Anatomy of a Research Project

February 20, 2019

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Hosted by ALCTS, the Association for Library Collections & Technical Services
Learning Outcomes

At the end of this webinar, attendee will be able to:

• understand the research process and how to start a research project
• understand the parts of a research project and how they work together
• identify various resources that can support research efforts
Iterative Research Process

“Iterative” meaning a repetition of the process
Define the Problem

Start with what you know.

• What topics interest you?
• What problems do you see?
• What is not addressed in the literature?

It is ok to start out thinking about the above in broad terms. Eventually you will narrow the focus.
Define the Problem

• Suitable research problems “represent conceptual thinking, inquiry, and insight – not merely activity...simply collecting data and making comparisons are not activities representative of true research” (Connaway & Radford, 2017, p. 35)

• For example, examining your technical services department’s workflow and comparing that workflow to another technical services department’s workflow is not formal research. Dig deeper.
Literature Review

• Now, learn more. Read! What is known about your topic? Where are the gaps? Has someone else already conducted the study you are thinking about?

• “The literature review describes the foundation on which the proposed study will be built by discussing published scholarship done by others, evaluating their methodologies and findings, and stating how the proposed research will differ” (Connaway & Radford, 2017, p. 30-31)
Literature Review

• Focus on peer-reviewed literature as much as possible (e.g., journals, books).

• Use non-peer reviewed sources (e.g., web resources, opinion pieces) sparingly and/or if peer-reviewed literature does not exist.

• Pay close attention to the Bibliography/Works Cited list.
Refine the Problem

- Take what you have learned from the literature review to create a study that builds on existing knowledge and is manageable and realistic (time, money, ethical concerns, etc. may influence your choice).

- Create a **Problem Statement** that clearly and explicitly explains the issue(s) the study will tackle and why the study is needed. Answers the “So what?” question.
The Purpose of the Problem Statement Is To...

Introduce the reader to the importance of the topic being studied. The reader is oriented to the significance of the study.

Anchors the research questions, hypotheses, or assumptions to follow. It offers a concise statement about the purpose of your paper.

Place the topic into a particular context that defines the parameters of what is to be investigated.

Provide the framework for reporting the results and indicates what is probably necessary to conduct the study and explain how the findings will present this information.

Source: http://libguides.usc.edu/writingguide/introduction/researchproblem
Problem Statements

• The problem statement should be in narrative form and not a series of bullet points.

• For example, “The problem to be resolved is whether providing undergraduate students with library instruction will have some effect on their use of the library” (Connaway & Radford, 2017, p. 36).
What does it mean to adopt a metadata standard? A case study of Omeka and the Dublin Core

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Abstract
Purpose – The purpose of this paper is to employ a case study of the Omeka content management system to demonstrate how the adoption and implementation of a metadata standard (in this case, Dublin Core) can result in contrasting rhetorical arguments regarding metadata utility, quality, and reliability. In the Omeka example, the author illustrate a conceptual disconnect in how two metadata stakeholders – standards creators and standards users – operationalize metadata quality. For standards creators such as the Dublin Core community, metadata quality involves implementing a standard properly, according to established usage principles; in contrast, for standards users like Omeka, metadata quality involves mere adoption of the standard, with little consideration of proper usage and accompanying principles.
Research Design

• “[P]lans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. It involves the intersection of philosophical assumptions, strategies of inquiry, and specific methods” (Creswell, 2009, p. 233).

• Quantitative Research vs. Qualitative Research
  • Quantitative = numbers, closed-ended questions
  • Qualitative = words, open-ended questions
  • Difference in strategy (e.g., experiments vs. case studies, statistical frequency/correlation vs. meaning/interpretation) – they are complementary, not necessarily in opposition
Research Design

Quantitative Research = “testing objective theories by examining the relationship among variables” (Creswell, 2009, p. 233)

Focus on independent and dependent variables
Hypothesis testing

Research questions (and possibly sub-questions) that attempt to tease out the whys and hows

Qualitative Research = “exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (Creswell, 2009, p. 232)

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Research Design

• You are not required to do a solely quantitative or solely qualitative study – it could also be mixed methods (using both quantitative and qualitative approaches).
  
