

Writing Integrative Reviews of the Literature: Methods and Purposes

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ABSTRACT

This article discusses the integrative review of the literature as a distinctive form of research that uses existing literature to create new knowledge. As an expansion and update of a previously published article on this topic, it acknowledges the growth and appeal of this form of research to scholars, it identifies the main components of the integrative literature review, and summarizes guidelines for organizing and writing integrative literature reviews. Not addressed elsewhere in the literature, this article describes five reasons and purposes for writing literature reviews and discusses these purposes in relation to the methods for writing literature reviews. The article concludes that aligning the integrative literature review's methods with its purpose provides unity and coherence to the review.

KEYWORDS

Integrative Literature Reviews, Literature Reviews, Reviews of the Literature

INTRODUCTION

Integrative literature reviews offer valuable contributions to the literature and are distinctive forms of research. After a brief introduction to literature reviews, the article discusses the main components of the integrative literature review and provides guidelines for writing literature reviews. The article concludes by discussing the purposes of literature reviews in relation to the methods for writing literature reviews and emphasizes the need for authors to align literature review methods with purposes.

LITERATURE REVIEWS: WHAT? WHERE? AND WHY ARE THEY WRITTEN?

The integrative literature review is a distinctive form of research that generates new knowledge about a topic by reviewing, critiquing, and synthesizing representative literature on a topic in an integrated way such that new frameworks and perspectives on the topic are generated.

Literature reviews are an appealing form of research to scholars. Authors in many disciplines follow the convention of citing sources only since the most recent systematic literature review on the topic was published. Consequently, literature reviews are among the most frequently cited type of research article across disciplinary fields (Annual Reviews, 2016). In addition, some publishers maintain that individual review articles and review series are highly used and cited due to the relatively few integrative literature reviews that appear each year and the many articles that cite them (Sage Publications, 2012). Literature reviews are ubiquitous and appear in a variety of publication venues.

In addition to being published as standalone articles, many academic disciplines have journals devoted to theoretical/conceptual research that include literature reviews within their scope of publication or are devoted exclusively to publishing literature reviews. Even publishers devote their business to literature reviews. For example, Annual Reviews (2016) is a non-profit publisher of review journals for forty-six specific disciplines in science and social science that publishes review articles in these disciplines. Finally, many scholarly journals that publish primary research also publish review articles and, consequently, contribute to this expansive, diverse form of published research.

Why write a literature review? Why is a literature review a better research methodology to study a problem than other forms of research? These questions should be answered early for readers so they understand why a literature review is the research method of choice to address the problem. Literature reviews often are conducted on dynamic topics that experience rapid growth in literature and that have not benefited from a comprehensive review and update during an extended period. Another common catalyst for literature reviews is a discrepancy between the literature and observations about the issue which are not addressed in the literature. A discussion of reasons and purposes for writing literature reviews is presented next.

Purposes of Literature Reviews

As with other forms of research authors seek to accomplish different goals or purposes by writing literature reviews. Cooper's (1988) taxonomy of literature reviews identified the goals of literature reviews as critically analyzing the literature, integrating diverse and sometimes conflicting perspectives from the literature, and identifying central issues or methodological problems in existing literature. This author reported the findings of a review of the literature on literature reviews (Torraco, under review). Based on a systematic review of the body of literature addressing literature reviews, five distinct goals or purposes of literature reviews were identified. Literature reviews are written to (a) review, update, and critique the literature, (b) conduct meta-analysis of the literature, (c) review, critique and synthesize the literature, (d) reconceptualize the topic reviewed in the literature, and (e) answer specific research questions about the topic reviewed in the literature. Each type of literature review is discussed next.

Beyond simply reporting about existing literature authors of literature reviews are responsible for adding value to the scholarly discussion of the topic. Most literature reviews accomplish this by providing some form of critique of how well the topic is presented in existing literature. Critical analysis of the literature identifies its strengths and weaknesses as well as any deficiencies, omissions, inaccuracies, and other problematic aspects of the literature. By exposing the strengths and weaknesses of the literature, critique lays the foundation for other objectives of the literature review such as synthesis and reconceptualization.

Meta-analysis provides both a means and a purpose for reviewing the literature on a topic. Meta-analysis uses statistical procedures to summarize a body of separate but similar empirical studies to integrate, synthesize, and make sense of the studies (Glass, 1976). It is a distinctive method of reviewing the literature that uses numbers and statistics to reveal patterns of causal relationships across empirical studies of a given topic. Meta-analysis can be used when a common statistical measure is shared among the studies, called the effect size, which can be characterized by a weighted average and used as an estimate of the common effect size. This estimate of the effect size across the studies allows inferences and conclusions to be drawn about relationships among variables in the studies (Hunter & Schmidt, 1990). An example of this type of review of the literature is a meta-analysis of the impact of positive psychological capital on employee behaviors (Avey, Reichard, Luthans & Mhatre, 2011).

