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REVIEW OF THE LITERATURE

LEARNING OBJECTIVES

1. Explain the reasons for a literature review to defend its use in a study.
2. Organize a literature review consistent with a quantitative, qualitative, or mixed methods approach.
3. Describe the steps typically undertaken when conducting a literature review.
4. Explain how to evaluate literature for inclusion in a literature review.
5. Identify the most frequently used style conventions from APA used in a research study.
6. Identify the types of terms needing definition in a scholarly research report.

INTRODUCTION

Besides selecting a quantitative, qualitative, or mixed methods approach, a first step in conducting research is to identify a topic and review the literature written about it. This chapter continues the discussion about understanding preliminary considerations before launching into a proposal or project. It begins with a discussion about selecting a topic by drafting a title for a study and then determining whether the topic is significant. Then, the chapter addresses the purpose of a literature review and its structural differences for a qualitative, quantitative, or mixed methods study. Next, the chapter addresses criteria for evaluating the quality of the literature. We also present several steps typically undertaken by researchers during the literature review process. Within these steps, the researcher searches databases, prioritizes the importance of literature, writes abstracts (or takes notes), and evaluates the quality of the literature. A literature map can help organize the information. We also recommend following closely the American Psychological Association *Publication Manual* (American Psychological Association, 2020) for important style guides and defining terms when they first appear in a proposal or study.

THE RESEARCH TOPIC

Before considering what literature to use in a project, identify a **topic** to study and reflect on whether it is practical and useful to undertake the study. The topic is the subject or subject matter of a proposed study, such as “faculty teaching,” “organizational creativity,” or “psychological stress.” Describe the topic in a few words or in a short phrase. The topic becomes the central idea to learn about or to explore in a study.

A Draft Title

There are several ways that researchers gain some insight into their topics when they initially plan their research (we assume that the topic is chosen by the researcher and not by an adviser or committee member). One way is to draft a brief working title to the study. We are surprised how often researchers fail to draft a title early in the development of their projects. In our opinion, the working or draft title becomes a major road sign in research—a tangible idea that the researcher refocuses as the project goes on (see Glesne, 2015; Glesne & Peshkin, 1992). It becomes an orienting device. We find that, in our research, this topic provides a central focus for the study and serves as an identifier for others reading or hearing about the subject. When students provide their research project ideas, we often ask them to supply a working title if they do not already have one completed.

How would this working title be written? Try completing this sentence: “My study is about . . .” A response might be, “My study is about at-risk children in the junior high,” or “My study is about helping college faculty become better researchers.” Consider framing a response so that another scholar might easily grasp the meaning of the project. A common shortcoming of beginning researchers is stating their title in complex and erudite language. This perspective often results from reading published articles that present a clean, clear message. However, like all research, they undergo extensive revisions before

being set in print. Good, sound research projects begin with straightforward, uncomplicated thoughts that readers can easily understand. Think about a journal article that you have read recently. If it was easy and quick to read, it was likely written in general language understandable to many readers. It was straightforward in overall design and conceptualization. As a project develops, it will become more complicated, but it should not start in a complex way.

Wilkinson (1991) provided useful advice for creating a title: Be brief and avoid wasting words. Eliminate unnecessary words, such as “An Approach to . . . ,” “A Study of . . . ,” and so forth. Use a single title or a double title. An example of a double title would be “An Ethnography: Understanding a Child’s Perception of War.” In addition to Wilkinson’s thoughts, consider a title no longer than 10 to 12 words, eliminate most articles and prepositions, and include the focus or topic of the study.

In addition to writing a draft title, another strategy for topic development is to pose the topic as a brief question. What question needs to be answered in the proposed study? A researcher might ask, “What treatment is best for depression?” “What does it mean to be Arabic in U.S. society today?” “What brings people to tourist sites in Hawaii?” When drafting questions, focus on the question’s key topic as the major signpost, and consider how to refine the topic to be descriptive of the study

A Significant Topic

Actively elevating this topic to a research study calls for reflecting on whether the topic *can* and *should be* researched. A topic *can* be researched if a researcher has participants willing to serve in the study. It also can be researched if the investigator has resources such as collecting data over a sustained time and using available computer programs to help in the analysis of data.

