Interdisciplinary collaboration: Lessons learned from systematic review research projects

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Systematic Review: Interdisciplinary Collaboration

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Interdisciplinary Collaboration

- Librarians working on systematic review with non-library faculty
Systematic review

• An analysis
  ❖ of previous research
  ❖ using a systematic method
  ❖ to identify, select, and critically appraise relevant studies
  ❖ to collect and analyze data from them

• Use other research results as data for systematic analysis

• Typically done as group research projects, not individual projects.
Research Project Examples

- **Pedagogical strategies in massive open online courses**
  - Collaborated with the research team in Engineering Education

- **Aviation - A systematic review of runway incursions**
  - Collaborated with the research team in Aviation and Transportation Technology

- **STEM instruction with students with autism spectrum disorders**
  - Consulted the research team in Engineering Education
Scholarly Work


Reviewers’ sample comments

• “...This paper does not add any original contribution, it's just an organized literature review...”

• “It is my suggestion that the authors refer to previous comprehensive reviews (e.g., ...) to ensure they include all studies as well as search in journals not included...”
<table>
<thead>
<tr>
<th>Types</th>
<th>Purpose</th>
<th>Search</th>
<th>Coding/appraisal</th>
<th>Synthesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narrative</td>
<td>Overview of topic</td>
<td>Varies in scope, not transparent</td>
<td>Varies, not described</td>
<td>Qualitative</td>
</tr>
<tr>
<td>Scoping</td>
<td>Description of multiple studies</td>
<td>Comprehensive, documented</td>
<td>Categories only, no appraisal</td>
<td>Visual (table or “maps”)</td>
</tr>
<tr>
<td>Systematic</td>
<td>In-depth synthesis to answer specific questions</td>
<td>Comprehensive, documented</td>
<td>In-depth coding and appraisal</td>
<td>Qualitative</td>
</tr>
<tr>
<td>Meta-analysis</td>
<td>Numerical synthesis of data from multiple studies</td>
<td>Comprehensive, documented</td>
<td>In-depth coding and appraisal</td>
<td>Quantitative</td>
</tr>
</tbody>
</table>

Adapted from Foster (2017).
Role of Librarian

As consultant
- Guidance with systematic review steps
- Identify Databases to be searched
- Develop Search strategy
- Few meetings

As contributor
- Consultant plus
- Multiple meetings to walk through the steps
- Training on information management

As author
- Contributor plus
- Write methods section
- Screening and or coding as appropriate

Adapted from 2017 "Intro to Systematic Reviews" by Margaret Foster, TAMU.
References