A third purpose of literature reviews is to review and synthesize literature on a topic. Synthesis is a creative act that results in the generation of new knowledge about the topic reviewed in the literature. Synthesis can take different forms. (Five alternative forms for presenting synthesis are identified later in the article in the Synthesis section). Authors synthesize new knowledge by weaving together elements and ideas from the literature into a unique synthesis model. Kornelakis' (2014) synthesized literature on the balance between individual employment security and the organization's need for flexibility in a new conceptual model and an agenda for research and practice for "organizational Flexicurity" (p. 406).

Since the synthesis may or may not reconceptualize the topic reviewed in the literature, reconceptualization can be another purpose of literature reviews. Reconceptualization provides a new way of thinking about the topic reviewed in the literature. Reconceptualization is undertaken when the current conception of the topic is acknowledged as out of date or otherwise problematic and critique and reconceptualization of the topic is needed. The purpose of Haeram, Pentland and Miller's (2015) literature review on the topic of task complexity was to reconceptualize this concept. The authors stated their intention at the beginning of the article, "In this article we address a basic question: how can we conceptualize the complexity of tasks that involve multiple actors carrying out a set of interdependent actions to achieve a common goal?" (p. 446). Although literature was carefully reviewed, the primary purpose of this literature review was to support the reconceptualization goals of the authors. That is, in this type of literature review, the authors' critique and reconceptualization are emphasized throughout the work, whereas in other types of integrative literature review the comprehensive review and critical analysis of the literature are dominant. The product of Haeram, Pentland and Miller's review and analysis of the literature was a new conception of tasks as networks of events that can occur at any level of analysis and can be performed multiple actors. This is a particular form of synthesis and, as such, the authors' synthesis is represented as their reconceptualization of the topic.

The fifth purpose of literature reviews is use literature reviews as a means for answering specific research questions about a topic. A literature review that takes this approach focuses the review on addressing the issues that are stated in the research questions for the review. These research questions define the boundaries of the literature to be reviewed and the issues to be examined. An example of a literature review conducted to answer specific research question was done by Kyndt and Baert (2013) who sought to identify the antecedents of employees' work-related learning intentions and participation in learning as studied in prior research. The authors stated the purpose of their study as "It aims at providing an exhaustive summary of the literature relevant for the research questions at hand" (p. 278). Grounded in four research questions and based on their review of the literature Kyndt and Baert (2013) found a positive relationship between learning intentions and participation in learning, and identified employee attitudes, subjective norms, self-efficacy, and initial level of education as important moderators of this relationship.

Introducing the topic and purpose of the integrative literature review leads the way to determining how the review article should be structured. Three forms of structure for integrative literature reviews can be used: temporal structure, methodological structure, and conceptual structure. (See Torracco, under review, for a discussion of the three forms of structuring literature reviews).

The main components of the literature review article appear in sections that are sequenced to provide logical connections for the reader among the rationale for the review, how it was done, and what it found. The main components of integrative literature review are presented next in the sequence in which they should appear in the article.

COMPONENTS OF THE INTEGRATIVE LITERATURE REVIEW

Need and Purpose

The author's first obligation is to establish the need and purpose of writing the integrative literature review. The need for a literature review on a topic can be based on an outdated conceptualization

of the topic, recent growth and diversification of the literature, especially on a new, emerging topic, significant debate about a topic especially one explained by rival theories or having different ways of being operationalized, and the continued expansion of the literature on a topic over an extended period. Earlier sections of the paper discussed this component of the integrative literature review (“Why write a literature review?” and “Purposes of Literature Reviews”). Emphasizing the importance of the topic for the field can help establish the need for the review and may encourage readers who may not share the intensity of your interest in the topic to read the review.

Definition of the Topic

Topics for the literature review can be considered along a temporal continuum from older, well established topics (mature topics) to emerging topics (new topics). As the literature on a new topic begins to accumulate and becomes its own body of literature, an integrative literature review is beneficial for bringing together individual pieces of literature and analyzing them to identify the insights and perspectives they offer, as well as the deficiencies, omissions, inaccuracies, and other problems that are inevitable with recently published literature on a new phenomenon. Integrative literature reviews of mature topics are also beneficial for reviewing and critiquing literature that has emerged since the last comprehensive literature review on the topic. Literature reviews of mature topics can rediscover perspectives on the topic that may have become obscured by years of intervening research and when needed, for reconceptualizing the topic to incorporate new ideas and the findings of recent research.

