



EBL 101

Research Methods: Scoping Studies

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This time around, I'm going to take a look at scoping studies or scoping reviews. A scoping study consists of a fairly comprehensive search of the literature around a particular topic. When I came across this methodology, my first question was, "how are these different from systematic reviews?" which I've written about previously (Wilson, 2013). As I looked deeper, I've discovered that a scoping study seems to sit somewhere between a literature review and a systematic review and is "one method among many that might be used to review literature" (Arksey & O'Malley, 2005, p. 20). This column will provide an overview of the scoping study methodology, some further reading on the subject, and some citations of examples of scoping studies in library and information studies.

But what exactly is a scoping study? A number of definitions have been put forward and several have been collected in a paper by

Levac, Colquhoun, and O'Brien (2010). For this column, I'm going to use the definition quoted by Arksey and O'Malley (2005): A scoping study aims "to map *rapidly* the key concepts underpinning a research area and the main sources and types of evidence available" (Mays, Roberts & Popay, 2001). Levac, Colquhoun, and O'Brien (2010) also include a definition from the Canadian Institutes of Health Research which states that scoping studies "are exploratory projects that systematically map the literature available on a topic, identifying the key concepts, theories, sources of evidence and gaps in the research" and are often "preliminary to full syntheses" (p. 2 of 9). The name of this methodology has been a bit confusing, as it has been referred to as "scoping study", "scoping review", "scoping literature review", and "scoping exercise" in various studies. Perhaps its relative newness as a defined methodology means that standard terminology has yet to be adopted.

Table 1

Adapted from Arksey & O'Malley (2005) and Grant & Booth (2009)

Systematic Reviews	Scoping Studies
<ul style="list-style-type: none"> • focus on a well-defined research question 	<ul style="list-style-type: none"> • address broader topics
<ul style="list-style-type: none"> • specific study designs can be identified prior to searching based on the question 	<ul style="list-style-type: none"> • different study designs may be applicable and included
<ul style="list-style-type: none"> • attempt to provide answers from a narrow range of "quality assessed studies" (Arksey & O'Malley, p. 20) 	<ul style="list-style-type: none"> • less likely to assess quality of studies included
<ul style="list-style-type: none"> • the goal is thorough, comprehensive searching 	<ul style="list-style-type: none"> • how complete the searching is depends on time and scope constraints

In order to illustrate how a scoping study differs from a systematic review, I have put together a table (Table 1).

The literature outlining and advancing the methodology of scoping studies is fairly recent. Arksey and O'Malley (2005) presented a framework that they adopted for the undertaking of a scoping study (p.22), to which I have added clarifying points:

Stage 1: identifying the research question – *this guides the development of search strategies*

Stage 2: identifying relevant studies – *the depth of this often depends of time and budget constraints*

Stage 3: study selection – *some search results will not be applicable to the research question*

Stage 4: charting the data – *material is sorted according to key issues and themes*

Stage 5: collating, summarizing and reporting the results

An optional, although strongly recommended, Stage 6 was also proposed, consisting of a consultation exercise "to inform and validate findings from the main scoping review" (p. 23). Levac et al (2010) also recommend incorporating this stage, as it "adds methodological rigor and should be considered a required component" (p. 7 of 9). Stage 6 involves consultations with stakeholders who may be able to "provide additional references about potential studies to include in the review as well as valuable insights" about other issues pertinent to the review (Arksey & O'Malley, 2005, p. 29). In 2013, Daudt, van Mossel, and Scott published an article further enhancing the methodology from the perspective of a large, inter-

professional team's experience using the original Arksey and O'Malley steps. They too agree that Stage 6 should be a fully incorporated rather than optional step.

Why might one conduct a scoping study? Arskey & O'Malley (2005) offer up four reasons:

1. To examine the extent, range and nature of research activity... [and when] mapping fields of study
2. To determine the value of undertaking a full systematic review...
3. To summarize and disseminate research findings...
4. To identify research gaps in the existing literature... (pp. 21-22)

A scoping study is a viable and useful methodology for a rapid scan of literature on a specific topic. I strongly recommend delving into the papers that I have consulted for this column; these are listed in the reference list. And, if you do conduct a scoping study, you might consider contributing your own experience to the literature as well. To get a broad overview of the many review strategies you might explore, check out the article by Grant and Booth (2009).

The following are some examples of the scoping study methodology used in library and information studies.

- Baxter, G. J. & Connolly, T.M. (2014). Implementing Web 2.0 tools in organisations: Feasibility of a systematic approach. *The Learning*

Organization, 21(1), 6-25.
<http://dx.doi.org/10.1108/TLO11-2012-0069>

- Gardois, P., Colombi, N., Grillo, G., & Villanacci, M.C. (2012). Implementation of Web 2.0 services in academic, medical and research libraries: A scoping review. *Health Information and Libraries Journal*, 29, 90-109. <http://dx.doi.org/10.1111/j.1471-1842.2012.00984.x>
- Norwood, J. & Skinner, B. (2012). Implementing RFID in a hospital library: A scoping study. *Health Information and Libraries Journal*, 29(2), 162-165. <http://dx.doi.org/10.1111/j.1471-1842.2012.00987.x>
- Younger, P. (2010). Internet-based information-seeking behaviour amongst doctors and nurses: A short review of the literature. *Health Information and Libraries Journal*, 27(1), 2-10. <http://dx.doi.org/10.1111/j.1471-1842.2010.00883.x>

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