A first step in any project is to spend considerable time in the library examining the research on a topic (strategies for effectively using the library and library resources appear later in this chapter). 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 a topic that has yet to be examined, extend the discussion by incorporating new elements, or replicate (or repeat) a study in new situations or with new participants.

The issue of *should* the topic be studied also relates to whether anyone outside of the researcher's own immediate institution or area would be interested in the topic. Given a choice between a topic that might be of limited regional interest or one of national interest, I would opt for the latter because it would have wide appeal to a much broader audience. Journal editors, committee members, conference planners, and funding agencies all appreciate research that reaches a broad audience. Finally, the *should* issue also relates 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 in enhancing career goals, whether these goals relate to doing more research, obtaining a future position, or advancing toward a degree.

Before proceeding with a proposal or a study, one needs to weigh these factors and ask others for their reaction to a topic under consideration. Seek reactions from colleagues, noted authorities in the field, academic advisers, and faculty committee members.

THE LITERATURE REVIEW

Once the researcher identifies a topic that can and should be studied, the search can begin for related literature on the topic. 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, 1984; Marshall & Rossman, 2006). It provides a framework for establishing the importance of the study as well as 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 Miller, 1991 for a more extensive discussion of purposes for using literature in a study).

The Use of the Literature

Beyond the question of why literature is used is the additional issue of how it is used in research and proposals. It can assume various forms. My best advice is to seek the opinion of your adviser or faculty members as to how they would like to see the literature addressed. I generally recommend to my advisees that the literature review in a proposal be brief and summarize the major literature on the research problem; it does not need to be fully developed and comprehensive at this point, since faculty may ask for major changes in the study at the proposal meeting. In this model, the literature review is shorter—say 20 pages in length—and tells the reader that the student is aware of the literature on the topic and the latest writings. Another approach is to develop a detailed outline of the topics and potential references that will later be developed into an entire chapter, usually the second, titled "Literature review," which might run from 20 to 60 pages or so.

The literature review in a journal article is an abbreviated form of that found in a dissertation or master's thesis. It typically is 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. Regardless of the form, another consideration is how the literature might be reviewed, depending on whether a qualitative, quantitative, or mixed methods approach has been selected.

In *qualitative* research, inquirers use the literature in a manner consistent with the assumptions of learning from the participant, not prescribing the questions that need to be answered 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 being studied, and the researcher seeks to listen to participants and build an understanding based on what is heard.

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 of qualitative research, there are several models for incorporating the literature review. I offer three placement locations, and it can be used in any or all of these locations. As shown in Table 2.1, the research might include the literature review in the introduction. In this placement, the literature provides a useful backdrop for the problem or issue that has led to the need for the study, such as who has been writing about it, who has studied it, and who has indicated 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.

Table 2.1 Using Literature in a Qualitative Study

Use of the Literature	Criteria	Examples of Suitable Strategy Types
The literature is used to frame the problem in the introduction to the study.	There must be some literature available.	Typically, literature is used in all qualitative studies, regardless of type.
The literature is presented in a separate section as a review of the literature.	This approach is often acceptable to an audience most familiar with the traditional postpositivist approach to literature reviews.	This approach is used with those studies employing a strong theory and literature background at the beginning of a study, such as ethnographies and critical theory studies.
The literature is presented in the study at the end; 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.	This approach is used in all types of qualitative designs, but it is most popular with grounded theory, where one contrasts and compares a theory with other theories found in the literature.

A second form is to review the literature in a separate section, a model typically used in quantitative research, often found in journals with a quantitative orientation. In theory-oriented qualitative studies, such as ethnography, critical theory, or an advocacy or emancipatory aim, the inquirer might locate the theory discussion and literature in a separate section, typically toward the beginning of the write-up. Third, the researcher may incorporate the related literature in the final section, where it is used to compare and contrast with the results (or themes or categories) to emerge from the study. This model is especially popular in grounded theory studies, and I recommend it because it uses the literature inductively.

Quantitative research, on the other hand, includes a substantial amount of literature at the beginning of a study to provide direction for the research questions or hypotheses. It is also used there to introduce a problem or to describe in 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 (see Chapter 3), describe the theory that will be used, and suggest why it is a useful theory to examine. At the end of a study, the literature is revisited by the researcher, and a comparison is made between

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.

Cooper (1984) suggests that literature reviews can be *integrative*, in which the researchers summarize broad themes in the literature. This model is popular in dissertation proposals and dissertations. A second form recommended by Cooper is a *theoretical* review in which the researcher focuses on extant theory that relates to the problem under study. This form appears in journal articles in which the author integrates the theory into the introduction. A final form suggested by Cooper is a *methodological* review, where the researcher focuses on methods and definitions. These reviews may provide both a summary of studies and a critique of the strengths and weaknesses of the methods sections. This last form is not seen frequently today in dissertations and theses.

