Website Redesign Quality Assurance Report
Compiled By: Rachael Winterling, Usability Coordinator

In the summer of 2016, the J. Murrey Atkins Library’s Usability Lab conducted a quality assurance (QA) study of the website redesign prior to the July 1, 2016 hard launch. Atkins library’s website plays a primary role for its services to its audience. The study included an assessment of the site, an analysis of tasks-based testing, an employee feedback survey, and HTML_CodeSniffer homepage report to identify errors prior to the redesign’s hard launch. The objectives for the Website Redesign Quality Assurance Report are as follows:

- Conduct a usability assessment of the redesign.
- Identify content errors prior to the hard launch.
- Conduct analysis of the design and functionality of the redesign.

The study identified issues that were addressed by members of the Technology & Digital Strategies department prior to the hard launch to ensure the interface’s functionality. This report contains a list of the discovered issues. Additionally, the temporary Technical Writing Staff member is conducting copyediting of the redesign and further usability testing will be conducted after the hard launch.

Study Design

The study included an assessment of the site, an analysis of tasks-based testing, an employee feedback survey, and HTML_CodeSniffer to identify errors that affect the functionality of the interface prior to the hard launch.

Redesign Assessment

Usability best practices were incorporated to complete the assessment. Members of the Assessment Team and Digital & Technology Strategies department reviewed the site for content errors, broken links, and functionality. The assessment identified several opportunities to improve the redesign that would result in a more efficient, effective, and desirable web interface. This report contains a list of recommendations to address these.

Tasks-Based Testing

The study utilized task based usability testing, an approach that relies on representative user groups’ attempt to perform relevant task to uncover design and functional issues with the interface. The tasks-based testing consisted of 30 participants that represented nine undergraduate students, three graduate students, ten library employees, three teaching faculty, and five Atkins Fellows. The study utilized three tasks lists (See Appendix) to accommodate the needs of the different participant groups. This approach allows the researcher to compare data across common benchmarks based on the participant groups’ ability to complete each task.
Participants’ performances as they attempt to complete the tasks expose usability issues and inform recommendations. During the test session, participants were encouraged to articulate their thoughts and actions aloud as they worked through the tasks. The think aloud protocol allows researchers to understand the context for user actions and decisions while completing a specific task; making it easier for the researchers to determine the underlying causes of usability issues.

In addition to the task list, participants completed a pre-test survey (See Appendix). The pre-test survey captured demographic information, including year in school, major/field of study, frequency of catalog use, and an explanation of use. The post-test survey (See Appendix) captured participants’ thoughts about the kiosk.

The test sessions were conducted on a Dell desktop computer running Morae Recorder. Morae Recorder captures the desktop activities and the participants’ facial expressions via a web camera. The test sessions ranged from 15-30 minutes and involved the test facilitator, a note taker, and the participant. The Usability Coordinator acted as the facilitator. The facilitator greeted participants upon arrival, guided participants through the informed consent, presented the participants with the tasks, answered participants’ questions, and prompted the participants for responses. The Assessment Assistant and Assessment Fellow acted as the note taker.

Participants were recruited through email and posters throughout the building. The emails included the purpose of the testing, the testing timeframe, the participation incentives, and contact information. The thirty participants read and signed an informed consent form to participate in the test session. The university’s Institutional Review Board approved the consent form. Student participants were incentivized with a $5 Starbucks gift card for his/her participation. Student participants received the incentive regardless of whether they completed the focus group.

**Employee Feedback Survey**

A feedback survey was shared with the entire library to gather content errors, broken links, design errors, and general commentary about the redesign. The survey asked participants to provide his/her department, length of employment, current website usage, bookmarked secondary pages, broken links and content errors on the redesign, and general feedback on the redesign.

