

MLA 2014
Research Section Meetings & Sponsored Programs

SUNDAY, MAY 18, 2014

7:00 AM - 8:55 AM Research Award Judging Informational Meeting
 Room: New Orleans, Gold Level, West Tower

MONDAY, MAY 19, 2014

2:00 PM - 3:25 PM Research Survey Design for Librarians, Columbus AB, Gold Level, East Tower

Invited expert panel:

- **Planning for Effective Survey Design**

Jodi L. Philbrick

Lecturer, University of North Texas, University of North Texas, Denton, Texas

2:05 - 2:30 pm

Description: Planning is a critical step in designing effective surveys. An overview of the planning process will be presented from research question to deployment. Personal examples will be shared with the audience.

- **Managing Bias in Survey Research**

Jonathan Eldredge

Associate Professor, University of New Mexico, Albuquerque, NM

Objective: The descriptive survey represents a common form of research design in health sciences library and information practice. How can surveys be better designed to yield research results applicable for practice?

Method: Didactic session: The speaker will include some active learning techniques to involve the audience.

Results: Descriptive surveys yield limited data for application in practice except, perhaps, for the exploratory stages of a series of research studies. There are numerous ways to introduce bias into descriptive surveys unintentionally. Surveys that are part of experimental designs such as randomized controlled trials, observational studies such as cohort studies, or ones that are testing a hypothesis based on a theory might bypass some of the serious biases associated with this research design.

Conclusion: Library and information practitioners should exercise caution when deploying descriptive surveys due to the many forms of bias that can unintentionally become introduced into this type of research design.

2:30 – 2:55 pm

- **The Value Study: An Example of Community-Based Collaborative Survey Design**

Joanne Gard Marshall

Professor, University of North Carolina, University of North Carolina, Chapel Hill, North Carolina

Description: Survey research design is typically undertaken by researchers as a means of gathering large amounts of data in a format that can easily be measured and analyzed. The "Value of Library and Information Services in Patient Care Study," funded by the National Network of Libraries of Medicine (NN/LM) took an approach known as community-based collaborative research (CBCR), in which the survey and the study as a whole were collaboratively designed by a planning group of librarians from NN/LM, Middle Atlantic Region, and the research team at the University of North Carolina-Chapel Hill. In CBCR, representatives of the group that will benefit from the research and the researcher play equally important roles in study design and implementation. While this approach takes additional time, the survey is more likely to address the issues of key importance to the field. In the case of the Value Study, the involvement of the planning group also ensured that the survey would be usable in different kinds of health care institutions served by a variety of hospital and academic health center libraries. The large number of survey respondents (16,122 physicians, residents, and nurses) and the use that is being made

of the study results in the health sciences library community demonstrate that the additional effort required in the CBCR approach is worthwhile.

2:55 – 3:30 pm

TUESDAY, MAY 20, 2014

7:00 – 8:55 am Research Section Business Meeting, Comiskey, Bronze Level, West Tower

Continental Breakfast will be served.

2:00 - 3:25 pm Systematic Review: The Librarian's Role

Regency B, Gold Level, West Tower

- **Evaluating the Usability of Systematic Review Software Tools**

2:05 - 2:24 pm

Joshua E. Richardson (Presenter)

Assistant Director, Clinical Services, Weill Cornell Medical College, New York, NY

Paul Albert

Assistant Director, Research and Digital Services, Weill Cornell Medical College, New York, NY

Allison Piazza

Student, Pratt Institute, New York, New York

Diana Delgado, AHIP

Associate Director, User Support, Research, and Education, Weill Cornell Medical College, New York, NY

Objective: Systematic reviews (SRs) are time- and labor-intensive projects that can utilize support software for effective and efficient project management. However, these tools have yet to be evaluated for their usability. Given an absence of guidance in current literature, we conducted a usability evaluation of software tools for library SR projects.

Methods: Our team identified SR software by searching the web and reviewing available literature. We created a rubric to compare SR software features. The rubric helped to narrow our sample to five tools; we successfully accessed three tools for this evaluation. We based usability on seven tasks based on PRISMA guidelines and our professional experience conducting SRs. The tasks included setting up a team, documenting databases searched, and importing and exporting citations. Three reviewers scored usability according to the Nielsen-Shneiderman Usability Heuristic Framework (1994), which measures software on variables such as consistency, complexity, and language on a scale from 0 (no usability problem) to 4 ("catastrophic" usability problem). We shared preliminary results with vendors so they could correct errors. In some cases, we used vendor comments to revise scores.

Results: The SR tools significantly varied in their abilities to support the tasks we identified. For example, 2 of 3 supported a function to export final citations, and all failed to include a function to document the source of citations. All tools could perform 2 of the 7 tasks: assigning researchers to the SR project team and importing citations. The lowest mean usability for the 2 tasks was 1.02, meaning only cosmetic changes are recommended. However, reviewers reported a total of 47 instances of catastrophic usability across all 3 tools. The most predominant in descending order were: data extraction (18), ability to review full text for including and excluding citations (15), and assigning researchers to an SR project (4). Lastly, reviewers reported that 1 tool had 3 times more barriers to task completion than the next closest tool (108 versus 36).

