

# 4.1

## **Introduction to Literature Reviews**

Linda Frederiksen, Sue F. Phelps, & Royce  
Kimmons

### **Learning Objectives**

At the conclusion of this chapter, you will be able to:

- Identify the purpose of the literature review in the research process;
- Distinguish between different types of literature reviews.

### **What is a Literature Review?**

Pick up nearly any book on research methods and you will find a description of a literature review. At a basic level, the term

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implies a survey of factual or nonfiction books, articles, and other documents published on a particular subject. Definitions may be similar across the disciplines, with new types and definitions continuing to emerge. Generally speaking, a literature review is a:

- “comprehensive background of the literature within the interested topic area...” (O’Gorman & MacIntosh, 2015, p. 31 [<https://edtechbooks.org/-EaoJ>]).
- “critical component of the research process that provides an in-depth analysis of recently published research findings in specifically identified areas of interest.” (House, 2018, p. 109 [<https://edtechbooks.org/-EaoJ>]).
- “written document that presents a logically argued case founded on a comprehensive understanding of the current state of knowledge about a topic of study” (Machi & McEvoy, 2012, p. 4 [<https://edtechbooks.org/-EaoJ>]).

As a foundation for knowledge advancement in every discipline, it is an important element of any research project. At the graduate or doctoral level, the literature review is an essential feature of thesis and dissertation, as well as grant proposal writing. That is to say, “A substantive, thorough, sophisticated literature review is a precondition for doing substantive, thorough, sophisticated research...A researcher cannot perform significant research without first understanding the literature in the field.” (Boote & Beile, 2005, p. 3 [<https://edtechbooks.org/-EaoJ>]). It is by this means, that a researcher demonstrates familiarity with a body of knowledge and thereby establishes credibility with a reader. An advanced-level literature review shows how prior research is linked to a new project, summarizing and synthesizing what is known while

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identifying gaps in the knowledge base, facilitating theory development, closing areas where enough research already exists, and uncovering areas where more research is needed. ([Webster & Watson, 2002, p. xiii \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ))

A graduate-level literature review is a compilation of the most significant previously published research on your topic. Unlike an annotated bibliography or a research paper you may have written as an undergraduate, your literature review will outline, evaluate and synthesize relevant research and relate those sources to your own thesis or research question. It is much more than a summary of all the related literature.

It is a type of writing that demonstrate the importance of your research by defining the main ideas and the relationship between them. A good literature review lays the foundation for the importance of your stated problem and research question.

Literature reviews do the following:

- define a concept
- map the research terrain or scope
- systemize relationships between concepts
- identify gaps in the literature ([Rocco & Plathotnik, 2009, p. 128 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ))

In the context of a research study, the purpose of a literature review is to demonstrate that your research question is meaningful. Additionally, you may review the literature of different disciplines to find deeper meaning and understanding of your topic. It is especially important to consider other

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disciplines when you do not find much on your topic in one discipline. You will need to search the cognate literature before claiming there is “little previous research” on your topic.

Well developed literature reviews involve numerous steps and activities. The literature review is an iterative process because you will do at least two of them: a preliminary search to learn what has been published in your area and whether there is sufficient support in the literature for moving ahead with your subject. After this first exploration, you will conduct a deeper dive into the literature to learn everything you can about the topic and its related issues.

## **Literature Review Tutorial**

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[\[https://edtechbooks.org/dN\]](https://edtechbooks.org/dN).

## Literature Review Basics

An effective literature review must:

- Methodologically analyze and synthesize quality literature on a topic
- Provide a firm foundation to a topic or research area
- Provide a firm foundation for the selection of a research methodology

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- Demonstrate that the proposed research contributes something new to the overall body of knowledge of advances the research field's knowledge base. ([Levy & Ellis, 2006 \[https://edtechbooks.org/-EaoJ\]](#)).