Mature topics and new topics each present distinctive challenges to the author searching for and reviewing literature for a review. An example of a mature topic in education would be factors associated with elementary student achievement in math and science, whereas a new topic might be the role of social media in student enculturation in schools. Since the knowledge base of a mature topic expands and becomes more diversified with time, more literature will be available for a mature topic than for a new topic, making the literature search easier for the author of a review of a mature topic. However, distinguishing among pieces of the abundant literature found on mature topics to identify only those that are relevant will be more difficult than for the literature on a new topic which, although less abundant, will be useful to the author as a coherent, emergent body of literature. Defining the topic of the review to clearly distinguish it from other related topics provides focus for the study and establishes boundaries to delineate the literature that will, and will not be reviewed. In addition to proscribing the parameters of the literature search, carefully defined boundaries of the topic become the basis for developing the criteria for retaining or discarding the literature retrieved in the literature search later in the study.

Discussion of Research Methods

This section of the review describes how the literature was identified, analyzed, synthesized and reported. The author’s methods for selecting the literature including the use of keywords and literature databases are discussed so that readers understand whether the scope of the literature reviewed by the author corresponds to the boundaries of the topic. Since the author has to discriminate carefully among the pieces of literature identified in the literature search to select only literature relevant to the review, the criteria used by the author for retaining or discarding the literature should be described for readers. The discussion should include how the literature was analyzed to identify and categorize themes from across the literature on the topic. For all literature reviews and especially those on new topics for which accepted models or frameworks have not yet been developed, the discussion should include the means used to verify the validity or authenticity of the themes that emerged from the analysis of the literature. As with all reports of research, the methods should be described in sufficient detail so that readers can ascertain if the literature on the topic they are familiar with has been included in the study and so that other researchers could replicate the research following the description of research methods.

Critical Analysis

After carefully reviewing the numerous individual articles that make up a defined body of literature, the author has a broad and deep understanding of the quality of the literature and is prepared to critically analyze it. Critical analysis identifies the literature's strengths and weaknesses and assesses how well the literature represents the topic. It should entail a thorough and systematic analysis of the literature's strengths, deficiencies, omissions, inaccuracies, and any contradictions about the topic that appear in the literature. An effective critique gives a balanced assessment of the strengths and areas for improvements in the literature and sets the stage for the next component of the literature review – synthesis.

Synthesis

Synthesis arises from analysis, but it differs from analysis since synthesis is the creation of something fundamentally new, whereas analysis deconstructs a phenomenon into its basic parts. With the strengths and weaknesses of the literature exposed through critical analysis and the full dimensions of the topic laid out for the reader, the author integrates concepts and ideas to build new models and perspectives about the topic. Synthesis brings together existing ideas with new ideas to create fresh, new ways of thinking about the topic. Synthesis can take various forms such as a taxonomy or classification scheme of constructs, a research agenda that poses provocative new question (or propositions) for further research, a reconceptualization of the topic, a meta-analysis, or metatheory (Torraco, 2005).

Logic and Conceptual Reasoning

Whetten (1989) maintained that logic and conceptual reasoning replaces data analysis as the basis for arguments and explanations in theoretical work. Similar to the description of research methods, a detailed discussion should explain how existing ideas and new ways of thinking about the topic were analyzed and then reformulated by the author to produce the reconceptualization or synthesis. Logic and conceptual reasoning are as valuable as other elements of the synthesis model to the new knowledge generated since they explain the author's thinking as (s)he assimilates the elements of a new theory or model, fitting and reshaping ideas and meaning, and integrating larger constructs into the emerging conceptual model. Applied to theory building, Weick (1989) described this conceptual reasoning as "thought trials" – the author's thinking and use of if-then conjectures to solve problems and provide direction for constructing a theory or developing a conceptual model (p. 522). Recognizing that developing strong theory and new conceptual models are the result of the theorist's "disciplined imagination," Weick stated, "In general, a theorizing process characterized by a greater number of diverse conjectures produces better theory than a process characterized by a smaller number of homogeneous conjectures" (p. 522). Since readers want to know how the author's logic and conceptual reasoning was used to create the conceptual framework or synthesis model, a section of the review article should be devoted to this discussion. "Presenting a framework or model without a description of the origin of its constructs, their interrelationships, and the conceptual reasoning used to build it is akin to presenting the results and conclusions of an empirical study without discussing data collection and analysis (Torraco, 2005, p. 363).