In a *mixed methods* study, the researcher uses either a qualitative or a quantitative approach to the literature, depending on the type of strategy being used. In a sequential approach, the literature is presented in each phase in a way consistent with the method being used. For example, if the study begins with a quantitative phase, then the investigator is likely to include a substantial literature review that helps to 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 researcher advances a concurrent study with an equal weight and emphasis on both qualitative and quantitative data, then the literature may take either qualitative or quantitative forms. To recap, the literature use in a mixed methods project will depend on the strategy and the relative weight given to the qualitative or quantitative research in the study.

My suggestions for using the literature in planning a qualitative, quantitative, or mixed methods study are as follows:

- In a *qualitative* study, use the literature sparingly in the beginning in order 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 and contrast with the findings.

- 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, describe related literature in a separate section, and to compare findings.

- If a separate review is used, consider whether the literature will be integrative summaries, theoretical reviews, or methodological reviews. A typical practice in dissertation writing is to advance an integrative review.
- In a *mixed methods* study, use the literature in a way that is consistent with the major type of strategy and the qualitative or quantitative approach most prevalent in the design.

Design Techniques

Regardless of the type of study, several steps are useful in conducting a literature review.

Steps in Conducting a Literature Review

A literature review means locating and summarizing the studies about a topic. Often these are research studies (since you are conducting a research study), but they may also include conceptual articles or thought pieces that provide frameworks for thinking about topics. There is no single way to conduct a literature review, but many scholars proceed in a systematic fashion to capture, evaluate, and summarize the literature. Here is the way I recommend:

1. Begin by identifying key words, useful in locating materials in an academic library at a college or university. These key words may emerge in identifying a topic or may result from preliminary readings.

2. With these key words in mind, next go to the library and begin searching the catalog for holdings (i.e., journals and books). Most major libraries have computerized databases, and I suggest you focus initially on journals and books related to the topic. Also, begin to search the computerized data bases that are typically reviewed by social science researchers, such as ERIC, PsycINFO, Sociofile, the Social Science Citation Index, Google Scholar, ProQuest, and others (these are reviewed later in some detail). These databases are available online using the library's Web site or they may be available on CD-ROM.

3. Initially, try to locate about 50 reports of research in articles or books related to research on 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 your academic library or whether you need to send for them by interlibrary loan or purchase them through a bookstore.

4. Skim this initial group of articles or chapters, and duplicate those that are central to your topic. Throughout this process, simply try to obtain a sense as to whether the article or chapter will make a useful contribution to your understanding of the literature.

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 contribute to the literature, positioning your own 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. These summaries are combined 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 American Psychological Association (APA) style manual (APA, 2001) so that you have a complete reference 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 your particular study further adds to the literature.

Searching Computerized Databases

To ease the process of collecting relevant material, there are some techniques useful in accessing the literature quickly through databases. **Computer databases of the literature** are now available in libraries, and they quickly provide access to thousands of journals, conference papers, and materials on many different topics. Academic libraries at major universities have purchased commercial databases as well as obtained databases in the public domain. Only a few of the major databases available will be reviewed here, but they are the major sources to journal articles and documents that you should consult to determine what literature is available on your topic.

ERIC (Educational Resources Information Center) 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. This database can be found at http://www.eric.ed.gov, and ERIC provides a search of 1.2 million items indexed since 1966. The collection includes journal articles, books, research syntheses, conference papers, technical reports, policy papers, and other education-related materials. ERIC indexes more than 600 journals, and links are available to full-text copies of many of the materials. To best utilize ERIC, it is important to identify appropriate descriptors for your topic, the terms used by indexers to categorize article or documents. Researchers can search through the *Thesaurus of ERIC Descriptors* (Educational Resources Information Center, 1975) or browse the online thesaurus. A **research tip** in conducting an ERIC search is to locate recent journal articles and documents on your topic. This process can be enhanced by conducting a preliminary search using descriptors from the online thesaurus and locating a journal article or document which is on your 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.

Another free database to search is Google Scholar. 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 you specify, 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. This database is a service of the U.S. National Library of Medicine, and it includes over 17 million citations from MEDLINE and other life science journals for biomedical articles going back to the 1950s (www.ncbi.nlm.nih.gov). PubMed includes links to full-text articles (located in academic libraries) and other related resources. To search PubMed, the researcher uses MeSH (Medical Subject Headings) terms, the U.S. National Library of Medicine's controlled vocabulary thesaurus used for indexing articles for MEDLINE/PubMed. This MeSH terminology provides a consistent way to retrieve information about topics that may be described using different terms.