All literature reviews, whether they are qualitative, quantitative or both, will at some point:

1. Introduce the topic and define its key terms
2. Establish the importance of the topic
3. Provide an overview of the amount of available literature and its types (for example: theoretical, statistical, speculative)
4. Identify gaps in the literature
5. Point out consistent finding across studies
6. Arrive at a synthesis that organizes what is known about a topic
7. Discusses possible implications and directions for future research

## Types of Literature Reviews

There are many different types of literature reviews, however there are some shared characteristics or features that all share.

Remember a comprehensive literature review is, at its most fundamental level, an original work based on an extensive critical examination and synthesis of the relevant literature on a topic. As a study of the research on a particular topic, it is arranged by key themes or findings, which may lead up to or link to the research question. In some cases, the research question will drive the type of literature review that is undertaken.

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The following section includes brief descriptions of the terms used to describe different literature review types with examples of each. The included citations are open access, Creative Commons licensed or copyright-restricted.

### Conceptual

Guided by an understanding of basic issues rather than a research methodology, the writer of a conceptual literature review is looking for key factors, concepts or variables and the presumed relationship between them. The goal of the conceptual literature review is to categorize and describe concepts relevant to the study or topic and outline a relationship between them, including relevant theory and empirical research.

Examples of a Conceptual Review:

- The formality of learning science in everyday life: A conceptual literature review ([Dohn, 2010](https://edtechbooks.org/-EaoJ) [\[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).
- Are we asking the right questions? A conceptual review of the educational development literature in higher education ([Amundsen & Wilson, 2012](https://edtechbooks.org/-EaoJ) [\[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

### Empirical

An empirical literature review collects, creates, arranges, and analyzes numeric data reflecting the frequency of themes, topics, authors and/or methods found in existing literature. Empirical literature reviews present their summaries in

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quantifiable terms using descriptive and inferential statistics.

Examples of an Empirical Review:

- Impediments of e-learning adoption in higher learning institutions of Tanzania: An empirical review ([Mwakyusa & Mwalyagile, 2016 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

## Exploratory

The purpose of an exploratory review is to provide a broad approach to the topic area. The aim is breadth rather than depth and to get a general feel for the size of the topic area. A graduate student might do an exploratory review of the literature before beginning a more comprehensive one (e.g., synoptic).

Examples of an Exploratory Review:

- University research management: An exploratory literature review ([Schuetzenmeister, 2010 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).
- An exploratory review of design principles in constructivist gaming learning environments ([Rosario & Widmeyer, 2009 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

## Focused

This type of literature review is limited to a single aspect of previous research, such as methodology. A focused literature review generally will describe the implications of choosing a particular element of past research, such as methodology in terms of data collection, analysis, and interpretation.



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Examples of a Focused Review:

- Language awareness: Genre awareness-a focused review of the literature ([Stainton, 1992](#) [<https://edtechbooks.org/-EaoJ>]).

## Integrative

An integrative review critiques past research and draws overall conclusions from the body of literature at a specified point in time. As such, it reviews, critiques, and synthesizes representative literature on a topic in an integrated way. Most integrative reviews may require the author to adopt a guiding theory, a set of competing models, or a point of view about a topic. For more description of integrative reviews, see [Whittemore & Knafl \(2005\)](#) [<https://edtechbooks.org/-EaoJ>].

Examples of an Integrative Review:

- Exploring the gap between teacher certification and permanent employment in Ontario: An integrative literature review ([Brock & Ryan, 2016](#) [<https://edtechbooks.org/-EaoJ>]).

## Meta-analysis

A subset of a systematic review, a meta-analysis takes findings from several studies on the same subject and analyzes them using standardized statistical procedures to pool together data. As such, it integrates findings from a large body of quantitative findings to enhance understanding, draw conclusions, and detect patterns and relationships. By gathering data from many different, independent studies that look at the same research

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question and assess similar outcome measures, data can be combined and re-analyzed, providing greater statistical power than any single study alone. It's important to note that not every systematic review includes a meta-analysis but a meta-analysis can't exist without a systematic review of the literature.