The question of *should* is a more complex matter. Several factors go into this decision. Perhaps the most important is whether the topic adds to the pool of research knowledge in the literature available on the topic. It might also replicate past studies, lift the voices of underrepresented groups or individuals, help address social justice, or transform the ideas and beliefs of researchers.

A first step in any project is to spend considerable time in the library examining the research on a topic. This point cannot be overemphasized. Beginning researchers may advance a great study that is complete in every way, such as in the clarity of research questions, the comprehensiveness of data collection, and the sophistication of statistical analysis. But the researcher may garner little support from faculty committees or conference planners because the study does not add anything new to the body of research. Ask, “How does this project contribute to the literature?” Consider how the study might address an unexamined topic, extend the discussion by incorporating new elements, or replicate (or repeat) a study in new situations or with new participants. Contributing to the literature may also mean how the study adds to an understanding of a theory or extends a theory (see Chapter 3). It can also mean providing a new perspective or “angle” to the existing literature. For example, the new angle might be one of these:

- Studying an unusual location (e.g., rural America)
- Examining an unusual group of participants (e.g., refugees)
- Taking an unexpected perspective that reverses an expectation (e.g., why marriages do work rather than do not work)
- Providing novel means of collecting data (e.g., collect sounds)
- Presenting results in unusual ways (e.g., graphs that depict geographical locations)
- Studying a timely topic (e.g., immigration issues) (Creswell & Bàez, 2020)

The issue of *should* the topic be studied also relates to whether anyone outside of the researcher’s own immediate institution or environment would be interested in the topic. Given choosing a topic that might be of limited regional interest or one of national interest, we opt for the latter because it has wide appeal to a broad audience. Journal editors, committee members, conference planners, and funding agencies can appreciate research that reaches a broad audience. Finally, the topic may relate to the researcher’s

personal goals. Consider the time it takes to complete a project, revise it, and disseminate the results. All researchers should consider how the study and its heavy commitment of time will pay off. It may pay off in enhancing career goals, conducting more research, obtaining a future position, or advancing toward a degree.

Before proceeding with a proposal or a study, one can weigh these factors and ask others for reactions to a topic. Seek reactions from colleagues, noted authorities in the field, academic advisers, and faculty committee members. We find it helpful to ask students to bring to us a one-page sketch of their proposed project. This sketch includes information about the problem or issue, the central research question, the types of data collected, and the overall significance of the study.

THE PURPOSE AND ORGANIZATION OF A LITERATURE REVIEW

Before searching the literature for a study, consider the intent or purpose of a literature review and plan for its organization. Literature reviews differ for qualitative, quantitative, and mixed methods projects.

Purpose of a Literature Review

The literature review accomplishes several purposes. It shares with the reader the results of other studies that are closely related to the one being undertaken. It relates a study to the larger, ongoing dialogue in the literature, filling in gaps and extending prior studies (Cooper, 2010; Marshall & Rossman, 2022). It provides a framework for establishing the importance of the study and a benchmark for comparing the results with other findings. All or some of these reasons may be the foundation for writing the scholarly literature into a study (see Boote & Beile, 2005, for a more extensive discussion of purposes for compiling a literature review in research). Studies need to add to the body of literature on a topic. Researchers shape literature sections in proposals from the larger problem to the narrower issue. This narrow issue, in turn, leads directly into the methods for studying the issue.

The Organization of the Literature Review

General Forms

In addition to the purpose of a literature review, consider how to organize it. In graduate proposals, it can assume various forms. In one model, the literature becomes additional information in an introduction to a study. In another model, the literature forms a separate chapter in the project. Researchers can name this chapter a “Literature Review” and write the chapter in 20 to 60 pages.

Regardless of the model, our best advice is to seek the opinion of an adviser or faculty mentors as to how they would like to see the literature addressed. We generally recommend to our advisees that the literature review in a proposal or project be brief and provide a summary of the major studies addressing the research problem. It does not need to be fully developed and comprehensive at this point because faculty may ask for major changes in the study at the proposal meeting.