  E.g., What information is searched for most often in a school library catalog and why?

• Having a clear and specific problem statement and research questions will help you determine which research method is needed and what kind of data need to be collected. If you prefer one method over another, make sure your questions reflect that approach.
Theoretical Frameworks

• “[P]rovide a general explanation as to what the researcher hopes to find in a study or a lens through which to view the needs of participants and communities in the study” (Creswell & Poth, 2018, p. 18).

• Can be applied in both quantitative and qualitative research.
Theoretical Frameworks

- **Quantitative Research** – theory is used deductively (a conclusion is drawn logically from a set of premises), used as a framework for the entire study (informs the questions asked, how data are collected and analyzed, etc.), and is often tested or verified rather than created.

- **Qualitative Research** – like quantitative research, theory can be used as a framework for the entire study, but also:
  - Provide guidance on what (e.g., marginalization, empowerment) or who (e.g., women, homeless, minority groups) to focus on; positionality of the researcher (Creswell, 2009)
Phase 1: The Researcher as a Multicultural Subject

- History and research tradition
- Conceptions of self and the other
- The ethics and politics of research

What perspectives and experiences do you bring to your research?

Phase 2: Philosophical Assumptions and Interpretive Frameworks

- Ontological
- Epistemological
- Axiological
- Methodological

- Postpositivism
- Social constructivism
- Transformative frameworks
- Postmodern perspectives
- Pragmatism

- Feminist theories
- Critical theory and critical race theory
- Queer theory
- Disabilities theories

How do your beliefs guide your actions as a researcher?

Phase 3: Research Strategies and Approaches

- Design
- Case study
- Ethnography, participant observation, performance ethnography
- Phenomenology, ethnomethodology

- Grounded theory
- Life history, testimonio
- Historical method
- Action and applied research
- Clinical research

How do your philosophical and theoretical frameworks inform your choice of research approaches?
What does it mean to adopt a metadata standard? A case study of Omeka and the Dublin Core

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Design/methodology/approach – The paper uses an approach based on rhetorical criticism. The paper aims to establish whether Omeka’s given ends (the position that Omeka claims to take regarding Dublin Core) align with Omeka’s guiding ends (Omeka’s actual argument regarding Dublin Core). To make this assessment, the paper examines both textual evidence (what Omeka says) and material-discursive evidence (what Omeka does).
Queering the Catalog: Queer Theory and the Politics of Correction

Emily Drabinski

ABSTRACT
Critiques of hegemonic library classification structures and controlled vocabularies have a rich history in information studies. This project has pointed out the trouble with classification and cataloging decisions that are framed as objective and neutral but are always ideological and worked to correct bias in library structures. Viewing knowledge organization systems from a queer perspective, however, challenges the idea that classification and subject language can ever be finally corrected. Engaging queer theory and library classification and cataloging together requires new ways of thinking about how to be ethically and politically engaged on behalf of marginal knowledge formations and identities who quite reasonably expect to be able to locate themselves in the library. Queer theory invites a shift in responsibility from catalogers, positioned to offer functional solutions, to public services librarians, who can teach patrons to dialogically engage the catalog as a complex and biased text, just as critical catalogers do.
Theories of Information Behavior


Iterative Research Process

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Start Here!

Research Design

Data Collection

Data Analysis

Reporting

Define the Problem

Refine the Problem

Literature Review
Data Collection

• Gathering evidence needed to **answer your research questions**

• Popular data collection methods:
  • Surveys
  • Interviews
  • Focus Groups
  • Observation
  • Analyzing Documents

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If your study involves living human subjects, you need to obtain Institutional Review Board (IRB) approval prior to collecting data. If your institution does not have an IRB, you can use another institution’s IRB.

IRB approval is important to ensure that your research is being conducted ethically (e.g., not violating subject’s privacy, minimizing harm, etc…).