Academic libraries also have site licenses to important commercial databases. One typically available is ProQuest (http://proquest.com), which enables a researcher to search many different databases, and it is one of the largest online content repositories in the world. For example, you can search ERIC, PsycINFO, Dissertation Abstracts, Periodicals Index, Health and Medical Complete, and many more specialized databases (e.g., International Index to Black Periodicals). Because it taps into many different databases, it can be one search tool to use before using more specialized databases.

Another commercially licensed database found in many academic libraries is *Sociological Abstracts* (Cambridge Scientific Abstracts, http://www.csa.com). This database indexes over 2,000 journals, conference papers, relevant dissertation listings, book reviews, and selected books in sociology, social work, and related disciplines. For literature in the field of psychology and related areas, consult another commercial database, *PsycINFO* (http://www.apa.org). This database indexes 2,150 journal titles, books, and dissertations from many countries. It covers the field of psychology as well as psychological aspects of related disciplines, including medicine, psychiatry, nursing, sociology, education, pharmacology, physiology, linguistics, anthropology, business, and law. It has a Thesaurus of Psychological Index Terms to locate useful terms in a literature search.

A final commercial database available in libraries is The *Social Sciences Citation Index* (SSCI, Web of Knowledge, Thomson Scientific [http://isiwebofknowledge.com]). It indexes 1,700 journals spanning 50 disciplines and

selectively indexes relevant items from over 3,300 scientific and technical journals. It can be used to locate articles and authors who have conducted research on a topic. It is especially useful in locating studies that have referenced an important study. The SSCI enables you to trace all studies since the publication of the key study that have cited the work. Using this system, you can develop a chronological list of references that document the historical evolution of an idea or study. This chronological list can be most helpful in tracking the developing of ideas about your literature review topic.

In summary, my **research tips** for searching computer databases are to

- Use both the free, online literature databases as well as those available through your 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.
- Locate an article that is close to your topic, then look at the terms used to describe it, and use these terms in your search.
- Use databases that provide access to full-text copies of your articles (through academic libraries or for a fee) as much as possible so that you can reduce the amount of time searching for copies of your articles.

A Priority for Selecting Literature Material

I recommend that you establish a priority in a search of the literature. What types of literature might be reviewed and in what priority? Consider the following:

1. Especially if you are examining a topic for the first time and unaware of the research on it, 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–*).

2. Next, turn to journal articles in respected, national journals, especially those that report research studies. By *research*, I mean that the author or authors pose a question or hypothesis, collect data, and try to answer the question or hypothesis. There are journals widely read in your field, and typically they are publications with a high-quality editorial board consisting of individuals from around the United States or abroad. By turning to the first few pages, you can determine if an editorial board is

listed and whether it is made up of individuals from around the country or world. Start with the most recent issues of the journals and look for studies about your topic and then work backward in time. Follow up on references at the end of the articles for more sources to examine.

3. 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 a single author or group of authors or books that contain chapters written by different authors.

4. Follow this search by 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. Make contact with authors of pertinent studies. Seek them out at conferences. Write or phone them, asking if they know of studies related to your area of interest and inquire also if they have an instrument that might be used or modified for use in your study.

5. If time permits, scan the entries in *Dissertation Abstracts* (University Microfilms, 1938). Dissertations vary immensely in quality, and one needs to be selective in choosing those to review. A search of the *Abstracts* might result in one or two relevant dissertations, and you can request copies of them through interlibrary loans or through the University of Michigan Microfilm Library.

6. The Web also provides helpful materials for a literature review. The easy access and ability to capture entire articles makes this source of material attractive. However, screen these articles carefully for quality and be cautious about whether they represent rigorous, thoughtful, and systematic research suitable for use in a literature review. Online journals, on the other hand, often include articles that have undergone rigorous reviews by editorial boards. You might check to see if the journal has a refereed editorial board that reviews manuscripts and has published standards for accepting manuscripts in an editorial statement.

In summary, I place refereed journal articles high on the list because they are the easiest to locate and duplicate. They also report research about a topic. Dissertations are listed lower in priority because they vary considerably in quality and are the most difficult reading material to locate and reproduce. Caution should be used in choosing journal articles on the Web unless they are part of refereed online journals.

A Literature Map of the Research

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 already completed.

A useful approach for this step is to design a literature map. This is an idea that I came up with 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 or summarizing the literature for a scholarly presentation or a journal article publication.

This map is a visual summary of the research that has been conducted by others, and it is typically represented 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 similar to 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, with each circle representing a body of literature and the intersection of the circles the place in which the future research is indicated. I have seen examples of all 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 four 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 references that are current, illustrative of the topic of the box and to briefly state the references in an appropriate style, such as APA.

- Consider several levels for the literature map. In other words, major topics lead to subtopics and then to sub-subtopics.

