

USABILITY STUDY PLAN
**RESEARCH
GUIDES**



PREPARED BY LINDSEY SPRAGUE
UX COORDINATOR, ATKINS LIBRARY
UNC CHARLOTTE

SUMMARY

The purpose of this study is to evaluate the usability of Atkins Library's Research Guides (LibGuides on the SpringShare platform) from the perspective of two user groups: undergraduate students and graduate students. This plan includes the following:

1) Research Questions and Goals

Define the questions guiding the design of this usability study and identify the study's goals.

2) Methodology

Describe test objectives, participant profiles, metrics to be collected, testing procedure, and logistics.

3) Artifacts and Deliverables

Description of project artifacts and deliverables with associated responsibilities.

4) Scenarios and Tasks

Identification and description of the critical tasks for each user group.



PROJECT TIMELINE

May

Introduction to project

- 5/16: Initial information gathering meeting with LibGuides Working Group

June/July/August

Kickoff, Planning, and Recruiting

- 6/21: Project kickoff meeting
- 7/19: First draft of project plan
- 7/20: Improvements to metadata and mapping of Canvas courses to LibGuides goes live
- 7/23-7/27: Final project plan and pilot test. Begin recruiting.

September/October

Testing and Analysis

- 9/15 - 9/30: Testing with 7 users
- 9/30-10/15: Final report and recommendations

RESEARCH QUESTIONS & GOALS

RESEARCH QUESTIONS

Based on knowledge shared during the initial project kickoff meetings on 5/16/2018 and 6/21/2018, the following questions will guide the design of this study:

- 1) How do users locate information within the guides?
- 2) How do users find and access the guides initially? What is the user flow from the homepage to the final action (locating a resource)?
- 3) How do users interact with the tabbed navigation within guides?
- 4) Are users able to return to the research guides after navigating away from them to complete tasks?
- 5) What do users think of the layout and design of the research guides?
- 6) Where do students turn for help if they encounter a question or problem?
- 7) What improvements can we make to the overall layout and look and feel of the guides?

GOALS

This study will use task-based analysis to assess the research guides relative to Nielsen and Norman's 5 components of usability:¹

Learnability: How easy is it for users to accomplish basic tasks the first time they encounter the design?

Efficiency: Once users have learned the design, how quickly can they perform tasks?

Memorability: When users return to the design after a period of not using it, how easily can they reestablish proficiency?

Errors: How many errors do users make, how severe are these errors, and how easily can they recover from the errors?

Satisfaction: How pleasant is it to use the design?

• 1. <https://www.nngroup.com/articles/usability-101-introduction-to-usability/>

METHODOLOGY

PARTICIPANT PROFILE

We will complete this test with a total of 7 participants: 5 undergraduate students and 2 graduate students. We will test with a majority of undergraduate students because this group uses LibGuides more frequently. Of the most visited research guides (those with 500 or more views) that map to a specific course, 16 of the guides are for undergraduate level courses whereas only 1 of the most visited guides maps to a graduate level course. This tells us that the heaviest users of research guides are most likely undergraduate students.

Among the guides with 500 or more views are databases by discipline and other introductory subject guides. We suspect these guides are most often used by undergraduate students, as graduate level students are more likely to be aware of discipline-specific resources. This ratio of undergraduate to graduate students also reflects the student body at UNC Charlotte, with 23,914 undergraduate students and 5,403 graduate students.

We will screen participants in order to study a broad spectrum of users with diverse representation in regards to college, major or field of study, gender, age, race and ethnicity.

INCENTIVES

Student participants will be provided with a \$10 Starbucks gift card as an incentive for taking part in the usability test.

LENGTH OF SESSION

Each session will take up to 45 minutes to complete. This includes the pre-test questions, tasks, post-test questions, and X's and O's exercise.

RECRUITMENT

We will recruit undergraduate and graduate participants with digital displays in the library, social media posts, and a recruitment table in the student union in order to test with at least two participants who are not regular library users.

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METRICS COLLECTED

QUANTITATIVE

- Time on task
- Task completion (success) rate
- Single Ease Question ratings

QUALITATIVE

- Observations of body language and facial expressions
- Participant questions and think-aloud comments
- X's and O's exercise data

UX TEAM ROLES

MODERATOR AND LOGGER

- Lindsey Sprague
- Welcomes participant, follows moderator script, gives participant incentive, logs task start and end, logs critical errors, records qualitative observations

USABILITY TEST

PROCEDURE

Participants will take part in the usability test in Atkins Library Room 252A. A PC laptop will be used for testing.