Examples of a Meta-Analysis:

- Efficacy of the cooperative learning method on mathematics achievement and attitude: A meta-analysis research ([Capar & Tarim, 2015](#) [<https://edtechbooks.org/-EaoJ>]).
- Gender differences in student attitudes toward science: A meta-analysis of the literature from 1970 to 1991 ([Weinburgh, 1995](#) [<https://edtechbooks.org/-EaoJ>]).

## Narrative/Traditional

A narrative or traditional review provides an overview of research on a particular topic that critiques and summarizes a body of literature. Typically broad in focus, these reviews select and synthesize relevant past research into a coherent discussion. Methodologies, findings and limits of the existing body of knowledge are discussed in narrative form. This requires a sufficiently focused research question, and the process may be subject to bias that supports the researcher's own work.

Examples of a Narrative/Traditional Review:

- Adventure education and Outward Bound: Out-of-class experiences that make a lasting difference ([Hattie](#),

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[Marsh, Neill, & Richards, 1997](https://edtechbooks.org/-EaoJ)  
[\[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

- Good quality discussion is necessary but not sufficient in asynchronous tuition: A brief narrative review of the literature ([Fear & Erikson-Brown, 2014](https://edtechbooks.org/-EaoJ)  
[\[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

### Realist

This specific type of literature review is theory-driven and interpretative and is intended to explain the outcomes of a complex intervention program(s).

Examples of a Realist Review:

- Unravelling quality culture in higher education: A realist review ([Bendermacher, Egbrink, Wolfhagen, & Dolmans, 2017](https://edtechbooks.org/-EaoJ) [\[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

### Scoping

This type of review tends to be a non-systematic approach that focuses on breadth of coverage rather than depth. It utilizes a wide range of materials and may not evaluate the quality of the studies as much as count the number. Thus, it aims to identify the nature and extent of research in an area by providing a preliminary assessment of size and scope of available research and may also include research in progress.

Examples of a Scoping Review:

- Interdisciplinary doctoral research supervision: A scoping review ([Vanstone, Hibbert, Kinsella, McKenzie, Pitman, &](https://edtechbooks.org/-EaoJ)

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[Lingard, 2013 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

### Synoptic

In contrast to an exploratory review, the purpose of a synoptic review is to provide a concise but accurate overview of all material that appears to be relevant to a chosen topic. Both content and methodological material is included. The review should aim to be both descriptive and evaluative as it summarizes previous studies while also showing how the body of literature could be extended and improved in terms of content and method by identifying gaps.

Examples of a Synoptic Review:

- Theoretical framework for educational assessment: A synoptic review ([Ghaicha, 2016 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).
- School effects research: A synoptic review of past efforts and some suggestions for the future ([Cuttance, 1981 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

### Systematic Review

A rigorous review that follows a strict methodology designed with a presupposed selection of literature reviewed, systematic reviews are undertaken to clarify the state of existing research, evidence, and possible implications that can be drawn. Using comprehensive and exhaustive searching of the published and unpublished literature, searching various databases, reports, and grey literature, these reviews seek to produce transparent and reproducible results that report details of time frame and methods to minimize bias. Generally, these reviews must

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include teams of at least 2-3 to allow for the critical appraisal of the literature. For more description of systematic reviews, including links to protocols, checklists, workflow processes, and structure see “[A Young Researcher’s Guide to a Systematic Review \[https://edtechbooks.org/-oF\]](https://edtechbooks.org/-oF)”.

Examples of a Systematic Review:

- The potentials of using cloud computing in schools: A systematic literature review ([Hartmann, Braae, Pedersen, & Khalid, 2017 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).
- The use of research to improve professional practice: a systematic review of the literature ([Hemsley-Brown & Sharp, 2003 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

## Umbrella/Overview of Reviews

An umbrella review compiles evidence from multiple systematic reviews into one document. It therefore focuses on broad conditions or problems for which there are competing interventions and highlights reviews that address those interventions and their effects, thereby allowing for recommendations for practice. For a brief discussion see “[Not all literature reviews are the same \[https://edtechbooks.org/-xZ\]](https://edtechbooks.org/-xZ)” (Thomson, 2013).

