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A Comparison of Systematic Review Services in NJ Academic Libraries and Beyond

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How are Libraries Supporting Systematic Reviews and Evidence Synthesis?

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Outline

- Types of Reviews
- Our Research & Findings
- Takeaways
- Where to Learn More

Types of Reviews

Narrative Review

Provides an overview or description of the literature review without using systematic methods.

Scoping Review

Systematic Map/Evidence Gap Map

Looks at themes, trends, and gaps in research. "Where the research is".

Uses rigorous methods for search and selection. Often answers questions of 'what works' or 'what the research says'.

Systematic Review

Rapid reviews

Living reviews

Umbrella Reviews

Other Methodologies

Narrative vs. Systematic Reviews

Narrative:

- Typically an overview of what's known about a topic - provides context
- Searching might be comprehensive, but is not considered exhaustive
- Searching does not follow an established protocol, so may not be reproducible
- May not necessarily include quality assessment
- May not control for author bias in which studies are selected
- May involve a single researcher or multiple researchers

Systematic:

- Usually answers the question of whether an intervention is effective for a specific population to yield a certain outcome
- Searching is considered exhaustive (e.g., looking at grey literature)
- Searching follows an established protocol with inclusion and exclusion criteria, so that it is reproducible and minimizes bias
- Always includes an assessment of the quality of sources
- Typically involves a team of researchers, and takes ~1 year to complete

More Common Evidence Syntheses

Evidence synthesis (a.k.a knowledge synthesis) involves combining information from multiple studies investigating the same topic to comprehensively understand their findings. (umbrella term)

- Scoping Reviews- Narrative synthesis that creates a map of what we know about a phenomenon

- Systematic Reviews- Asks narrow questions and uses explicit, pre-specified methods to identify, select, assess, and summarize the findings of similar but separate studies

- Meta analysis- Uses statistical method to combine the results from multiple (quantitative) research studies, hopefully producing a more precise estimate for the effect of an intervention

Less Common Evidence Syntheses

- Rapid Reviews- Often conducted when there's a need for quick decision-making, applying systematic review methodology with "shortcuts" due to time-constraints, so searching is not exhaustive and may result in bias

- Living Reviews- An approach that aims to continually update a review, incorporating relevant new evidence as it becomes available. They may be particularly important in fields where research evidence is emerging rapidly, current evidence is uncertain, and new research may change policy or practice decisions.

- Umbrella Reviews- Systematic reviews of previously existing systematic reviews that provide an overall assessment of the information available on a specific topic

Typical Steps in Evidence Synthesis

1. Assemble research team

2. Decide on review type and then formulate specific, answerable research question

3. Write and register a (peer reviewed) reproducible protocol - identify databases to search, inclusion and exclusion criteria

4. Run searches according to protocol (translate search strategy across platforms), export results, and de-duplicate

5. Screen results as per inclusion and exclusion criteria - 1st = title & abstract; 2nd = full-text (each source screened by multiple reviewers)

6. Hand search to find additional sources

7. Assess the quality of sources - validity, reliability, and bias

8. Extract data and synthesize it (meta-analysis?)

9. Write and publish manuscript

Reason for Our Research

We were tasked with exploring the feasibility of a systematic review service at Montclair State University, and what that might look like.

Research Questions

- Are there differences in how academic libraries at R1 and R2 institutions support evidence synthesis/systematic reviews?

- What can be taken away from this research to assist academic libraries in creating, or improving upon, their own systematic review services?

Methodology

1. Assembled a list of Montclair State University's IPEDS and Aspirant Peers.

2. Used Google to identify other institutions with established systematic review services.

3. Collected information from websites and/or LibGuides of institutions identified above on the types of resources and/or services offered to support systematic reviews (e.g., workshops, tutorials, videos, consultations and/or co-authorship)

4. Reached out to librarians at these institutions for further information about their resources (e.g., how many librarians work on these services, in what subject areas, etc.)

Results

Table 1. Institutions Surveyed

Table 2. Findings

Trends

R1 Institutions [n=23]:

- 69.6% of R1s with a systematic review service offer both consultation and co-authorship service
  - 13% only offer consultations

- More likely to have supplemental resources (videos, tutorials, workshops, etc.) - 95.7% have a LibGuide/webpage

- On average, tend to have more librarians dedicated to systematic review services (between 2-14)

R2 Institutions [n=12]:

- Varies in whether or not they provide a service at all; 58.3% provide consultations, co-authorship services, or both
  - Only 33.3% of the R2s that provide a service do so at the co-authorship level

- 66.6% have a LibGuide or a systematic review webpage

- Have fewer librarians dedicated to systematic review services (between 2-7)

Consultation vs. Co-authorship Services

The list of what each includes varies across institutions

In general, Consultation is the first level of service and may include:

- Providing information and other resources about the evidence synthesis process
- Helping with formulating research questions appropriate for the different types of evidence syntheses
- Recommend search strategies (including which databases to use) and how to document them
- Recommend protocol registration platforms appropriate for their discipline (and possibly search for existing protocols on the project idea)
- Using citation management tools

Co-authorship is more of a time investment and may include:

- Commenting on the protocol,
- Selecting databases and grey literature resources
- Writing the search strategy
- Translating searches to syntax of all databases
- Performing searches and exporting them to citation management software, performing deduplication, or training your team on the process
- Setting up in article screening software
- Writing a portion of the methods section specific to searching.

Takeaways

- Institutions with systematic review services also had health sciences or medical libraries, or dedicated health science or medical librarians.

- Future development of systematic review services will depend on the support allocated to that service: personnel, databases, software, etc.

- With systematic reviews growing beyond the health sciences, it is important to ensure that each university starts by investigating need/desire for such a service.

- Consider starting off with:
  - training, then serving as an apprentice on a systematic reviews research team
  - offering a 'lite' consultation service which may involve referrals to existing tutorials (e.g., about protocol registration)

Some Excellent LibGuides

- Cornell University's Evidence Synthesis Training for Librarians LibGuide:
  https://guides.library.cornell.edu/EvidenceSynthesisTraining

- Cornell University's Guide to Evidence Synthesis LibGuides:
  https://guides.library.cornell.edu/evidence-synthesis/steps

- Harvard University's Systematic Reviews LibGuide:
  https://guides.library.harvard.edu/meta-analysis/epi233_528

- Princeton University's Systematic Reviews LibGuide:
  https://libguides.princeton.edu/c.php?g=1019850&p=9639315

- University of Minnesota's Systematic Reviews and Evidence Synthesis LibGuide:
  https://libguides.umn.edu/c.php?g=1264119&p=9269094

Additional Resources

- Evidence Synthesis Institute training materials: https://pressbooks.umn.edu/evidencesynthesisinstitute/

- Cornell University's decision tree about: What Type of Review is Right for You? https://cornell.app.box.com/s/tfgvuicvsn9s58g7c0akxh0cmcuifbbo

- Lê, M., Neilson, C. J., & Winkler, J. (2023, April 26). Benchmarking Librarian Support of Systematic Reviews in the Sciences, Humanities, and Social Sciences. https://doi.org/10.31219/osf.io/v7m9y

- Temple University Libraries' Reviews by Discipline and Type: https://guides.temple.edu/c.php?g=78618&p=9539066

- Wissinger C. L. (2018). Is there a place for undergraduate and graduate students in the systematic review process?. Journal of the Medical Library Association : JMLA, 106(2), 248–250. https://doi.org/10.5195/jmla.2018.387

Questions?

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