The literature review in a journal article is an abbreviated form found in a dissertation or master’s thesis. It is typically contained in a section called “Related Literature” and follows the introduction to a study. This is the pattern for quantitative research articles in journals. For qualitative research articles the literature review may be found in a separate section, included in the introduction, or threaded throughout the study.

In general, the literature review can take several forms. Cooper (2010) discussed four types: literature reviews that (a) integrate what others have done and said, (b) criticize previous scholarly works, (c) build bridges between related topics, and (d) identify the central issues in a field. Most dissertation and thesis literature reviews integrate what others have done and said, organize it into a series of related topics (often from general topics to narrower ones), and summarize the literature by pointing out the central issues. Regardless of the form, another consideration is how the literature might be presented depending on a qualitative, quantitative, or mixed methods project.

A Qualitative Structure

In *qualitative* research, inquirers use the literature consistent with the assumptions of learning from the participant and not prescribe questions needing answers from the researcher's standpoint. One of the chief reasons for conducting a qualitative study is that the study is exploratory. This usually means that not much has been written about the topic or the population studied, and the researcher seeks to listen to participants and build an understanding based on what they hear.

However, the use of the literature in qualitative research varies considerably. In theoretically oriented studies, such as ethnographies or critical ethnographies, the literature on a cultural concept or a critical theory is introduced early in the report or proposal as an orienting framework. In grounded theory, case studies, and phenomenological studies, literature is less often used to set the stage for the study.

With an approach grounded in learning from participants and variation by type, there are several models for incorporating the literature review into a qualitative study. We offer three placement locations for the literature review, and it can be used in any or all locations. As shown in Table 2.1, the researcher might include the literature review in the introduction. In this placement, the literature provides a useful rationale for the problem or issue. This rationale may present a need for the study based on advancing the importance of studying the issue. This framing of the problem is, of course, contingent on available studies. One can find illustrations of this model in many qualitative studies employing different types of inquiry strategy. For a qualitative study the literature review might explore aspects of the central phenomenon being addressed and divide it into topical areas.

Table 2.1 Using Literature in a Qualitative Study

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Use of the Literature	Criteria	Examples of Suitable Strategy Types
The literature frames the problem in the introduction to the study.	There must be some literature available.	Typically, researchers use this way in all types of qualitative studies.
The literature appears in a separate section	This approach is often acceptable to an audience most familiar with the traditional postpositivist approach to literature reviews.	Researchers with a strong quantitative orientation like this approach.
The literature ends the study; it becomes a basis for comparing and contrasting findings of the qualitative study.	This approach is most suitable for the inductive process of qualitative research; the literature does not guide and direct the study but becomes an aid once patterns or categories have been identified.	Researchers with a strong qualitative orientation like this approach.

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The literature ends the study; it becomes a basis for comparing and contrasting findings of the qualitative study.	This approach is most suitable for the inductive process of qualitative research; the literature does not guide and direct the study but becomes an aid once patterns or categories have been identified.	Researchers with a strong qualitative orientation like this approach.

In a qualitative study, use the literature sparingly in the beginning to convey an inductive design unless the design type requires a substantial literature orientation at the outset. Consider the most appropriate place for the literature in a qualitative study, and base the decision on the audience for the project. Keep in mind the options: placing it at the beginning to frame the problem, placing it in a separate section, and using it at the end to compare with the findings.

A Quantitative Structure

A second form is to review the literature in a separate section, a model typically used in quantitative research, and often found in journals with a quantitative orientation. *Quantitative* research includes substantial literature at the beginning of a study to provide direction for the research questions or hypotheses. It is also used to introduce a problem or detail the existing literature in a section titled "Related Literature" or "Review of Literature" or some other similar phrase. Also, the literature review can introduce a theory—an explanation for expected relationships ___ ____ —describe the theory that will be used, and suggest why it is a useful theory to examine. At the end of a study, the researcher then revisits the literature and compares the results with the existing findings in the literature. In this model, the quantitative researcher uses the literature deductively as a framework for the research questions or hypotheses.