The participant will be monitored by the moderator sitting in the same room. Participants will be given the incentive at the beginning of the test session to reinforce the idea that the incentive is in return for their time and is not tied to how they perform on the tasks. We will use Camtasia to record testing videos and Google Hangouts to connect to the moderator and observers. The UX Coordinator will compile and

METHODOLOGY

analyze data from the test recordings and log start task time and end and task completion rate. After each task, the moderator will ask participants to rate the difficulty or ease of the task on a likert scale of 1 (Very Easy) to 7 (Very Difficult). This is the Single Ease Question.

X'S AND O'S EXERCISE PROCEDURE

After completing the usability test tasks, the moderator will present participants with three screenshots of different research guides. The moderator will ask the participant to draw an X over any content on the page they do not like or do not find useful, and draw a circle around any content on the page they like or find useful.

The moderator will then ask the participant to walk us through their process of circling and crossing out content. The X's and O's



exercise will allow us to get a quick visual sense of what elements of the page layout and design users find engaging, and what they do not like or do not use. In addition to the data collected from the usability test, this additional qualitative exercise will provide us with more information about user preferences and opinions.

ARTIFACTS & DELIVERABLES

TEST ARTIFACTS

The UX Coordinator will provide:

- IRB-Approved consent form
- Recruitment language
- Pre-test questions
- Scenarios and tasks
- Post-test debrief questions
- Screenshots of guides for X's and O's exercise

DELIVERABLES

The UX Coordinator will provide:

- Initial draft of test plan
- Final test plan
- Final report with findings and recommendations

The LibGuides working group will provide:

- Guidance on the critical tasks users need to accomplish (completed at the Project Kickoff Meeting on 5/19/18)
- Feedback and approval of the initial draft of the test plan
- Optional observation and feedback on usability test sessions
- Feedback on the final study report and recommendations

OPTIONAL (ENCOURAGED) INVOLVEMENT

The UX Coordinator can arrange an observer lab in a library conference room for any observers from the library faculty and staff who wish to observe test sessions with participants. This can be a great opportunity to see how users interact with the website, and give insight into future design decisions. Observers will also notice important user behavior or usability issues during the test that the UX Coordinator may miss. The perspective of multiple observers gives us even more insight to make improvements.

MODERATOR SCRIPT

WELCOME

WELCOME SCRIPT *

Hi, PARTICIPANT, my name is Lindsey and I'm going to be walking you through this session today. We asked you here today to help us test a website to make sure everything works as intended. This session should take up to 45 minutes.

The first thing I want to make clear is that we're testing the website, not you. You can't do anything wrong here. Also, please don't worry that you're going to hurt our feelings. We're doing this to improve the site for all of our users, so we need to hear your honest reactions. If something is unclear or confusing, that means we can learn something.

As you use the site, I'm going to ask you as much as possible to think out loud continuously: to say what you're thinking. Let me show you what I mean [shows participant example of think-aloud protocol].

If you have any questions as we go along, you can just ask them. I may not be able to answer them right away, since we're interested in how people do when they don't have someone sitting next to them to help. But if you still have questions when we're done, I'll try to answer them then.

If you need to take a break at any point, just let me know. With your permission, we're going to record what happens on the screen and our conversation. The recording will only be used to help us figure out how to improve the site, and it won't be seen by anyone except the people working on this project.

[Also, there are a few people observing this session in another room] If you would, I'm going to ask you to sign a consent form for us. It says that we have your permission to record you and that the recording will only be seen by the people working on the project.

Do you have any questions so far?

*Script adapted from Steve Krug's "Rocket Surgery Made Easy"

SCENARIOS & TASKS

PRE-TEST QUESTIONS

Before we look at the site, I'd like to ask you a few questions:

- 1) Are you an undergraduate or graduate student?
 - a. If undergraduate, what is your major?
 - b. If graduate, what department are you in?

- 2) Have you ever used a LibGuide or a research guide before? If yes, how did you use it?

TASKS

1. [Open the browser to the research guides homepage] Looking at this website, what do you expect to be able to do here? What kind of information do you expect to find?

2a. [From the main library website] You are a history major and you are writing a paper for your class HIST 2600: Roman Empire. Your instructor said the library has a research guide specifically for this class where you can find sources for your paper. See if you can find the research guide for this class.