Conclusions: To our knowledge, this project represented the first attempt to assess the usability of SR tools. Using the Nielsen-Shneiderman heuristic framework, we found that three currently available SR tools would benefit from greater functionality and usability. Each of the three tools missed at least one basic functionality and suffered from catastrophic but fixable usability shortcomings. Our findings can help SR tool developers to prioritize future development and help users identify the tool that best meets their needs.

- **Reproducibility of Systematic Review Search Strategies in Cardiology, Surgery, and Pediatrics Journals**

2:24 - 2:43 pm

Jonathan Koffel (Presenter)

Clinical Information Librarian, University of Minnesota, Minneapolis, MI

Melissa L. Rethlefsen, *Education Technology Librarian, Mayo Clinic, Rochester, MN*

Objectives: To measure the reproducibility of search strategies included in systematic reviews in cardiology, surgery, and pediatrics journals and identify predictors of reproducibility.

Methods: A well-described search strategy allows readers to gauge the comprehensiveness of a systematic review and replicate it as needed. It is unclear, however, how often published search strategies are reproducible and what factors may influence this. A search was conducted to identify all systematic reviews published in 2012 in the ten highest impact factor journals in surgery, cardiology, and pediatrics. The authors independently examined the search strategies in these articles for elements of reproducibility (e.g., database names, search terms, explicit use of Boolean terms, limits) and the strategies were categorized as reproducible/not reproducible and the individual elements recorded. In addition, the authors independently recorded other characteristics of the searches and studies (e.g., librarian involvement, mention of PRISMA Statement), which they hypothesized might affect reproducibility. The data were analyzed to determine overall rates and specific predictors of reproducibility.

- **A Pipeline of Informatics Tools to Accelerate the Writing of Systematic Reviews**

2:43 - 3:02 pm

Neil R. Smalheiser (Presenter)

Associate Professor, University of Illinois, Chicago, Illinois

Objectives: The writing of systematic reviews is largely a manual process--initially retrieving a large excess of articles, and reading their titles and abstracts to find relatively few relevant ones to be analyzed in detail. We hypothesized that specialized informatics tools can be developed to streamline this process significantly.

Methods: We formed an inter-institutional consortium to study the systematic review process and to develop a pipeline of tools that can assist users at critical bottleneck points: (a) A metasearch engine, Metta, was created to carry out unified, deduplicated queries across the five most utilized biomedical databases (PubMed, Embase, CINAHL, Cochrane Central Register, and PsycINFO). (b) A publication type tagger modeled the characteristics of randomized controlled clinical trials (RCTs) using machine learning. The model estimated the probability that any given article represents a RCT, and this was applied to re-tag all human-related studies in MEDLINE. The model identified many RCTs that had not been indexed as RCTs by publication type, and conversely, the model flagged articles that were indexed as RCT publication type but that were not RCTs. (c) An aggregator model was developed that estimates the probability that any two RCT articles in PubMed arise from the same underlying clinical trial. This model was applied to PubMed searches, to cluster together all retrieved articles that are likely to arise from the same trial.

Results: Each of the three tools are available as working prototypes. Metta is freely available for testing and comments at mengl.cs.binghamton.edu/metta/search.action, and we are building web interfaces for the others.

Conclusions: Our current goals are to make sure that the tools are aligned with the needs of systematic reviewers and to fit them together into an integrated pipeline. We believe that this approach should significantly reduce the time and effort needed to assemble articles for a systematic review. The automated RCT tagger also may be useful, prospectively and retrospectively, for quality control in the assignment of manual RCT publication type tagging.

- **Flipping the Classroom: Developing and Piloting a Successful Systematic Review Course for Librarians Utilizing Online and In-Person Instruction**

3:02 - 3:21 pm

Mark P. MacEachern (Presenter) *Informationist, University of Michigan, Ann Arbor, Michigan*
Marisa L. Conte *Clinical and Translational Science Liaison, University of Michigan, Ann Arbor, Michigan*

Nandita S. Mani *Assistant Director, Enabling Technologies, University of Michigan, Ann Arbor, Michigan*

Judith Smith *Informationist, University of Michigan, Ann Arbor, MI*

Caitlin Kelley *Graduate Student, University of Michigan, Ann Arbor, MI*

Objectives: To develop a systematic review course for librarians utilizing a "flipped classroom" model for instruction.

Methods: Librarians at the University of Michigan's Taubman Health Sciences Library developed a pilot course to teach librarians about systematic reviews (SR) and discuss librarian roles in SR project teams. The course followed a hybrid "flipped classroom" model, with instruction provided online in an intensive two-week curriculum followed by a two-day in-person workshop. Group participation and targeted learning activities played a key role in the workshop, which culminated with a capstone project preparing librarians to deploy their new knowledge at their home institutions.