A model for the quantitative structure relates to the variables studied ___ ____ . A model is to write a quantitative literature review of the literature that contains sections about the literature related to major independent variables, major dependent variables, and studies that relate the independent and dependent variables. This approach seems appropriate for dissertations and conceptualizing the literature to be introduced in a journal article. Consider this model literature review to comprise five components: (a) an introduction, (b) Topic 1 (about the independent variable), (c) Topic 2 (about the dependent variable), (d) Topic 3, (studies that address both the independent and dependent variables), and (e) a summary. Here is more detail about each section:

- Introduce the review by telling the reader about the sections included in it. This passage provides a statement about the organization of the section.
- Review Topic 1, addressing the scholarly literature about the *independent* variable or variables. With several independent variables, consider subsections or focus on the single most important variable for the literature review. Remember to address only the literature about the independent variable; keep the literature about the independent and dependent variables separate in this model.
- Review Topic 2, incorporating the scholarly literature about the *dependent* variable or variables. With multiple dependent variables, write subsections about each variable or focus on a single important one.
- Review Topic 3, including the scholarly literature that relates the independent variable(s) to the dependent variable(s). Here we are at the crux of the proposed quantitative study. Thus, this section should be relatively short and contain studies that are extremely close in topic to the proposed study. Perhaps nothing has been written on the topic. Construct a section as close as possible to the topic or review studies that address the topic at a more general level.

- Provide a summary that highlights the most important studies, captures major themes, suggests why more research is needed on the topic, and advances how the proposed study will fill this need.

This model focuses the literature review, relates it closely to the variables in the research questions and hypotheses, and sufficiently narrows the study. It becomes a logical point of departure for the research questions and the method section.

Overall, in a quantitative project, use the literature in a quantitative study deductively—as a basis for advancing research questions or hypotheses. In a quantitative study plan, use the literature to introduce the study, advance a theory, describe related literature in a separate section, and compare findings.

A Mixed Methods Structure

In a *mixed methods* study, the researcher uses either a qualitative or a quantitative approach to the literature, depending on the type of strategy used. In a sequential approach, the literature is presented in each phase consistent with the method being used. For example, suppose the study begins with a quantitative phase. In that case the investigator is likely to include a substantial literature review that helps establish a rationale for the research questions or hypotheses. If the study begins with a qualitative phase, then the literature is substantially less, and the researcher may incorporate it more into the end of the study—an inductive approach. If the research advances a mixed methods study with an equal weight and emphasis on qualitative and quantitative data, then the literature may take either qualitative or quantitative forms. The decision as to which form to use is based on the audience for the study and what would be most receptive to the students' graduate committees and their orientation.

To recap, the literature used in a mixed methods project will depend on the strategy and the relative weight given to the qualitative or quantitative research in the study. In a mixed methods study, use the literature that is consistent with the major type of design and the qualitative or quantitative approach most prevalent in the design .

STEPS IN CONDUCTING A LITERATURE REVIEW

A literature review means locating and summarizing the studies about a topic. Often these are research studies, but they may also include conceptual articles or opinion pieces that provide frameworks for thinking about topics. There is no single way to conduct a literature review, but many scholars proceed systematically to capture, evaluate, and summarize the literature. The steps mentioned next provide an overview of the process of searching for the literature. Researchers may not follow the steps precisely as presented here. Often the process of research requires an iterative process of searching and then re-searching the literature until finding appropriate material. Here is the way we recommend:

1. Begin by identifying key words, which are useful in locating materials in an academic library at a college or university. These key words may emerge in identifying a topic or result from preliminary readings. For example, a researcher may start with the broad term, "mental health" and, after searching the literature, narrow the term to "autism spectrum disorder," and then further specify multiple terms, such as "family factors, support, autism spectrum disorder" that serve to narrow the focus of the search.
2. With the key words in mind, use your home computer to search the databases for holdings (i.e., journals and books). Most major libraries have computerized databases. Search general databases, including ERIC, Google Scholar, Web of Science, EBSCO, ProQuest, and JSTOR. These cover a broad range of disciplines.
3. Initially, try to locate about 50 reports of research in articles or books related to your topic. Set a priority on the search for journal articles and books because they are easy to locate and obtain. Determine whether these articles and books exist in an academic library or whether they need to be obtained from an interlibrary loan or purchased through a bookstore.
4. Skim this initial group of articles or chapters, and collect those central to your topic. Throughout this process, simply try to obtain a sense about whether the article or chapter will make a useful contribution to your understanding of the literature (see the evaluation criteria to follow).
5. As you identify useful literature, begin designing a literature map (to be discussed more fully later). This is a visual picture (or figure) of groupings of the literature on the topic that illustrates how your particular study will add to the existing literature and position your study within the larger body of research.