**HTML_CodeSniffer**

HTML_Code Sniffer detects accessibility violations and potential violations on behalf of W3C’s Web Content Accessibility Guidelines (WCAG) and the U.S. Section 508 regulation. “HTML_CodeSniffer is a client-side script that checks HTML source code and detects violations of a defined coding standard.” (HTML_CodeSniffer). The U.S. Section 508 regulation standards “define the types of technology covered and set forth provisions that establish a minimum level of accessibility” (Summary of Section508 Standards). The criteria for web-based technology and
information are based on access guidelines developed by the Web Accessibility Initiative of the World Wide Web Consortium. The standards aim to ensure that information like website graphics or animation is also available in an accessible format. “Generally this means use of text labels or descriptors for graphics and certain format elements (HTML already provides an “Alt Text” tag for graphics which can serve as a verbal descriptor for graphics)” (Summary of Section508 Standards).

WCAG is a wide range of recommendations for making web content more accessible. Content will be more accessible to a wider range of disabilities, “including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these” (Caldwell). These guidelines cover a wide range of issues, but they are not able to address the needs of people with all types, degrees, and combinations of disabilities. In addition, WCAG’s guidelines make web content more usable by older individuals with changing abilities due to aging and often improve usability for users in general.

Findings

Findings were found through an assessment of the site, an analysis of tasks-based testing, an employee feedback survey, and an HTML_CodeSniffer homepage report. The findings were shared with the Technology & Digital Strategies department as they were discovered. The type of error organizes the findings: broken links, content errors, design & layout errors, inconsistent labeling, accessibility issues, and user suggestions.

Broken Links

Broken links are defined as a “connection in an HTML document to a URL that is not working properly, esp. because it goes to a Web page that is no longer available or which has moved to another server” (The Definition). The identified broken links include:

- Link the numerals on the laptop ribbon to the “Laptop Lending.”
  - Currently, when a user clicks the numeric, it redirects the user to a page not found.
- https://island1.uncc.edu/atkins/researchconsultation
  - “Research Consultation” under “Services” is not linked.
  - https://library.uncc.edu/node/559
    - Proxy Card Form link goes to current site. The form and should be recreated in Drupal 7.
- https://island1.uncc.edu/atkins/studentplagiarism
  - The link “copyright ownership: students” redirects the user to a page not found, https://island1.uncc.edu/copyright/personalwork/students.
https://island1.uncc.edu/atkins/copyrightgraduate
  o “UNCC Basic Copyright Tutorial” redirects the user to a page not found, https://island1.uncc.edu/copyright/basics.
  o “UNCC Using Copyright Materials Tutorial” redirects the user to a page not found, https://island1.uncc.edu/atkins/copyrightgraduate.

https://island1.uncc.edu/atkins/graduatemorning
  o “Technology and Equipment Lending” redirects the user to a page not found, https://island1.uncc.edu/atkins/technologyequipmentlending.

https://island1.uncc.edu/atkins/articlebookdelivery
  o “Article and Book Delivery” redirects the user to a page not found.

https://island1.uncc.edu/atkins/undergroomingstudents
  o “Subject Librarians” gives a DNS error: http://atkins/findyoursubjectlibrarians.
  o “Technology and Equipment Lending” redirects the user to a page not found: https://island1.uncc.edu/atkins/technologyequipmentlending.

https://island1.uncc.edu/atkins/facultystaff
  o “Article and Book Delivery” has a page not found error: https://island1.uncc.edu/atkins/articlebookdelivery.
  o “Family Cards” does not have a link.

Content Errors

Content errors provide users with misleading information. The identified content errors include:

- Remove the “You are here” from the first floor map.
- Remove the “You are here” from the first floor desktop availability map.
  - Add printer locations on the computer availability maps.
  - Create a legend/key for the computer availability maps.
    - Red circle: PC unavailable
    - Green circle: PC available
    - Red Apple: iMac unavailable
    - Green Apple: iMac Available
    - Gray circle: Computer being serviced
- Input the current and future hours on the hour’s secondary page.
- On the “Library Instruction” secondary page, list Stephanie’s contact information (email).
- Input “Today’s Hours” to the upper right corner on the “Hours” secondary page.
- Add Marc Bess to the “Find Your Subject Librarian” secondary page.
  - He is the librarian for Film Studies, University Studies, and Communication Studies.
- Add Film Studies and University Studies to the search by subject drop-down.
- Remove RSS Feed widget.
- Content has not been created for the “Friends of the Library” secondary page.
• On the “Library Instruction” secondary page, link Stephanie Otis’s name to her directory page instead of opening in Outlook.