- Optimal path: Library website > Research & Collections > Research guides > History guides > HIST 2600: Roman Empire
- Observations: Does the student scroll or use the search feature (Research Question 2)? Is the student able to locate the History guide (RQ 2)?

2b. [From the HIST 2600 guide] Using this guide, please locate an encyclopedia on the Roman Empire. When you are finished, please return to the Research Guides homepage.

- Optimal path: HIST 2600: Roman Empire > **Encyclopedia of the Roman Empire** under "Reference Sources"
- Observations: Does the student notice the 'Reference Sources' immediately or do they use the "Find Books" tab (RQ 1, 3)? Is the student able to return to the Research Guides homepage from the catalog (RQ 4)?

SCENARIOS & TASKS

3a. [From the research guides homepage] For your film studies class, you are writing a paper on the movie Blade Runner. Using a research guide, please locate a database you can use to find an article for your film studies class.

- Optimal path: Research guides homepage > Film Studies guides > Film Studies databases > Participant selects a database
- Observations: Which database does the student select and what is their rationale (RQ 2)? Does the student seem to be familiar with using databases for research (RQ 2)?

3b. [From the database] Starting here, please locate the article "Moviegoing and Golem-Making: The Case of Blade Runner," by Eric G. Wilson. When you are finished, please return to the Research Guides homepage.

- Optimal path: Database > Search for article > locate the article
- Observations: What search terms does the student use (RQ 2)? Does the student use facets to filter results (RQ 2)? Do they recall how to return to the Research Guides homepage (RQ 4)?

4. [From the research guides homepage] You are taking an elective class on Modern Dance and you're not sure how to find sources for an assignment. Please locate the contact information of someone who can help you with your research. When you are finished, please return to the Research Guides homepage.

- Optimal path: Research guides homepage > Dance guides > Dance Databases OR Dance Research Guide > Contact info for Jenna Rinalducci
- Observations: Does the student search for general library contact information or do they expect to be able to locate a discipline-specific librarian (RQ 6)? Do they recall how to return to the Research Guides homepage (RQ 4)?

SCENARIOS & TASKS

5a. [From the research guides homepage] You are taking an introductory Chemistry class. You have a paper due soon but you haven't done research in Chemistry before and you're not sure where to begin looking for sources. See if you can find a general research guide for Chemistry.

- Optimal path: Research guides homepage > Chemistry guides > Chemistry Research Guide
- Observations: Does the student scroll or use the search feature (RQ 2)?

5b. [Starting on Chemistry Research Guide] For your Chemistry paper, you decided to write about toxic chemicals in North Carolina. Starting here, see if you can find source that will show you where toxic chemicals are located on an interactive map. When you are finished, please return to the Research Guides homepage.

- Optimal path: Chemistry Research Guide > Web Resources tab > link to TOXMAP
- Observations: Does the student notice and use the "Web Resources" tab in the Chemistry guide (RQ 3)? Does the participant display a preference for information in any of the columns (RQ 5)? Do they recognize content in the third column as part of the guide (RQ 5)? If they use the search interface within the guide, is it clear to the student how the search is scoped (RQ 2)? If they use the search interface within the guide, what search terms do they use (RQ 2)? Do they know how to return to the Research Guides homepage from an external, non-library website (RQ 4)?

6. [From the research guides homepage] For your public health class, you are writing a paper on women and heart attacks. Using a research guide, please locate a resource for your paper. When you are finished, please return to the Research Guides homepage.

- Optimal path: Research guides homepage > Public Health guides > selects a guide > finds relevant resource
- Observations: What does the student initially search for? If they select a guide with a GoogleBooks search widget, do they use this feature or choose a database (RQ 1,2)? What search terms does the student use (RQ 2)? Do they recall how to return to the Research Guides homepage (RQ4)?

SINGLE EASE, X'S AND O'S, AND POST-TEST

SINGLE EASE QUESTION

Participants will answer this question after each task:

Overall, how difficult or easy did you find this task?

Likert scale: 1 to 7

1 = Very Easy

7 = Very Difficult

X'S AND O'S EXERCISE

Now that we're done with the tasks on the website, I'd like you to take a look at these screenshots and share your feedback on the layout and design of these pages:

- Please circle any areas of content that you like or would use
- Please draw an "X" over any areas of content that you don't like or wouldn't use

POST-TEST QUESTIONS

1. What are your general impressions of the website you used today?
2. Were any tasks particularly difficult to complete? Were any particularly easy?
3. Which feature or features did you find the most useful?
4. Is there anything else you want to tell us about your experience using this website today?