6. As you put together the literature map, also begin to draft summaries of the most relevant articles. Combine these summaries into the final literature review that you write for your proposal or research study. Include precise references to the literature using an appropriate style guide, such as the *Publication Manual* (American Psychological Association, 2020) for complete references to use at the end of the proposal or study.
7. After summarizing the literature, assemble the literature review, structuring it thematically or organizing it by important concepts. End the literature review with a summary of the major themes, and suggest how the study further adds to the literature and addresses a gap in the themes. This summary should also point toward the methods (i.e., data collection and data analysis) to be written after the literature review. In this summary, a researcher could also advance a critique of the past literature and point out deficiencies in it and issues in its methods (see Boote & Beile, 2005).

SEARCHING THE LITERATURE

The literature search requires knowing databases to search, prioritizing the types of literature available, assessing the quality of the literature before including it in a review, developing written notes or abstracts for each source, and organizing the literature through a visual map.

Computer Databases

To facilitate collecting relevant material, use computerized databases for accessing the literature. **Computer databases of the literature** are available through the internet, and they provide easy access to thousands of journals, conference papers, and materials on many different topics. Academic libraries at major universities house commercial and public domain databases. We will review only a few of the major databases available, but they represent major sources of information for literature reviews.

- ERIC is a free online digital library of education research and information sponsored by the Institute of Education Sciences (IES) of the U.S. Department of Education. ERIC provides a search of 1.4 million items indexed since 1966. It is found on the internet at http://eric.ed.gov. The collection includes journal articles, books, research syntheses, conference papers, technical reports, policy papers, and other education-related materials. To best use ERIC, identify appropriate descriptors for your topic, as in the terms used by indexers to categorize articles or documents. Researchers can search through the *Thesaurus of ERIC Descriptors* (Educational Resources Information Center, 1975) or browse the online thesaurus.

- Another free database to search is Google Scholar. It is located on the internet at scholar.google.com. It provides a way to broadly search for literature across many disciplines and sources, such as peer-reviewed papers, theses, books, abstracts, and articles from academic publishers, professional societies, universities, and other scholarly organizations. The articles identified in a Google Scholar search provide links to abstracts, related articles, electronic versions of articles affiliated with a library specified, web searches for information about this work, and opportunities to purchase the full text of the article.

- Researchers can obtain abstracts to publications in the health sciences through the free-access PubMed (www.ncbi.nlm.nih.gov). It is available at pubmed.gov on the internet. This database is a service of the U.S. National Library of Medicine, and it includes over 17 million citations from MEDLINE and life science journals for biomedical articles going back to the 1950s. PubMed includes links to full-text articles (located in academic libraries) and other related resources. A PubMed User Guide is available at pubmed.ncbi.nlm.nih.gov. This guide provides useful information about steps in searching by citation, author, journal, and date of publication.

- Also available is ProQuest (proquest.com), which enables a researcher to search many different databases, and it is one of the largest online content repositories in the world. It advertises that it holds the world's largest collection of dissertations and theses.

- Another database is EBSCO (ebsco.com). It is a mega-database featuring many specialized databases. Because EBSCO taps into many different databases, it can be one search tool to use before using more specialized databases. It is also an online research service, including full-text databases, subject indexes, point-of-care medical references, historical digital archives, and e-books. The company provides access to more than 350 databases and nearly 300,000 e-books.

