Systematic reviews for evidence-based practice in librarianship

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Systematic Reviews

"The purpose of a systematic review is to sum up the best available research on a specific question. This is done by synthesizing the results of several studies.

A systematic review uses transparent procedures to find, evaluate and synthesize the results of relevant research. Procedures are explicitly defined in advance, in order to ensure that the exercise is transparent and can be replicated. This practice is also designed to minimize bias.

Studies included in a review are screened for quality, so that the findings of a large number of studies can be combined. Peer review is a key part of the process; qualified independent researchers control the author's methods and results." (Campbell Collaboration)

Step One – Research Question
Establish a well formed research question and/or objectives for the study.

Step Two – Inclusion and Exclusion Criteria
Define the criteria to be used for selecting studies to be included and excluded from the project for final analysis, such as currency, population, study methodology, and focus of the research question.

Step Three – Literature Search
Conduct a comprehensive search of all the literature using multiple approaches. Consider extensive database searching, browsing of journals and conference proceedings, citation searching of bibliographies, cited references, a Web search, and organizations and researchers.

Step Four – Screening
Use the inclusion criteria and the research question/objectives as a guide to select the studies/articles to be used for the final analysis. When it is not clear from the abstract whether the inclusion criteria is met, the entire article must be read.

Step Five - Data Extraction
After screening, all of the selected studies/articles must be read and reviewed to extract the relevant data to answer the research question. The elements to be considered for data extraction will vary for each systematic review. A data extraction form is helpful for this step.

Step Six – Data Analysis and Conclusions
Quantitative data that is similar across studies can be analyzed statistically. Qualitative data and inconsistent quantitative data can be analyzed using narrative/textual analysis methods. Using both statistical and narrative analysis in tandem make for a more thorough review. Results then need to be reported.

Example Systematic Review: *Commitment and trust in librarian-faculty relationships*

[1] Research Question

The aim of this review was to explore the relationship dynamics between faculty and librarians by:
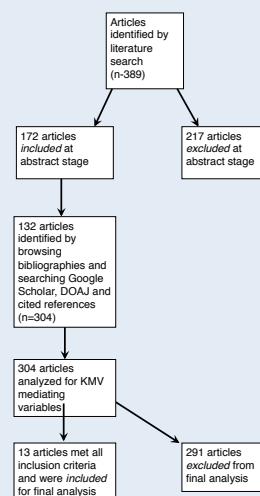
- identifying elements that *contribute to* or *deter from* commitment and trust, according to the Commitment-Trust Theory
- analyzing the professional literature about librarian and faculty relationships.

[3] Literature Search

To locate material from multiple disciplines, we searched twenty subject specific **databases**, **Google Scholar** and the **Directory of Open Access Journals**.
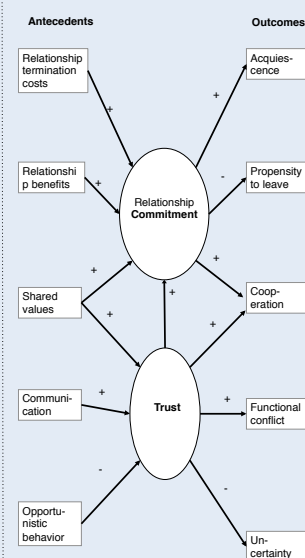
We also analyzed bibliographies of retrieved articles and conducted a cited reference search. In total, we collected 521 articles related to faculty/librarian relationships, to which we applied our inclusion and exclusion criteria.
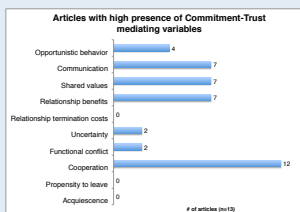
[4] Screening process

[2] Inclusion and exclusion criteria

Key mediating variable model of relationship marketing (Morgan & Hunt, 1994)

[5] Data Extraction

[6] Data Analysis / Conclusions

- *Communication* positively contributed to trust
- *Relationship benefits* positively contributed to commitment
- *Shared values* contributed to trust & commitment
- Strong commitment & trust allowed for *cooperation* and an unharmed relationship in the face of *uncertainty*, *functional conflict*, and *opportunistic behavior*

Thoughts on the Methodology

Benefits

- Useful to distill and synthesize an excess of information
- Useful to compile information on a topic when only a small amount of information has been published
- Explicit methods limit bias in article selection and aid in replication of the study
- Stringent criteria strengthen the value of the review
- Can draw together information on a topic to resolve discrepancies or to use the information for training
- Can identify gaps in the literature to inform future research
- Can prevent unnecessary repetition of primary research
- Can be done by anyone motivated to follow through on the process
- Librarians' search skills make them uniquely qualified to conduct this type of study

Challenges

- Time consuming to plan, search, access, read, code and analyze the amount of information necessary for in a systematic review
- More than one person needs to be involved in a review increasing the cost in time and personnel investment
- The quality of the review depends on the quality of research and the published literature
- Article retrieval depends on the accuracy of abstracting and indexing of the literature
- If the method is new to the researcher, it requires more time to negotiate the steps of the systematic review

Works Cited

Campbell Collaboration. *What Helps? What Harms? Based on What Evidence?, Producing a Review.* URL: www.campbellcollaboration.org/ systematic_reviews/index.php

Morgan, R.M., & Hunt, S.D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20-38. (Source for the commitment-trust theory and model used for this study.)

Phelps, S.F., & Campbell, N. (2012). Commitment and trust in librarian-faculty relationships: A systematic review of the literature. *Journal of Academic Librarianship*, 38(1), 13-19.

More information about our study can be found at: directory.vancouver.wsu.edu/ people/nicole-campbell/systematic-reviews

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