About me

- Experience doing research and publishing on various scales (individual, team-based, cross-campus)
- Experience applying different methods (qualitative, qualitative, and text-oriented)
- Participant in the 2015 Institute for Research Design in Librarianship (IRDL)
- Participated in an ACRL 2017 panel on qualitative methods
What we will discuss today

1. Research Questions and Research Methods: What’s the Connection?
2. Methods: Quantitative, Qualitative, and more
3. Data Analysis: Procedures and Programs
4. Research Projects from the LIS Literature
5. Resources for more on Research Methods
Poll: Where are you in the research process?

- Just interested in learning more
- Have a topic and/or research question
- Collecting/collected data
- Analyzing data/writing up the project
- Other
1. RESEARCH QUESTIONS & RESEARCH METHODS

How your questions will guide your approach
First ask “What do I want to know?”

- Determine your research question(s) by identifying an area of interest
- Narrow it down by using Who, What, When, or Where
- Other things to consider
  - Is this a question being explored in a new way?
  - Is the question answerable considering your time and resources available?
  - “So what?”
COUNTING THINGS

LET'S GET A SHOW OF HANDS...

WHO HERE PREFERENCES QUANTITATIVE DATA OVER QUALITATIVE DATA?

1...2...3...

OK! LOOKS LIKE EVERYBODY! TELL ME, WHY DO YOU PREFER QUANT?

WELL, QUANT DATA IS THE ONLY WAY TO REALLY KNOW...

OH, SORRY...

I SHOULD HAVE MENTIONED, PLEASE ONLY USE NUMBERS IN YOUR RESPONSE.

*PAUSE*

SEVEN?

Source: https://medium.com/indeed-engineering/qualitative-before-quantitative-how-qualitative-methods-support-better-data-science-d2b01d0c4e64

Research Methodologies and Data Analysis | Hosted by ALCTS, Association for Library Collections and Technical Services
“The motivation for this study started from a simple question: ‘How is technical services changing?’ Although the question itself seems naively simple, it led to some fundamental questions about the changing nature of technical services and helped formulate the research questions of this study:

1. What is the name of the functional area that is traditionally known as technical services?
2. What are the current and emerging functions of technical services?
3. What are the organizational structures of technical services? How often do libraries reorganize their technical services and why?
4. What are the factors that drive technical services to change?”
Example: Method determined by questions

Research question: How is technical services changing?
Method: Phone interviews with Tech Services Directors

“In this study the author investigates how technical services in large research university libraries are adapting to support the changing roles of academic libraries. The author conducted hour-long phone interviews in early 2014 with the representatives from nineteen out of the twenty-five university libraries in the Technical Services Directors Large Research Libraries Interest Group. This paper presents the results and discussion based on the interview data.”
2. METHODS: QUANTITATIVE, QUALITATIVE, & MORE

Determining which method best suits your project
Quantitative vs. qualitative: The basics

<table>
<thead>
<tr>
<th>Interested in</th>
<th>Quantitative</th>
<th>Qualitative</th>
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<tbody>
<tr>
<td>Measuring a subject</td>
<td>Data that’s numerical</td>
<td>Exploring a topic</td>
</tr>
<tr>
<td>Data that’s numerical</td>
<td>Being able to generalize</td>
<td>Non-numerical data</td>
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<tr>
<td>Being able to generalize</td>
<td></td>
<td>Context</td>
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<table>
<thead>
<tr>
<th>Key questions</th>
<th>“What”</th>
<th>“How”</th>
</tr>
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<tr>
<td>“How many”</td>
<td></td>
<td>“Why”</td>
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Quantitative methods

- Draw conclusions based on analyses of numbers
- Identify measurable characteristics of a population
- Often use scales for measurement
- Seek objectivity and replicability
Why choose quantitative?

1. You’re interested in quantifiable, measurable questions
2. You want to investigate a question that does not directly involve people and their thoughts, opinions, or actions
3. You want the results to be rigorous and reproducible
4. You prefer spending time on your data collection methods up front, through pretesting and confirming validity
A few quantitative methods to consider

- Surveys and questionnaires
- Content analysis
- Observing and recording events (such as number of visits)
- Using existing data (such as e-resource system)
Qualitative methods

- Draw conclusions based on non-numerical data
- Seek insights into people’s actions and social realities
- Account for complexity and nuance
- Can take considerable time in the data analysis phase
Why choose qualitative?