Implications for Further Research

A strong integrative review of the literature can be an important research contribution and can be a landmark for the state of knowledge on the topic to date. But the review can also be a significant catalyst for further research on the topic. When a topic is reconceptualized in a literature review, the new perspectives on the topic inevitably include relationships among constructs that have not been fully explored. The review also may expose contested areas of research or contradictions among literature sources on an issue. These problems should be explained and research questions for further study in these areas should be formulated for other researchers interested in the topic.

Topics examined in literature reviews, including most topics in education, undergo continuous and sometimes dramatic change, with new developments unfolding that are of interest to researchers, policy makers, and practitioners. Literature reviews often trace the historical development of the topic and how this is represented in the literature, bringing the reader forward to the present state of knowledge on the topic. Yet literature reviews need not limit their coverage of the topic by stopping at the present. Having undertaken a thorough, systematic review of the existing literature on a topic, there is no better time to address pending developments and explore factors that are shaping the future of an issue (Webster & Watson, 2002). The integrative literature review can be an influential force in shaping practice and the future directions of the field.

GUIDELINES FOR WRITING INTEGRATIVE LITERATURE REVIEWS

Detailed guidance for organizing and writing integrative literature reviews has been published by the author elsewhere (Author, under review). Enumerated below is a summary of the guidelines for writing integrative literature reviews from this previously published work.

1. **Need and Purpose of the Review:** Is there a need for the integrative literature review? Is an integrative literature review the most appropriate form of research to address the problem? Will the review article make a significant, value-added contribution to new thinking in the field? Is the distinctive purpose of the literature stated (e.g., reconceptualization of the topic; answer specific research questions; review, update and critique the literature)?
2. **Topic of the Review:** Will the literature review examine a new topic; a mature topic? Is the topic of the review clearly defined? Are the scope and boundaries of the review demarcated to show the bodies of literature that will and will not be reviewed?
3. **Author(s) Perspective:** Is the perspective taken by the author on the literature review explained to readers (e.g., neutral representation versus taking a position or point of view)? Are the assumptions of the author regarding the literature review stated?
4. **Organization and Structure:** Is the integrative literature review organized effectively?
 - a. Is the literature review organized for logical flow of ideas, organization, and readability?
 - b. Is the literature review organized around a coherent structure for clarity about what is being reviewed and how the main concepts or themes of the topic come together as a unified idea (e.g., temporal, methodological, or conceptual structure)?
 - c. Should diagrams or other visual representations be used to show how the literature review is structured and to enhance the reader's understanding of how the topic is addressed in the literature?
5. **Discussion of Research Methods:** Are the methods for conducting the integrative literature review sufficiently described?
 - a. How was the literature for the review selected? What key subject terms (or keywords) were used to search the literature? What databases were used to search the literature?
 - b. Is a table or matrix used to track which keywords and databases led to relevant literature and which did not? If so, is the use of the table mentioned in the review for readers?
 - c. Are the criteria stated for retaining or discarding the literature retrieved?
 - d. Is there a discussion of how each piece of literature was reviewed (e.g., complete reading of each literature source, reading of abstracts only, a staged review)?
 - e. Is there a discussion of how the main ideas and themes from the literature were identified and analyzed?
 - f. Is the description of the methods for searching, analyzing, and interpreting the literature as transparent as possible for the reader? Is the description of the literature review methodology written so that if other researchers attempted to replicate the integrative literature review, sufficient information would be available to do so?

6. **Critical Analysis:** Does the review critically analyze existing literature on the topic (i.e., is a critique provided)?
 - a. Does the critical analysis describe both the strengths and weaknesses of the literature?
 - b. Does the critical analysis identify literature deficiencies, omissions, inaccuracies, conflicting perspectives and inconsistencies, and aspects of the topic or phenomenon that are missing, incomplete, or poorly represented in the literature?
 - c. Would it be beneficial for the review to include a concept map, analysis matrix, or other visual representation of the main ideas and conceptual relationships of a topic to enhance the reader's understanding of the critical analysis of the literature?
7. **Synthesis:** Does the integrative literature review synthesize knowledge from the literature into a significant, value-added contribution to new knowledge on the topic?
8. **Further Research:** Does the integrative literature review lay the foundation for future research by formulating questions for further research on the topic?
9. **Logic and Conceptual Reasoning:** Does the integrative literature review describe the logic and conceptual reasoning used by the author to synthesize the model or framework from the review and critique of the literature?
10. **Future of the Topic:** Does the integrative literature review explore the future of the topic or field? Does the review identify factors that are shaping the future of the topic, discuss pending developments in the field, and assess the direction for future events and trends?
11. **Writing Quality:** Has the integrative literature review been examined and revised for clear, concise, understandable writing?