- Scopus is an institutional-subscription database for literature. It advertises as the largest abstract and citation database of peer-reviewed literature, scientific journals, books and conference proceedings. It is available from Elsevier Publications.
- Consider the Directory of Open Access Journals (DOAJ). This database is a specialized academic database in that all the articles indexed are open access and can be accessed free of charge. Open access means that the copyright holder of a scholarly work grants usage rights to others using an open license. This database contains more than 7 million articles and 17,500 journals. It was a service launched in 2003, and it covers all areas of science, technology, medicine, social sciences, arts and humanities.
- Other more specialized commercially licensed databases found in many academic libraries include Sociological Abstracts (Cambridge Scientific Abstracts), available under ProQuest in academic libraries, and PsycINFO (www.apa.org).

In summary, our research tips for searching computer databases are to do the following:

- Use both the free, online literature databases and those available through your institutional academic library.
- Search several databases, even if you feel that your topic is not strictly education, as found in ERIC, or psychology, as found in PsycINFO. Both ERIC and PsycINFO view education and psychology as broad terms for many topics.
- Use guides to terms to locate your articles, such as a thesaurus, when available.
- A process for conducting a search is to locate recent journal articles and documents on a topic. Conduct a preliminary search using descriptors from the online thesaurus and locating a journal article or document on a topic. Then look closely at the descriptors used in this article and document, and run another search using these terms. This procedure will maximize the possibility of obtaining a good list of articles for your literature review.
- Use databases that provide access to full-text copies of your articles (through academic libraries, the internet connection to a library, or for a fee) as much as possible to reduce the amount of time searching for copies of your articles. Consider searching the free DOAJ.

Types of Literature

With so much literature available, we recommend a priority for reviewing the different types of literature to maximize the time spent in search. Also, there is a need to evaluate the quality of the information gathered and to apply a set of criteria for assessing whether the information should be included in the review.

Priority of the Literature

We use a priority for a search of the literature to save time. What types of literature might be reviewed, and in what priority? If you are examining a topic for the first time and unaware of the research, start with *broad syntheses of the literature*, such as overviews found in encyclopedias (e.g., Aikin, 1992; Keeves, 1988). You might also look for summaries of the literature on your topic presented in journal articles or abstract series (e.g., *Annual Review of Psychology, 1950–*).

Next, turn to *journal articles in respected scientific journals*—especially those that report research studies. By *research*, we mean that the author or authors pose a question or hypothesis, collect data, and answer the question or hypothesis with the data. There are journals widely read in your field, and typically they are publications with a high-quality editorial board comprising leading scientists. Start with the most recent issues of the journals, look for studies about a topic, and then work backward in time. Follow up on references at the end of the articles for more sources to examine.

Turn to *books* related to the topic. Begin with research monographs that summarize the scholarly literature. Then consider entire books on a single topic by an author or group of authors or books that contain chapters written by different authors. Follow this search by looking for *recent conference papers*. Look for major national conferences and the papers delivered at them. Often conference papers report the latest research developments. Most major conferences either require or request that authors submit their papers for inclusion in computerized indices. Contact authors of pertinent studies. Seek them out at conferences. Write or phone them, asking if they know studies related to an area of interest, and inquire if they have an instrument that might be used or modified for use in a study.

The *web* also provides helpful materials for a literature review. The easy access and ability to capture entire articles enhances the attractiveness of the material. However, evaluate these articles carefully for quality, and be cautious about whether they represent rigorous, thoughtful, and systematic research suitable for use in a literature review.

Overall Evaluation Quality

Before including the literature in a research proposal or study, evaluate the quality of the material. Only high-quality literature should be included. How would a researcher judge the quality? For journals, find articles from nationally refereed publications. These are journals with an editorial review board. Journal issues list editorial board members typically in the first few pages of an issue. Online journals, in addition, often include articles that have undergone rigorous reviews by editorial boards. Check whether the journal has a refereed editorial board that reviews manuscripts and has published standards for accepting manuscripts in an editorial statement.

For books, look at publishers with name recognition and length of service over many years. An online search can provide information about the publishing house. We generally recommend books (and journal articles) published in the last 10 years. Conference papers can provide useful, high-quality information if the paper is included as a paper in a recent conference. If reporting in literature review web studies, look for literature that has been reviewed for quality. Contacting the web source can provide this useful information. Further, advisers or mentors can recommend high-quality literature to include in a proposal or study.