Examples of an Umbrella/Overview Review:

- Reflective practice in healthcare education: An umbrella review ([Fragknos, 2016 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

## **Why do a Literature Review?**

The purpose of the literature review is the same regardless of the topic or research method. It tests your own research question against what is already known about the subject.

### **First - It's part of the whole.**

Omission of a literature review chapter or section in a graduate-level project represents a serious void or absence of a critical element in the research process.

The outcome of your review is expected to demonstrate that you:

- can systematically explore the research in your topic area
- can read and critically analyze the literature in your discipline and then use it appropriately to advance your own work
- have sufficient knowledge in the topic to undertake further investigation

### **Second - It's good for you!**

- You improve your skills as a researcher
- You become familiar with the discourse of your discipline and learn how to be a scholar in your field
- You learn through writing your ideas and finding your voice in your subject area
- You define, redefine and clarify your research question for yourself in the process

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### **Third - It's good for your reader.**

Your reader expects you to have done the hard work of gathering, evaluating, and synthesizing the literature. When you do a literature review you:

- Set the context for the topic and present its significance
- Identify what's important to know about your topic - including individual material, prior research, publications, organizations and authors.
- Demonstrate relationships among prior research
- Establish limitations of existing knowledge
- Analyze trends in the topic's treatment and gaps in the literature

### **So, why should you do a literature review?**

- To locate gaps in the literature of your discipline
- To avoid reinventing the wheel
- To carry on where others have already been
- To identify other people working in the same field
- To increase your breadth of knowledge in your subject area
- To find the seminal works in your field
- To provide intellectual context for your own work
- To acknowledge opposing viewpoints
- To put your work in perspective
- To demonstrate you can discover and retrieve previous work in the area

# Common Literature Review Errors

Graduate-level literature reviews are more than a summary of the publications you find on a topic. As you have seen in this brief introduction, literature reviews are a very specific type of research, analysis, and writing. We will explore these topics more in the next chapters. Some things to keep in mind as you begin your own research and writing are ways to avoid the most common errors seen in the first attempt at a literature review. For a quick review of some of the pitfalls and challenges a new researcher faces when he/she begins work, see “[Get Ready: Academic Writing, General Pitfalls and \(oh yes\) Getting Started! \[https://edtechbooks.org/-GUc\]](https://edtechbooks.org/-GUc)”.

As you begin your own graduate-level literature review, try to avoid these common mistakes:

- Accepting another researcher’s finding as valid without evaluating methodology and data
- Ignoring contrary findings and alternative interpretations
- Providing findings that are not clearly related to one’s own study or that are too general
- Allowing insufficient time to defining best search strategies and writing
- Reporting rather than synthesizing isolated statistical results
- Choosing problematic or irrelevant keywords, subject headings and descriptors
- Relying too heavily on secondary sources
- Failing to transparently report search methods
- Summarizing rather than synthesizing articles



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In conclusion, the purpose of a literature review is three-fold:

1. to survey the current state of knowledge or evidence in the area of inquiry,
2. to identify key authors, articles, theories, and findings in that area, and
3. to identify gaps in knowledge in that research area.

A literature review is commonly done today using computerized keyword searches in online databases, often working with a trained librarian or information expert. Keywords can be combined using the Boolean operators, “and”, “or” and sometimes “not” to narrow down or expand the search results. Once a list of articles is generated from the keyword and subject heading search, the researcher must then manually browse through each title and abstract, to determine the suitability of that article before a full-text article is obtained for the research question.

Literature reviews should be reasonably complete and not restricted to a few journals, a few years, or a specific methodology or research design. Reviewed articles may be summarized in the form of tables and can be further structured using organizing frameworks such as a concept matrix.