1. You’re interested in collecting detailed and unexpected data
2. You want to have a thorough investigation of a topic involving people
3. You want the possibility to go “off script” and discuss unexpected or interesting comments in an interview or focus group
4. You prefer a more iterative process with room for error
A few qualitative methods to consider

- In-depth interviews
- Focus groups
- Unobtrusive Observations
- Cognitive Mapping
- Reflective Diaries
Other great options

- Mixed methods
- Action research
- User Experience methods
What questions do you have at this point?
3. DATA ANALYSIS: PROCEDURES & PROGRAMS

The process and best programs for different data
Data analysis procedures: Quantitative

1. Identify type of data analysis required
   a. Descriptive statistics (summarize results through percentages, averages, etc.)
   b. Inferential statistics (performing statistical tests to produce results)

2. Consider appropriate program
   a. Is it free or low cost?
   b. Is there a learning curve?

3. Prepare data for analysis
   a. Cleaning (finding and eliminating errors)
   b. Formatting and separating variables
Data analysis procedures: Qualitative

1. Get to know your data
   a. Transcribe, if working with verbal data
   b. Read and re-read transcripts or other data sources

2. Consider whether a program is necessary
   a. Review different approaches to coding and thematic analysis
   b. Try coding by hand first

3. Coding and identifying themes
   a. Process of identifying patterns and making connections
   b. Can be done on your own or with the help of a program
Data analysis programs

Quantitative
- Simpler: Excel
- Intermediate: SPSS
- Advanced: R

Qualitative
- Intermediate: Nvivo
- Advanced: Dedoose, Atlas.ti
What other questions do you have at this point?
4. RESEARCH PROJECTS FROM THE LIS LITERATURE

Examples of these methods in practice
Example 1: Usability testing

“Academic E-book Usability from the Student’s Perspective”
by Esta Tovstia, Natalia Tingle, and Gabrielle Wiersma:
https://journals.library.ualberta.ca/eblip/index.php/EBLIP/article/view/29457

“Objective – This article describes how librarians systematically compared different e-book platforms to identify which features and design impact usability and user satisfaction.

Methods – This study employed task-based usability testing, including the ‘think-aloud protocol.’ Students at the University of Colorado Boulder completed a series of typical tasks to compare the usability and measure user satisfaction with academic e-books. For each title, five students completed the tasks on three e-book platforms: the publisher platform and two aggregators. Thirty-five students evaluated titles on nine academic e-book platforms.”
Example 2: Content analysis

“Qualifications for Serials Catalogers in the 21st Century: A Content Analysis of Job Advertisements” by Christopher S. Dieckman:

tandfonline.com/doi/full/10.1080/01639374.2018.1493011

Abstract: “Recent developments have altered the work performed in library technical services. As with similar positions, responsibilities for serials/continuing resources catalogers have experienced changes. This study examined qualifications sought by employers between the period from January 1, 2002 to May 21, 2017. Through content analysis of job advertisements, with emphasis on professional-level cataloging of serials/continuing resources, this study found a demand for a diverse mix of both traditional and emerging skills. The results were analyzed for insights into the field of serials/continuing resources cataloging.”
Example 3: Survey

“RDA Implementation in Large US Public Libraries”
by Chris Evin Long: https://journals.ala.org/index.php/lrts/article/view/6728

Abstract: “This survey sought to investigate how the transition to the new cataloging standard, Resource Description and Access (RDA), has been handled in one hundred of the largest US public libraries, specifically examining whether catalogers believe that some of RDA’s major goals have been met, and how some of the anticipated impacts of RDA implementation have been handled. A large majority of these libraries have implemented RDA for original cataloging, but respondents also generally believe that RDA has failed to meet some of its most important goals, primarily ease of use and cost-effectiveness.”
Abstract: “The intent of this project was to identify whether there is a gap between catalogers’ personal values related to cataloging assessment and their perceptions of their institutions’ values. This article uses Q methodology to contrast those perspectives. The Q-statements for this study were based on the discourse represented in a literature review of articles related to cataloging assessment. A factor analysis of Q-sorts was used to identify themes in participant perceptions. The patterns identified support the research question, while also suggesting that consensus may be built around the ideas of usability, service, and access.”
5. RESOURCES FOR MORE ON RESEARCH METHODS

Recommended sources for additional information
Websites and reference sources

- The Librarian Parlor
  https://libparlor.com/

- Librarian and Researcher Knowledge Space
  http://www.ala.org/tools/research/larks/researchmethods
Books and articles


QUESTIONS? THOUGHTS?

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