Using Student Researchers to Assess the Digital Collections User Experience

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Original Publication Citation

BYU ScholarsArchive Citation
Wiederhold, Rebecca A.; Memory, Lindsey; Jarvis, Jonathan; Seppi, Greg; Meldrum, Madeleine; and Bozue, Hannah, "Using Student Researchers to Assess the Digital Collections User Experience" (2022). *Faculty Publications*. 5857.  
https://scholarsarchive.byu.edu/facpub/5857

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Using Student Researchers to Assess the Digital Collections User Experience

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Head of Digital Collections  
University of Nevada, Las Vegas

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Curator, 19th & 20th Century Americana

**Sociology 404**
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Professor of Sociology
Hannah Bozue  
Undergraduate Student
Madeleine Meldrum  
Undergraduate Student

RBMS Conference  
June 24, 2022
Presentation Outline

01 INTRO/METHODOLOGY
Participants will learn about our study’s methodology, which may inform the development of their own digital collections assessments

02 COURSE PROJECT
"Outside the library" perspective of the project, as incorporated into a research methods course

03 STUDENT RESEARCHERS' EXPERIENCE
Undergraduate student research assistants' experience

04 STUDY RESULTS
Participants will discover techniques for improving the user experience with a digital asset management system

05 INCORPORATING STUDENT RESEARCHERS
Participants will learn tips for designing a research study that utilizes student research assistants and how to avoid some potential pitfalls

06 Q&A
Moderated by Cory Lampert, Head of Digital Collections, University of Nevada, Las Vegas
INTRODUCTION/METHODOLOGY
BYU Library and CONTENTdm

- First collection went live in 2002
- 2,770,000+ digital items
- 150+ collections*
- Supplemented by landing pages
- Harvested by our discovery layer and MWDL/DPLA via OAI-PMH
BYU’s Undergraduates

- 33,633: largest undergraduate enrollment of any private US university
- 95% Americans
- 50/50 male-female ratio
- 8% first-generation college students
- Majority are members of The Church of Jesus Christ of Latter-Day Saints
Conducting the Study

• Holistic study design with a combination of data collection methods

• 10 user tasks:
  • “Please find and download a journal or diary written by Alice Louise Reynolds.”
  • “Please find a copy of the Woman’s Exponent newspaper from May 1882.”

• 10 follow-up questions about their experiences:
  • "How efficient did you feel you were in the completion of the tasks?"
  • "In the future, if you needed to find X item, what process would you use to find it on your own?"
Analyzing the Data

• Initial Coding & Summary of Data by student researchers

• Secondary Coding & Summary of Data by library staff

• Analysis of Data
COURSE PROJECT
Experiential Learning

• Sociology 404 – Qualitative Research Methods
  • Moving from theoretical to practical/applied (getting reps)
  • Personal projects
  • Class projects

• Goal: Providing Research Experiences
  • Mentored research experience

• We can also provide the service of throwing hours at questions organizations need answers to
Experiential Learning

• Evaluations
  • Past projects and questions
  • Working with the Library
The Process

• Meet with Client
  • Expectations, Big Questions, Deliverables
• Familiarize students with project
• Multiple stages
• Getting over nervousness
• Qualitative Data gathering is messy and can be unorganized
• Analyzing Qualitative data can be a confusing and insecure experience
• Too descriptive, looking for patterns and processes
03 STUDENT RESEARCHERS' EXPERIENCE
Our Process & Methods

1. Practice project
2. Library study: Gathering Student Sample
   - Email (19)
   - Adding other students by word-of-mouth (4)
3. List of user tasks provided
4. Interview guide

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Table 1: Gender Demographics of Participants

<table>
<thead>
<tr>
<th>Class</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
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</tr>
<tr>
<td>Sophomore</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Junior</td>
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<td>4</td>
<td>6</td>
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<tr>
<td>Senior</td>
<td>4</td>
<td>7</td>
<td>11</td>
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<tr>
<td>Unknown</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>16</td>
<td>23</td>
</tr>
</tbody>
</table>
Data gathering

1. Meeting with students
2. Transcribing interviews
3. Creating a coding guide
4. Coding
Data Analysis

• Each student filled out a Closed Coding sheet for their interview
  • Whether participant finished each task, how long it took, whether they needed a hint
• The class was divided into 8 groups
  • Effectiveness ("How well did they do?")
  • Assessment of the system
  • Ease of use
  • Obstacles/Problems
  • Past Experience
  • Suggestions
  • Presentation/Methods
  • Editing/Introduction
Data Analysis

• Within the groups, students looked through the codes to identify quotes and themes that fit their subject
• Pared down to 2-3 major themes, found quotes associated with them
• Used closed coding to identify how participants performed on each task and overall based on their major and year in school
• All groups' findings were compiled and presented to the library
What students got out of it

• Experience contacting and interviewing participants
• Real-life practice with qualitative coding
• Working with a group to identify themes and analyze findings
• Develop an official report and present to faculty
Four themes

• CONTENTdm interface
• CONTENTdm integration with lib.byu.edu
• Metadata
• Undergraduate behaviors and preferences
CONTENTdm Interface

- Progressive searching is very difficult within CONTENTdm.
- Collection selection was more a hindrance than a help

"I don't really know what baden-powell is so we can just leave it."
CONTENTdm Interface

• Progressive searching is very difficult within CONTENTdm.
  • Collection selection was more a hindrance than a help
  • Filter facets were difficult to use
  • Many resorted to inefficient, aimless, hunt-and-peck browsing across pages of results:
Integration into lib.byu.edu

- Digital Collections landing page(s) were useful... when found
Integration into lib.byu.edu

- Discovery layer's advanced search facets can be misleading
Integration into lib.byu.edu

- Used the subject headings to assess what a search result is about
Metadata

- Too many fields (64!)
- Jargony field labels
  - Change to natural language terms
  - Example: Source not “Cite as”
Metadata

• Title and object description orient user.
  • "Based on everything it gives me in the object description, it gives me a pretty good idea of exactly what this is, instead of just looking at the actual photos because the handwriting is hard to read."