A well-conducted literature review should indicate whether the initial research questions have already been addressed in the literature, whether there are newer or more interesting research questions available, and whether the original research questions should be modified or changed in light of findings of the literature review.

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The review can also provide some intuitions or potential answers to the questions of interest and/or help identify theories that have previously been used to address similar questions and may provide evidence to inform policy or decision-making ([Bhattacharjee, 2012 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

### Test Yourself

#### Question 1

The purpose of a graduate-level literature review is to summarize in as many words as possible everything that is known about my topic.

- a. True
- b. False

#### Question 2

A literature review is significant because in the process of doing one, the researcher learns to read and critically assess the literature of a discipline and then uses it appropriately to advance his/her own research.

- a. True
- b. False

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### Question 3

Read the following abstract and choose the correct type of literature review it represents.

The focus of this paper centers around timing associated with early childhood education programs and interventions using meta-analytic methods. At any given assessment age, a child's current age equals starting age, plus duration of program, plus years since program ended. Variability in assessment ages across the studies should enable everyone to identify the separate effects of all three time-related components. The project is a meta-analysis of evaluation studies of early childhood education programs conducted in the United States and its territories between 1960 and 2007. The population of interest is children enrolled in early childhood education programs between the ages of 0 and 5 and their control-group counterparts. Since the data come from a meta-analysis, the population for this study is drawn from many different studies with diverse samples. Given the preliminary nature of their analysis, the authors cannot offer conclusions at this point. ([Duncan, Leak, Li, Magnuson, Schindler, & Yoshikawa, 2011 \[https://edtechbooks.org/-EaoJ\]](https://edtechbooks.org/-EaoJ)).

- a. Focused
- b. Synoptic
- c. Meta-analysis
- d. Realist

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### Question 4

Read the following abstract and choose the correct type of literature review it represents.

In this review, Mary Vorsino writes that she is interested in keeping the potential influences of women pragmatists of Dewey's day in mind while presenting modern feminist re readings of Dewey. She wishes to construct a narrowly-focused and succinct literature review of thinkers who have donned a feminist lens to analyze Dewey's approaches to education, learning, and democracy and to employ Dewey's works in theorizing on gender and education and on gender in society. This article first explores Dewey as both an ally and a problematic figure in feminist literature and then investigates the broader sphere of feminist pragmatism and two central themes within it: (1) valuing diversity, and diverse experiences; and (2) problematizing fixed truths. (Vorsino, 2015 [<https://edtechbooks.org/-EaoJ>]).

- a. Scoping
- b. Exploratory
- c. Synoptic
- d. Focused

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### Previous Versions

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## **Linda Frederiksen**

Linda Frederiksen is the Head of Access Services at Washington State University Vancouver. She has a Master of Library Science degree from Emporia State University in Kansas. Linda is active in local, regional and national organizations, projects and initiatives advancing open educational resources and equitable access to information.

## **Sue F. Phelps**

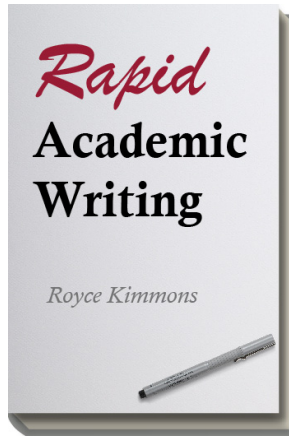
Sue F. Phelps is the Health Sciences and Outreach Services Librarian at Washington State University Vancouver. Her research interests include information literacy, accessibility of learning materials for students who use adaptive technology, diversity and equity in higher education, and evidence based practice in the health sciences

## Royce Kimmons



Dr. Royce Kimmons is an Assistant Professor of Instructional Psychology and Technology at Brigham Young University where he studies digital participation divides specifically in the realms of social media, open education, and classroom technology use. More information about his work may be found at <http://roycekimmons.com>, and you may also dialogue with him on Twitter [@roycekimmons](https://twitter.com/roycekimmons) [<https://twitter.com/roycekimmons>].





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