Abstracting the Literature

When reviewing the literature, it is helpful to develop abstracts of the studies to later include in the review. An **abstract** is a brief review of the literature (typically a short paragraph) that summarizes major elements to enable a reader to understand the basic features of the article or book. Researchers need to consider what material to extract and summarize when developing an abstract. This is important information when reviewing perhaps dozens, if not hundreds, of studies.

Components of an Abstract

A model for developing an abstract exists in the abstracts for journal articles. A good summary of a research study reported in a journal for a data-based article might include the following points in an abstract:

- Mention the problem being addressed.
- State the central purpose or focus of the study.
- Briefly state information about the sample, population, or subjects.
- Review key results that relate to the proposed study.
- If it is a critique or methods review (Cooper, 2010), point out technical and methodological flaws in the study.

In addition to examining abstracts, there are other places in a study to look for these parts. In well-crafted journal articles, the problem and purpose statements are clearly stated in the introduction. Information about the sample, population, or subjects is found midway through in a method (or procedure) section. In the results sections, look for passages in which the researchers report information to answer or address each research question or hypothesis. For book-length research studies, look for the same points.

Theoretical, Conceptual, and Methodological Abstracts

How are studies advancing the methods of research, theories, typologies, or syntheses of past research abstracted because these are not research studies? The material to be extracted from these non-empirical studies would be as follows (see Example 2.1):

- Mention the problem addressed by the article or book.
- Identify the central theme of the study.
- State the major conclusions related to this theme.
- If the review type is methodological, mention flaws in reasoning, logic, force of argument, and so forth.

Example 2.1 Components of a Methodological Journal Article Abstract

The following abstract for an article advancing quality criteria for mixed methods research (Hirose & Creswell, 2022) illustrates the major components of a methodological article:

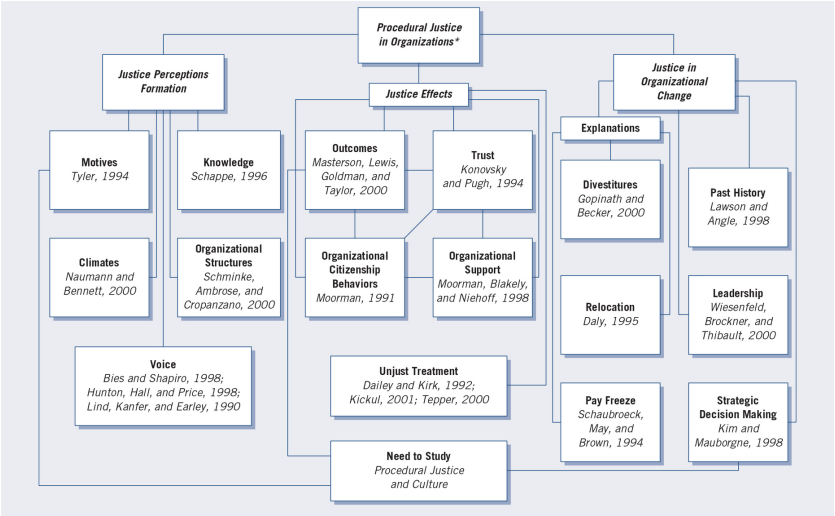
Recent published articles and comments by researchers, federal recommendations, and professional association standards have recommended core quality criteria for designing and writing mixed methods research. Unfortunately, a synthesis of recent timely recommendations has not been made, and we can draw guidance from them for detailed guidance for beginning researchers (*the research problem*). This article presents six best practices in mixed methods culled from recent sources, discusses the need for each practice, and then illustrates its use in a recent empirical study from Japan (*the purpose of the study and the topics addressed)*. This article contributes to the field of mixed methods methodology by providing a parsimonious list of core criteria based on synthesizing three recent influential recommendations to illustrate a state-of-the-art set of core quality criteria.

This abstract is short because it was limited to only 120 words as stated in the author's guidelines for the journal. Still, it represents a concise abstract for a methodological article that conveys the purpose, and the major topics in the study. Also, the final sentence mentions the contribution of the article to the field of mixed methods. Stating the contribution reflects the criteria required by the journal.