Inconsistent Labeling

Inconsistent labeling identified throughout the redesign highlights services that are labeled in more than one way. The identified inconsistent labeling includes:

• How-To Videos needs to be labeled consistently on the homepage, under “Get Research Help” and in the Undergraduate, Graduate, and Faculty & Staff “For You” secondary pages under the “Research” section.
• Remove the “s” from “Research Consultations” on the homepage to be “Research Consultation” to be consistent with the navigation labeling and the secondary page title.
• Change “Special Collections” to “Special Collections and University Archives” in the sub-navigation on the “Ask Atkins” secondary page.
• Research Help Desk Labeling
  o 1st floor computer floor map
    ▪ Change “Research Assistance” to “Research Help Desk”
  o Floor Maps, change “Research Help” to “Research Help Desk”
• Spell out the RIS abbreviation on the homepage research section or list Subject librarians because that is how they are referred to on the site.
• “About Special Collections” secondary page on the Special Collections and University Archives site, heading should be titled, “About Special Collections & University Archives” instead of “About Special Collections.”
• Special Collections & University Archives’ “Finding Aids” and “Collection Guides” are both used to represent the same content.
• On the homepage’s “For You” section, change “Community” to “Community Borrowers.”
• Change “Evideo” to “eVideo” in the navigation, secondary pages, and catalog search tab.

Design & Layout Errors

Design and layout errors highlight organization, hierarchy, readability, and functionality of the redesign. The identified design and layout errors include:

• Library Spaces secondary page.
  o Separate different study/resources on the Ground Floor Spaces.
    ▪ Study Spaces - On the ground floor of Atkins, you will find collaborative study rooms for groups as well as spaces for individual and informal study.
- The Compact Shelving room offers quiet study, and is also, where you can find the microfilm collection.
- Writing and Speaking Resource Centers are available to assist students with their papers and presentations.
- The Peets’ Library Café is also located on the ground floor, and offers a wide selection of food and drinks.
  - Second Floor, link to OASES for the family friendly study room.
  - Tenth Floor, Link to Special Collections & University Archives site.
- Add underline to the hours after “Today’s Hours” to indicate it is clickable.
- “Dean’s Welcome” is cutting off under “About” when using the navigation from a secondary page.
- Add border around navigation drop-downs.
- Navigation Glitches.
- Navigation is cutting off sub-headings when highlighted.
- Remove the mouse-over bold navigation labels from the secondary page view.
- Add the main navigation to the study room reservation interface.
- Change the layout of the events calendar to upcoming instead of month view.
- Split the “About” navigational drop-down labels into two columns.
- “Checkouts/returns/renewals” and the “Circulation Policy” secondary page content is running into the margin.
- All calendars showing hours should be in month view.
- Homepage spotlight is not rotating when users are not logged in.

**Accessibility Issues**

Findings are based on the data produced by the HTML_CodeSniffer on the homepage redesign. HTML_Code Sniffer detects accessibility violations and potential violations on behalf of W3C’s Web Content Accessibility Guidelines (WCAG) and the U.S. Section 508 regulation. The identified accessibility issues include:

- **WCAG2A Errors**
  - Catalog “Search for books, articles, media, and more…”: Add an API and an “aria-label” for accessibility software to read.
- Catalog search widget/button: Add a name and accessible API.

- Catalog beta search: Add alt text to the star icon.

- Social media widgets: Add alt text to the widgets.