Aligning Integrative Literature Review Methods with Purposes

Five distinct goals or purposes of literature reviews were identified earlier in the article. The guidelines and methods listed above provide a means of organizing and writing an integrative literature review in three phases: (a) Before writing the integrative literature review, (b) Organizing the integrative literature review, and (c) Writing the integrative literature review. This section discusses the five purposes of literature reviews in relation to the methods for writing literature reviews because strong, coherent research requires the alignment of methods with purposes.

To review, integrative literature reviews can be written to (a) review, update, and critique the literature, (b) conduct meta-analysis of the literature, (c) review, critique and synthesize the literature, (d) reconceptualize the topic reviewed in the literature, and (e) answer specific research questions about the topic reviewed in the literature. The guidelines for writing integrative literature reviews listed above apply to all integrative reviews of the literature and should be followed when writing a review for any purpose. Nonetheless the value and appeal of the integrative literature review to readers can be enhanced when authors tailor the substance and style of their writing to the purpose of their literature review in light of the guidelines listed above. For example, criterion 3 asks "Is the perspective taken by the author on the literature review explained to readers (e.g., neutral representation versus taking a position or point of view)?" The manner in which the authors state their perspective on reviewing the literature at the beginning of the review sets expectations for the reader about how and why the review was conducted and what the review should accomplish. In their review of the literature on task complexity Haeram, Pentland and Miller's (2015) clearly stated a definitive point of view about writing their review on this topic: the concept of task complexity as characterized in existing literature is out of date and needs to be reconceptualized. On the other hand, some reviews of the literature are written with a neutral point of view in which the findings and outcomes of the review (in the form of critique and synthesis) are not fully known by the authors ahead of time and emerge as the literature review is conducted. Although the need for the review may be justified because the topic is mature and the literature has not been reviewed for an extended period, the author, while familiar

with the topic, seeks to discover the strengths and weaknesses of the literature including conflicting perspectives and inconsistencies, and aspects of the topic or phenomenon that are poorly represented in the literature. In this sense the author does not take a position, a priori, on how well the topic has been characterized in the literature.

Criterion 4 asks “Is the integrative literature review organized effectively?” Effective organization depends on the purpose of the literature review since its form should enable readers to readily follow the author’s reasoning from the original research problem, through the literature review and critique, to the intended outcome of the review (e.g., synthesis model, answers to the research questions, or reconceptualization). For example, an integrative literature review conducted to answer specific research questions should be grounded in the research problem as stated in the research questions and organized to show how the findings from the literature answer the research questions, whereas a literature review to reconceptualize the topic reviewed in the literature should begin with a critique of the current conceptualization of the topic to demonstrate the need for its reconceptualization. The literature review’s form (organization) is determined by its function (primary purpose).

Criterion 7 asks, “Does the integrative literature review synthesize knowledge from the literature into a significant, value-added contribution to new knowledge on the topic? This criterion is addressed differently by each of the five types of literature reviews based on their distinct purposes. The ways in which synthesis is represented in each type of literature review are discussed next.

Literature reviews that are written to review, update, and critique the literature only do not synthesize findings from the literature and, thus, do not meet this criterion of integrative literature reviews. Meta-analysis of the literature on a topic generates an estimate of the effect size across the studies that allows inferences and conclusions to be drawn about the studies examined (Hunter & Schmidt, 1990). Findings of meta-analyses represent a potentially valuable form of synthesis since they provide empirical evidence that can support or disconfirm relationships among variables across multiple related studies. Literature reviews that intentionally include synthesis in their purpose can generate new knowledge from the review through any of the forms of synthesis identified earlier in the article. Syntheses that reconceptualize the topic reviewed in the literature provide researchers with provocative perspectives that catalyze new thinking and scholarship on the topic. Literature reviews that answer specific research questions about the topic synthesize knowledge from the body of literature reviewed to answer the research questions, thereby providing new insights on the topic and the foundation for further research. In short, the form of synthesis, and whether it appears at all, depends on the purpose intended for the integrative literature review.

Aligning the integrative literature review’s methods with its purpose provides unity and coherence to the review. This is apparent to readers when they are able to follow the connections among the research problem addressed by the review (e.g., deficiencies in the literature), the critique of the literature, and the theoretical outcome (e.g., reconceptualization or a new conceptual model) (Author, 2005). Alignment of research methods with purposes is a feature of all good research.

SUMMARY

Integrative literature reviews offer valuable contributions to research, stimulate new thinking about a topic, and catalyze further research. This article discussed the purposes of integrative literature reviews, the main components of the integrative literature review, and summarized guidelines for organizing and writing integrative literature reviews. It concluded with a discussion of the importance of aligning literature review methods with purposes.

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