A Literature Map

One of the first tasks for a researcher working with a new topic is to organize the literature. As mentioned earlier, this organization enables a person to understand how the proposed study adds to, extends, or replicates research completed.

A useful approach for this step is to design a literature map (see Figure 2.1). This is an idea that we developed several years ago, and it has been a useful tool for students to use when organizing their review of the literature for making presentations to graduate committees, summarizing the literature for a scholarly presentation, or composing an article for journal publication.



Description

Figure 2.1 An Example of a Literature Map

*Employees' concerns about the fairness of and the making of managerial decisions

Source: Janovec (2001).

The **literature map** presents a visual summary of the literature, positions the current researcher's study within this existing literature, and represents this alignment in a figure. Maps are organized in different ways. One could be a hierarchical structure with a top-down presentation of the literature, ending at the bottom with the proposed study. Another might be like a flowchart in which the reader understands the literature as unfolding from left to right, with the farthest right-hand section advancing a proposed study. A third model might be a series of circles; each circle represents a body of literature and the intersection of the circles as the place indicating the need for future research. We have seen examples of these possibilities and found them all effective.

The central idea is that the researcher begins to build a visual picture of existing research about a topic. This literature map presents an overview of existing literature. Figure 2.1 is an illustration of a map that shows the literature found on procedural justice in organizational studies (Janovec, 2001). Janovec's map illustrates a hierarchical design, and she used several principles of good map design:

- She placed her topic in the box at the top of the hierarchy.
- Next, she took the studies that she found in computer searches, located copies of these studies, and organized them into three broad subtopics (i.e., Justice Perceptions Formation, Justice Effects, and Justice in Organizational Change). For another map, the researcher may have more or fewer than three major categories, depending on the extent and publications on the topic.
- Within each box are labels that describe the nature of the studies in the box (i.e., outcomes).
- Also within each box are references to major citations illustrating its content. It is useful to use current and illustrative references of the topic of the box and to briefly state the references in an appropriate style, such as APA (American Psychological Association, 2020).
- She included several levels for her literature map. In other words, major topics lead to subtopics and then to sub-subtopics.
- Some branches of the chart are more developed than others. The extent of development depends on the amount of literature available and the depth of the exploration of the literature by the researcher.

- After organizing the literature into a diagram, Janovec (2001) next considered the branches of the figure that provided a springboard for her proposed study. She placed a “Need to Study” (or proposed study) box at the bottom of the map, she briefly identified the nature of this proposed study (Procedural Justice and Culture), and she then drew lines to past literature that her project would *extend*. She proposed this study based on ideas written by other authors in the future research sections of their studies.
- In this way, a reader could see how her study added to the existing literature by building on the three broad categories of literature.
- Although not evident in her map, she included quantitative, qualitative, and mixed methods studies in her literature map.
- Finally, she could have written a narrative description of the literature map for her committee or presentation. In it, she could discuss the heading box at the top of the map and the databases reviewed. She could have specified the divisions of the literature into broad topics and indicated the specific topic that she planned to study (at the bottom box of the map). Finally she could discuss how her topic expanded branches in the literature (the connecting lines).

Composing a literature map is challenging. You need to do the following:

- *Educate readers*. Individuals seeing this map for the first time may not be familiar with this approach to organizing the literature. Carefully explain the intent of the map and the position of your study within it.
- *Take the time necessary.* It takes time to develop such a map and locate literature to put into the map. For a preliminary map, we consider collecting maybe 25 studies. For a full literature map for a dissertation or thesis, this number may expand to 100 studies or more.
- *Limit the branches leading to your study.* Figuring out how your study adds to the literature takes some time. Select one or two subdivisions that your study will extend, and then draw the lines from your proposed topic to the subdivisions.
- *Consider the broad topic.* Consider carefully the broad topic at the top of the map. This is the topic to which your literature map adds. Ask others who know the literature to see how they would group the studies stemming from the broad topic.
- *Revise the map.* Go through several versions of the map. Develop a preliminary map, write the discussion, and solicit feedback from others.
- *Draw with a software program.* Use a software program to draw the figure, such as a Word document or a PowerPoint slide.