• Hyperlinks in metadata are useful; controlled vocab lists/filter facets not as much.
Metadata – The importance of image descriptions

Who are these guys?
Where are they?
What are they doing?
Undergraduate Behaviors & Preferences

Reading handwriting
- Immediate disinterest
- Transcriptions desired... and often missed

"What?! I cannot read any of that! I think if I knew how to read this I could tell you if I found it or not."
Undergraduate Behaviors

• VERY quick to give up on search strategy or try a new method if they don't see pertinent results above the fold
• Not afraid of searching and filtering, but too many options stops them up

Scrolls past most of the info on the page. Does not choose to click on anything. Says, "I give up"
Undergraduate Behaviors

- Student preference for familiar functionality

- Highlighted search terms in search results page desired

"I will say what's really strange, obviously the search engine found it somehow, but it doesn’t highlight what it found. Normally if you search something on google and you click on the article it will skip right to what you searched and it will be highlighted or bolded."
Undergraduate Behaviors

• Digital object navigation
  • Some clicked through pages, most relied on description
Undergraduate Behaviors

• The experience of CONTENTdm at home is impacted by extra logins, internet speed, and type of device.

"Okay, don't know why it's not loading..."
Future Directions

• Consider data from the interviews:
  • Very picky about search tool now
  • Perhaps create 1-minute use tutorials
  • Take better advantage of the way digital content is different than physical
    • Collection Selection – blow it up, facilitate browsing more readily
Future Directions

• Interface:
  • Scale back number of fields displayed (64 fields)
  • Put transcriptions next to item
  • Ensure relevance is the primary sort method
  • Seek ways to facilitate scroll-ability of results (and actual objects, where possible)
INCORPORATING STUDENT RESEARCHERS
Initial researchers (Becca and Lindsey) coordinated with our library assessment officer to find a professor interested in assisting with the study. Going in, we were aware of the following benefits:

- Professor Jarvis has lots of experience! He is an expert in qualitative research. His willingness to work with us was irreplaceable. He also has significant experience working with organizations to help them.

- His Sociology 404 course, Qualitative Research Methods, dovetailed perfectly with our study goals!

- The students are well-taught and educated!

- His students could recruit and do interviews, providing us with a highly effective labor pool.
Benefits (Happy Surprises)

• Beyond the benefits identified in the previous slide, our study benefited from the following outcomes:
  • The students were highly effective at recruiting fellow students for the study. This improved the reliability of our study since the pool of individuals interviewed was larger.
  
  • Professor Jarvis and the Sociology 404 students prepared a detailed, professionally-presented multi-page report on students’ experiences with our digital collections. When it was presented to our library administrators, it was received quite well and made clear that we needed to explore new options for presenting our digital collections.
  
  • The students gathered information we forgot to, specifically demographic and quantitative data such as how long it took students to perform the requested tasks.
  
  • We were able to take some of their final recommendations and implement them immediately, such as shifting fields around and changing how search results were ordered.
Challenges

- Our own inexperience showed. For example, sometimes interviewers rushing interviewees since they were not sure they would have time to get through everything.
  - We could have prevented this in one of three or all of the following ways:
    - Demo the interview so that students would have a clear idea of the flow of the interview/observation.
    - Assign TAs or select students to head up groups of interviewers to help with quality control and to be more easily at hand for interviewers to get answers to questions they might have.
    - Visiting their class to discuss the interview and answer questions an additional time before interviews to clarify any misunderstandings.

- The interviewers’ own lack of experience with library systems sometimes led them to make suggestions that only made tasks harder. This could have been caught through the points above.

- We started the interviewers and interviewees on a less-than-ideal starting page, which only served to make the initial round of questions even more confusing. This is one where experience was necessary, so perhaps not something we could have thought of on our own.

- Students are obviously not versed in library terms so their report sometimes was not as granular as we needed it to be.
Assessment and Data Analysis

- Students approached task to assess the usability of the site, leading to a coding of responses that was sometimes not as in-depth as we librarians wanted it to be. This led us to review all of the interviews and observations.

- We noted that we could dig much deeper into the students’ responses and behaviors, leading to more specific codes such as “patrons have the capacity to accidentally be searching in the wrong collection”; CONTENTdm displays serial titles, not article titles”; “Patron uses breadcrumb trail in CONTENTdm successfully”; “after using advanced search, patron required to retype search terms”

- Ultimately, the combination of the students’ work and analysis provided a great picture of our digital collection. Without their data and hard work, we would not be able to review their work for additional details that will be critical for improving or requesting a new system.
QUESTIONS

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