- WCAG2AA Errors
  - Rotating banner caption contrast: Alter the color of the “Click Here” green text to white to improve the contrast to at least a 4.5:1 ratio
Events calendar contrast: Alter the color of the gray on white text to white to improve the contrast to at least a 4.5:1 ratio

User Recommendations

User recommendations were by participants made during and from observations of the task-based testing sessions or in the employee feedback survey. The recommendations included:

- Add the mission statement to “About.”
- Add Annual Reports to “About.”
- Change “Government Documents” to “Government Documents and Maps.”
- Remove “Articles” from “Find Books, Articles, and More.”
- https://island1.uncc.edu/atkins/findyoursubjectlibrarian
  - Link the image and Subject Librarian’s name to the individual’s research guide page.
- Add 3D Printing to the “print/copy/scan” secondary page and add a sub-navigation link to the “Technology & Equipment” secondary page.
- Ask Atkins Chat on the “Ask Atkins” and “Research Consultation” secondary pages should open in another tab, thus users can chat and navigate the website at the same time.
- Discover Unique Collections Secondary page, https://island1.uncc.edu/atkins/discoveruniquecollections
  - Link to the “Special Collections and University Archives” website in the first section.
  - Link to the “Government Documents & Maps” secondary page in the last section.
  - Link to “Rare Collections” secondary page in the “Special Collections and University Archives” section.
- https://island1.uncc.edu/atkins/policies
  - Temporary signage policy is the only one not capitalized, capitalize to be consistent
- Floor Maps; link the floor map image to the PDF image.
- Add laptop availability numeric to the laptop lending detail secondary page.
• Add Subject Librarians emails to their contact information when using the search by subject drop-down.
• Add the Dean’s Welcome under the “About” navigation label.
• Add all desk hours to the “Hours” secondary page.
• Underline the laptop numerals in the ribbon.
• Bold links within content.
• Remove all caps from “In the name of the faculty member” on the “Proxy Card” secondary page.
• Increase the visibility of the blue computer/study room availability ribbon.
• Add the Research Help Desk’s location and the first floor map to the “Research Consultation” secondary page.
• Add maps to the “Print/Copy/Scan” secondary page to display service locations.
• Add the Architecture Library’s hours to the “Hours” secondary page.
• Add the Architecture Library to the “Discover Unique Collections” secondary page to be consistent with the navigation labels.
• Change “Citating” to “Citing” on all participant group secondary pages.
• Link the term “Laptop” in the blue ribbon to the laptop policy.
• Change “Lib Lab” to “LibLab” on the “Ask Atkins” secondary page.
• Change “Citating Your Sources” to “Citing Your Sources.”
• Remove “eResources” link from the “Faculty & Staff” secondary page.
• Add social media icons to the “Special Collections & University Archives” website.
• Reduce white space above the search box and main image on the “Special Collections & University Archives” website.
• Change the “Special Collections & University Archives” sub-navigation to 16 point.
• Add emblems to the “Government Documents & Maps” secondary page.
• Change “Goldmine” to “Goldmine: Repository” in the navigation.
• Change the order of “Special Collections & University Archives” search tabs to books, manuscripts, journals.
• On “Special Collections & University Archives,” make the order of the collections in the “Explore our Collections” sub-navigation consistent with the order at the bottom of the homepage.
• On the “Special Collections & University Archives” website, link the title of the specific exhibit or featured project.
Works Cited


Appendix

Undergraduates & Atkins’ Fellows

- Pretest Conversation
  1. What year are you in school? (Circle answer)
     a. Freshman
     b. Sophomore
     c. Junior
     d. Senior
     e. Atkins Fellow
  2. What is your field of study?
     a. Major(s):
     b. Minor(s):
     c. Concentration(s):
     d. Fellow Project:
  3. How often do you use the library website?
     a. Never
     b. A few times a semester (2 or more)
     c. A few times a month (2 or more)
     d. A few times a week (2 or more)
     e. Daily
  4. What do you use the current library website for?
  5. What do you like the best about the current library website?
  6. Have you had any issues with the current library website? If so, what have they included?

