QUESTIONS & QUANDARIES

Should I do a synthesis (i.e. literature review)?

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Abstract

This column is intended to address the kinds of knotty problems and dilemmas with which many scholars grapple in studying health professions education. In this article, the authors address the question of whether one should conduct a literature review or knowledge synthesis, considering the why, when, and how, as well as its potential pitfalls. The goal is to guide supervisors and students who are considering whether to embark on a literature review in education research.

Two junior colleagues come to you to ask your advice about carrying out a literature review on a particular topic. "Should they?" immediately pops into your mind, followed closely by, if yes, then what kind of literature review is appropriate? Our experience is that colleagues often come to suggest a literature review to "kick start" their research (in fact, some academic programs require them as part of degree requirements), without a full understanding of the work involved, the different types of literature review, and what type of literature review might be most suitable for their research question. In this Questions and Quandaries,

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we address the question of literature reviews in education research, considering the why, when, and how, as well as potential pitfalls.

First, what is meant by literature review? The term literature review has been used to refer to both a *review of the literature* and a *knowledge synthesis* (Maggio et al., 2018; Siddaway et al., 2019). For our purposes, we employ the term as commonly used to refer to a *knowledge synthesis*, which is a formal comprehensive review of the existing body of literature on a topic. It is a research approach that critically integrates and synthesizes available evidence from multiple studies to provide insight and allow the drawing of conclusions. It is an example of Boyer's scholarship of integration (Boyer, 1990). In contrast, a *review of the literature* is a relatively casual and expedient method for attaining a general overview of the state of knowledge on a given topic to make the argument that a new study is needed. In this interpretation, a literature review serves as a key starting point for anyone conducting research by identifying gaps in the literature, informing the study question, and situating one's study in the field.

Whether a formal knowledge synthesis should be done depends on if a review is needed and what the rationale is for the review. The first question to consider is whether a literature review already exists. If no, is there enough literature published on the topic to warrant a review? If yes, does the previous review need updating? How long has it been since the last review and has the literature expanded so much or are there important new studies that need integrating to justify an updated review? Or were there flaws in the previous review that one intends to address with a new review? Or does one intend to address a different question than the focus of the previous review?

If the knowledge synthesis is to be done, it should be driven by a research question. What is the research question? Can it be answered by a review? What is the purpose of the synthesis? There are two main purposes for knowledge synthesis– knowledge support and decision support. Knowledge support summarizes the evidence while decision support takes additional analytical steps to allow for decision-making in particular contexts (Mays et al., 2005).

If the purpose is to provide knowledge support, then the question is how or what will the knowledge synthesis add to the literature? Will it establish the state of knowledge in an area, identify gaps in the literature/knowledge base, and/or map opportunities for future research? Cornett et al., performed a scoping review of the literature on professional identity, focusing on how professional identity is described, why the studies where done, and what constructs of identity were used. Their findings advanced understanding of the state of knowledge by indicating that professional identity studies were driven primarily by the desire to examine the impact of political, social and healthcare reforms and advances, and that the various constructs of professional identity across the literature could be categorized into five themes (Cornett et al., 2023).

If, on the other hand, the purpose of the knowledge synthesis is to provide decision support, for whom will the synthesis be relevant and how will it improve practice? Will the synthesis result in tools such as guidelines or recommendations for practitioners and policymakers? An example of a knowledge synthesis for decision support is a systematic review conducted by Spencer and colleagues to examine the validity evidence for use of the Ottawa Surgical Competency Operating Room Evaluation (OSCORE) assessment tool. The authors summarized their findings with recommendations for educational practice– namely supporting the use of the OSCORE for in-the-moment entrustment decisions by frontline

supervisors in surgical fields but cautioning about the limited evidence for support of its use in summative promotions decisions or non-surgical contexts (Spencer et al., 2022).

If a knowledge synthesis is indeed appropriate, its methodology should be informed by its research question and purpose. We do not have the space to discuss the various types of knowledge synthesis except to say that several types have been described in the literature. The five most common types in health professions education are narrative reviews, systematic reviews, umbrella reviews (meta-syntheses), scoping reviews, and realist reviews (Maggio et al., 2018). These represent different epistemologies, serve different review purposes, use different methods, and result in different review outcomes (Gordon, 2016).

Each type of review lends itself best to answering a certain type of research question. For instance, narrative reviews generally describe what is known about a topic without necessarily answering a specific empirical question (Maggio et al., 2018). A recent example of a narrative review focused on schoolwide wellbeing programs, describing what is known about the key characteristics and mediating factors that influence student support and identifying critical tensions around confidentiality that could make or break programs (Tan et al., 2023). Umbrella reviews, on the other hand, synthesize evidence from multiple reviews or meta-analyses and can illuminate agreement, inconsistencies, or evolution of evidence on a topic. For example, an umbrella review on problem-based learning highlighted the shift in research focus over time from does it work, to how does it work, to how does it work in different contexts, and pointed to directions for new research (Hung et al., 2019).

Practical questions for those considering a literature review include whether one has the time required and an appropriate team to conduct a high-quality knowledge synthesis. Regardless of the type of knowledge synthesis and use of quantitative or qualitative methods, all require rigorous and clear methods that allow for reproducibility. This can take time, up to 12–18 months. A high-quality knowledge synthesis also requires a team whose members have expertise not only in the content matter, but also in knowledge synthesis methodology and in literature searches (i.e. a librarian). A team with multiple reviewers with a variety of perspectives can also help manage the volume of large reviews, minimize potential biases, and strengthen the critical analysis.

Finally, a pitfall one should be careful to avoid is merely summarizing everything in the literature without critical evaluation and integration of the information. A knowledge synthesis that merely bean counts or presents a collection of unconnected information that has not been reflected upon or critically analyzed does not truly advance knowledge or decision-making. Rather, it leads us back to our original question of whether it should have been done in the first place.

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