the “bare bones” appearance of the interface. The interface was “sparse.”

Recommendations:

- Revise the visual design of the various pages to yield a tighter layout with better visual logic.
Script for Usability Testing

Introductions

Review of Consent Form: Questions?

Overview of Sakaibrary Project

Currently, Oncourse CL/C-Tools, the software offered to IU professors to manage their courses, requires the instructors and students to use library search tools separately, with few ways to effectively link resources into Oncourse CL/C-Tools. The goal of this project is to bring about closer integration between Oncourse CL/C-Tools and the many resources available through the IU Libraries. In other words, we want to make searching for articles and journals available through the class website instead of having to go to the Libraries website to do research.

Overview of Activity

In order to test the usability of the OncourseCL/C-Tools tool today, I am going to give you a scenario involving a project for a course. While completing this activity, I encourage you to talk-aloud. I am interested to know what you are thinking as you work through the task. I encourage you to work independently but feel free to ask for help should you become stuck or totally confused.

Administer Background Questionnaire

Please take a moment to complete a brief background questionnaire. If you are unsure about any of the questions, feel free to ask.

Administer Performance Test

Please read the scenario on the card. If you have any questions concerning the activity, please feel free to ask questions at any time. [Once the participant is well-acquainted with the task and feels ready to begin, have them begin creating the citation list from the Oncourse CL/C-Tools Resources page. The facilitator will make notes about user behavior, comments, interactions with the interface and the experience of users.]

Wrap up: Final Questions/Comments

Discuss user’s feelings about and problems with the interface during the performance test. Walk through the interface with the participants to help them recall any troublesome spots. Discuss the overall perceived value of the interface and this type of tool within Oncourse CL/C-Tools.
Background Questionnaire

1. Are you male / female? (Circle one)

2. What is your native language? _________________

3. You are a: (circle one)
   INSTRUCTOR GRADUATE STUDENT UNDERGRADUATE STUDENT   LIBRARIAN

4. Have you used the course management software Oncourse CL? ____________

5. If yes, on a scale of one to ten, how would you rate your experience with Oncourse CL?
   1 2 3 4 5 6 7 8 9 10
   (not helpful) (extremely helpful)

6. Approximately, how frequently do you search for full-text articles using the library’s databases?
   [ ____ not at all]       [ ____ sometimes] [ ____ quite often]   [ ____ all the time]

7. Approximately, how frequently do you use bibliographic tools such as Endnote, RefWorks, etc.?
   [ ____ not at all]       [ ____ sometimes] [ ____ quite often]   [ ____ all the time]
Sakaibrary Prototype Screen Shots

1. **Resources Page**: The Resources page was the starting point for the usability testing. From this page, participants needed to click on the “Add” button to begin the process of creating a citation list.

   ![Resources Page Screenshot]

2. **Add Item Page**: From the Add Item page, participants needed to click on “Citation List” to bring up the template for creating a citation list.
3. **Citation List page**: Once at the Citation List template, participants can title their list, provide a brief description and begin searching for and manually adding citations into their citation list.

![Image of Sakai Citation List template]
4. **Search Page**: After clicking “Search Library Resources”, participants can now perform a search on various databases.
5. **Search page with results:** The participants then select the citations of interest and click on the “Add” button.
6. **Citation List page**: The Citation List page is now populated with the two selected citations.
7. **Create New Citation page**: The participants can also add their own citation as well.
8. **Citation List – Read Only View**: Participant can now see the list as a student would view it.

![Citation List](image)

Citation List: Community Resources

Click on citation's title for details. Click on "U-Link" to see if a copy is available through your library.