Results: A detailed course assessment plan--which included pre- and post-tests, course evaluations, and a post-course focus group--was used to obtain participant feedback and drive refinements in course organization, delivery, and content. Participants reiterated across multiple assessments that the hybrid structure of the course was not only enjoyable but facilitated and strengthened learning. A majority of participants (80%) "agreed" or "strongly agreed" that the online course had a good amount of activity, and 100% "strongly agreed" or "agreed" that the activities facilitated learning. Nearly 100% of participants "agreed" or "strongly agreed" that the in-person workshop reinforced SR concepts and practical applications.

Conclusions: The results of the assessments were overwhelmingly positive with participants expressing that the hybrid model reinforced learning and that instruction was effective. There were, however, a few areas in which the course could be improved. The pre- and post-tests, for example, could be redesigned to better gauge participant knowledge, and some of the activities could be timed differently. The participants expressed strong appreciation for the course's focus on practical applications and skills, which the instructors could build upon in future offerings. By making slight course modifications to address the issues highlighted by the assessments, the instruction team should be able to improve upon an already successful course.

Research Section Members Posters

Sunday, May 18, 2014, 3:30 pm – 4:25pm

A Guide for ORCID (Open Researcher and Contributor ID)

Caitlin Kelley, Mari Monosoff-Richards, Merle Rosenzweig
 Taubman Health Sciences Library, University of Michigan
 Poster Number: 5

Book Reviews in Ophthalmic Journals

Gale Oren
 Kellogg Eye Center, University of Michigan
 Poster Number: 35

Building on Good Foundations: Constructing a Research Data Management Program for a Research University

Margaret Henderson, Teresa L. Knott
 Tompkins-McCaw Library for the Health Sciences, Virginia Commonwealth University

Poster Number: 52

Building a Framework to Assess our Value

Terrie Wheeler, Alicia Livinski, Doug Joubert, Diane Cooper, Bradley Otterson, Nancy Terry

NIH Library

Poster Number 39

Building an Innovative Infrastructure in Clerkship Curriculum: Integrating Virtual Library Services with Tablet Technology

Lori A. Fitterling, Marilyn J. De Geus, Angie Clemmer, Elizabeth K. McClain

Kansas City University of Medicine and Biosciences

Poster Number 43

Building for Innovation with Library-Hosted 3D Printing and Scanning

Hannah F. Norton, Clifford D. Richmond, Sara Gonzalez

University of Florida

Poster Number 47

Cultivating Fallow Fields: A Program to Train Undergraduate Student Workers to be Effective Communicators of Health Information Skills in an Academic Medical Library

Rick Wallace

ETSU Quillen College of Medicine Library

Poster Number 67

Monday May 19, 2014, 3:30 pm – 4:25pm

For the mouths of babes: nutrition literacy outreach to a child care center

Darra Ballance, Nancy Webb, Sallie Long

Georgia Regents University Augusta; Trinity Hospital of Augusta

Poster Number: 105

Improving data management in academic research: Assessment results for a pilot lab

Heather Coates

University Library @ IUPUI

Poster Number 116

Medication Safety: A Librarian's Expanding Role for the Future

Mary E. White

Kaiser Permanente

Poster Number 141

International Health Research Sources: Citation Pattern Analysis Including the Use, Citation, and Sources for Data Sets

Young-Joo Lee, Virginia Pannabecker

Louis Stokes Health Sciences Library, Howard University

Poster Number 127

Forging an Alliance with Faith Based Clinics

Rick Wallace

ETSU Quillen College of Medicine Library

Poster Number 106

Library as Place: Why Our Users Still Come!

Donna S. Gibson, Amy Draemel, Marisol Hernandez
 Memorial Sloan Kettering Cancer Center
 Poster Number 133

Tuesday, May 20, 2014, 1:00 pm – 1:55 pm

The Semantic Web Demystified

Bethany S. McGowan
 Allied Health Sciences Librarian, Howard University
 Poster Number: 197

Web-Scale Discovery Tool: Is It Right For You?

Tara Brigham, Kelly Arp, Carol Ann Attwood, Ann M. Farrell, Leah Osterhaus Trzasko, Mark Wentz
 Mayo Clinic Libraries, Jacksonville, FL, Rochester, MN, Scottsdale, AZ, La Crosse, WI
 Poster Number: 213

The National Institutes of Health (NIH) Public Access Policy: A Learning Opportunity

Emily Mazure
 Medical Center Library & Archives, Duke University
 Poster Number: 154

One Book: A Case Study of Community Reading to Explore Ethical Issues in a Health Sciences Setting

Rajia Tobia, Susan C. Hunnicutt
 University of Texas Health Science Center at San Antonio
 Poster Number 156

Several Hands Make Light(er) Work: A Collaborative Effort to Support the Deposit of Student Literature into a Digital Repository

Erin Foster, Mellanye Lackey
 UNC Chapel Hill
 Poster Number 180