- Tasks
  1. Locate the library’s hours for July 29, 2016.
2. Reserve a individual study room on the main floor for June 13, 2016.
   a. You do not know where the study room is located, using the website, how would you determine the room’s location.
3. Locate the contact information for the engineering librarian.
4. Locate Special Collections and University Archives rare book collection.
   a. How many volumes are in the collection?
5. Locate the Public Health research guide.
   a. Who is subject expert?
6. Locate the library’s information about printing, scanning, and copying.
   a. How much does it cost to print a page in color?
7. How many laptops are available for checkout?
8. What occurred in the library June 2?
9. Where would you find information about checking out a laptop?
10. You are interested in using the library’s 3D printer, locate more information about it.
11. Locate a tutorial to assist your research in locating peer-reviewed articles.
12. You are interested in learning about the services the Research Help Desk provides, where would you locate this information.

- **Post-test Conversation**
  1. Have you attempted any of the tasks before today?
  2. Are there any features you learned about today that you want to explore further or that you will use in your future visits to the library website?
  3. Which feature do you find the most useful? Why?
  4. Are there any features that are difficult to navigate or find?
  5. Are there any features missing from the website?

**Graduate Students**

- **Pretest Conversation**
  1. What year are you in school? (Circle answer)
     a. Masters
     b. Ph.D
  2. What is your field of study?
  3. How often do you use the library website?
     a. Never
     b. A few times a semester (2 or more)
     c. A few times a month (2 or more)
     d. A few times a week (2 or more)
     e. Daily
  4. What do you use the current library website for?
5. What do you like the best about the current library website?
6. Have you had any issues with the current library website? If so, what have they included?

- **Tasks**
  1. Locate the library’s hours for July 29, 2016.
  2. Reserve a individual study room on the main floor for June 13, 2016.
     a. You do not know where the study room is located, using the website how would you determine the room’s location.
  3. Locate the contact information for the engineering librarian.
  4. Locate Special Collections and University Archives rare book collection.
     a. How many volumes are in the collection?
  5. Locate the Public Health research guide.
     a. Who is subject expert?
  6. Locate the library’s information about printing, scanning, and copying.
     a. How much does it cost to print a page in color?
  7. How many laptops are available for checkout?
  8. What occurred in the library June 2?
  9. Where would you find information about checking out a laptop?
 10. You are interested in using the library’s 3D printer, locate more information about it.
 11. Locate a tutorial to assist your research in locating peer-reviewed articles.
 12. You are interested in learning about the Graduate and Silent Study Room, where would you locate this information.

- **Post-test Conversation**
  1. Have you attempted any of the tasks before today?
  2. Are there any features you learned about today that you want to explore further or that you will use in your future visits to the library website?
  3. Which feature do you find the most useful? Why?
  4. Are there any features that are difficult to navigate or find?
  5. Are there any features missing from the website?

**Library Employees & Faculty**

- **Pretest Conversation**
  1. What is your current position?
  2. What college are you a part of?
  3. What department are you in?
  4. How often do you use the library website?
     a. Never
b. A few times a semester (2 or more)
c. A few times a month (2 or more)
d. A few times a week (2 or more)
e. Daily

5. What do you use the current library website for?
6. What do you like the best about the current library website?
7. Have you had any issues with the current library website? If so, what have they included?

- **Tasks**
  1. Locate the library’s hours for July 29, 2016.
  2. Locate the contact information for the engineering librarian.
  3. Locate Special Collections and University Archives rare book collection.
     a. How many volumes are in the collection?
  4. You want to request a proxy card for your Graduate Assistant, locate the request form
  5. Locate the library’s information about printing, scanning, and copying.
     a. How much does it cost to print a page in color?
  6. How many laptops are available for checkout?
  7. What occurred in the library June 2?
  8. You are interested in using the library’s 3D printer, locate more information about it.
  9. You have checked out a book, how long is your loan period?
     a. You want a subject librarian to come to a class in the fall semester, who do you contact to get more information?
     b. The instruction session will take place in room 124. You do not know where the room is located, using the website how would you determine the room’s location.

- **Post-test Conversation**
  1. Have you attempted any of the tasks before today?
  2. Are there any features you learned about today that you want to explore further or that you will use in your future visits to the library website?
  3. Which feature do you find the most useful? Why?
  4. Are there any features that are difficult to navigate or find?
  5. Are there any features missing from the website?