Different levels of review: Full, Expedited, Exempt.
Domain Analytic, and Domain Analytic-Like, Studies of Catalog Needs: Addressing the Ethical Dilemma of Catalog Codes Developed with Inadequate Knowledge of User Needs

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Maurine McCourry is Technical Services Librarian at Hillsdale College, where she is responsible for the acquisition and cataloging of monographic material, and for the maintenance of the integrated library system. She is also Adjunct Instructor, Graduate School of Library and Information Science, at Dominican University, teaching a beginning course in the organization of knowledge. She holds a PhD in library and information science from Dominican University, and does research in the ethics of library cataloging. Her dissertation, “RD4 and the Music Student: A Domain Analytic Approach to Catalog Needs,” proposed the model described in this paper.
Data Analysis

• Analyzing and interpreting the data collected

• Start by preparing and processing the data for analysis – for example, creating interview transcripts, downloading data into a spreadsheet, writing up formal notes, “de-identifying” to maintain confidentiality, etc.
Data Analysis

• **Scan the data** – get a general sense of what is being said.

• **Categorize the data** – answers to open-ended questions should be coded to identify major themes.

• **Interpret the data** – what have you learned from the data collected? How does this compare to what has been documented in the literature and how does it fit within the theoretical framework(s) used? What are some important findings?
Reporting

• Tell the world about your research! Ideally, make sure your contribution is added to the literature.

• Organization of report – usually in the same order as the research process.

• Include future research recommendations and limitations of your study.
Reporting

• Conference presentation
  • Conference proceedings?

• Journal article
  • Library Resources & Technical Services
  • Cataloging & Classification Quarterly
  • Technical Services Quarterly
  • Journal of Library Metadata
  • Knowledge Organization

• Book

• Book chapter
Recommendations

• New to research? Find a mentor! Conducting research with a co-investigator may also help.

• Have a clear timeline and stick to it. Flexibility often leads to procrastination.

• Have clear expectations and goals.
Resources

Research & Publication Basics Webinar Series
(http://www.ala.org/alcts/confevents/upcoming/webinar/researchbasics)

March 6, 2019 - Research Methodologies and Data Analysis
March 20, 2019 - Writing and Publishing Research Results
April 3, 2019 - Assessment in Technical Services
May 8, 2019 - Communicating Impact Using Data Visualization
Librarian Parlor (https://libparlor.com/)

“The Librarian Parlor (aka LibParlor or #libparlor) is a space for conversing, sharing expertise, and asking questions about the process of developing, pursuing, and publishing library research. We feature interesting research methodologies, common challenges, in progress work, setbacks and successes. In providing this space, LibParlor aspires to support the development of a welcoming community of new researchers.” (https://libparlor.com/about/)
Resources

• **Library Juice Academy** ([http://libraryjuiceacademy.com/](http://libraryjuiceacademy.com/)) – fully online courses are usually 4 weeks and $175 each
  - Research Design for Librarians
  - Exploring and Applying Critical Theory: An Introduction for Librarians
  - Know Your User: Research Methods Beyond Usability Testing

• **ALCTS Mentorship Program** ([http://www.ala.org/alcts/mgrps/howto/mentor](http://www.ala.org/alcts/mgrps/howto/mentor)) – deadline for this year’s program is Feb. 28, 2019

• **LIS program course auditing** – some programs allow alumni/ae to audit courses for free or at a discounted rate
Resources


Defining the Problem: https://emojifresh.co.uk/products/thinking-face-emoji-vinyl-sticker
Review the Literature: https://phxpublishingandbookpromotion.wordpress.com/2017/08/01/researching-an-historical-fiction-novel-how-much-is-too-much/
Quantitative vs. Qualitative Research: https://www.ikoninternational.org/news/2018/2/26/qualitative-vs-quantitative-research
Data Collection: http://ixd.prattsi.org/2016/04/1606/
Human Subjects Research: https://cliparts.zone/google-people-cliparts
Reporting: https://project-management.com/communication-theories-applied-on-project-management/
Recommendations: https://ajsmithactionresearch.wordpress.com/recommendations/
Questions: https://poco.today/2018/10/question-port-coquitlam-candidates/
Works Cited


Questions?