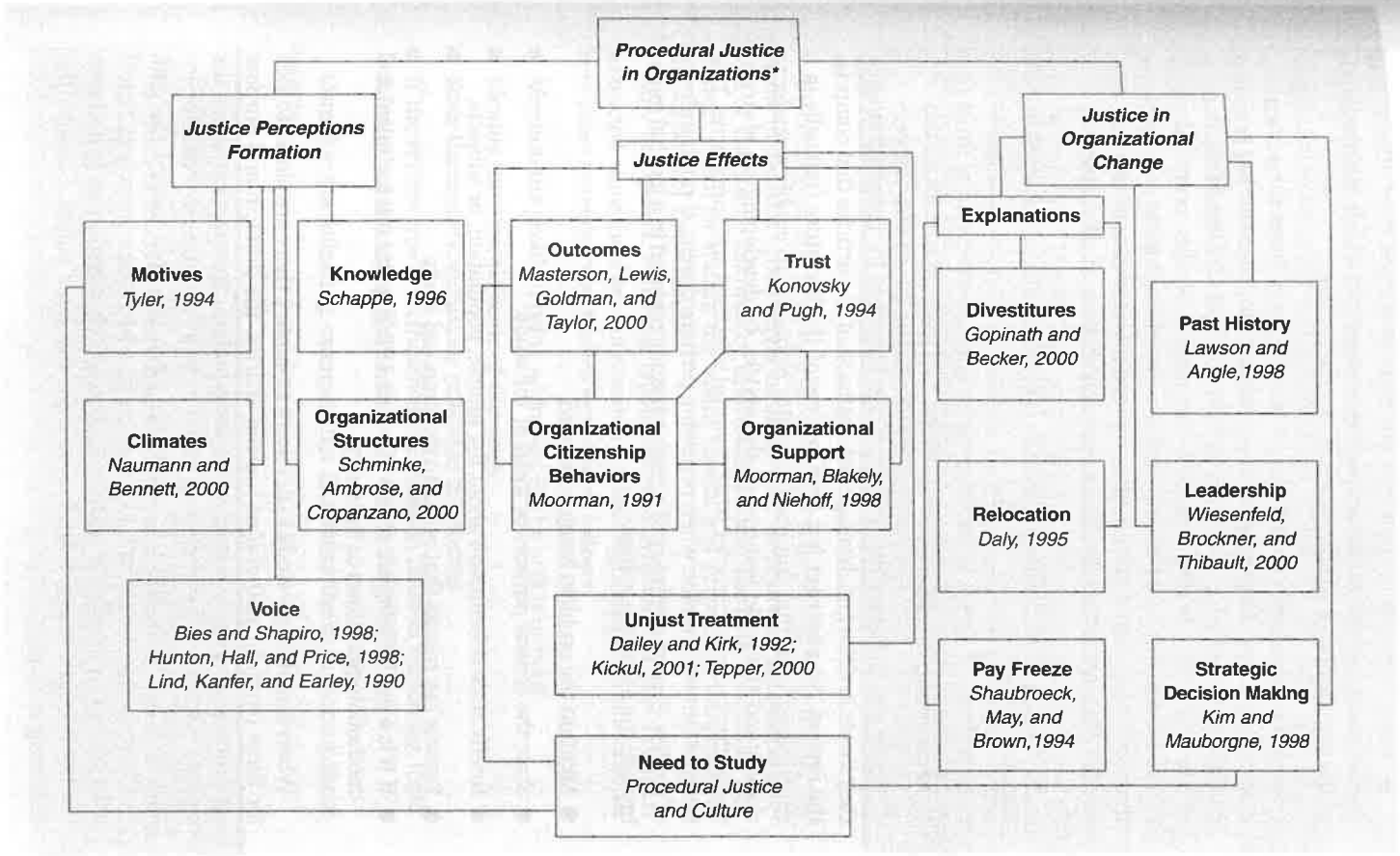

Figure 2.1 An Example of a Literature Map

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

SOURCE: Janovec (2001). Reprinted by permission.

- Some branches of the chart are more developed than others. This 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 next considered the branches of the figure that provide 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.

- Include quantitative, qualitative, and mixed methods studies in your literature map.

Abstracting Studies

When researchers write reviews of the literature for proposed studies, they locate articles and develop brief abstracts of the articles that comprise the review. An **abstract is a brief review of the literature (typically in a short paragraph) that summarizes major elements, to enable a** reader to understand the basic features of the article. In developing an abstract, researchers need to consider what material to extract and summarize. This is important information when reviewing perhaps dozens, if not hundreds, of studies. A good summary of a research study reported in a journal might include the following points:

- 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 methodological review (Cooper, 1984), point out technical and methodological flaws in the study.

When examining a study to develop a summary, there are places 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, and the results are often reported toward the end. 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. Consider the following example:

Example 2.1 *Literature Review in a Quantitative Study*

Here follows a paragraph summarizing the major components of a quantitative study (Creswell, Seagren, & Henry, 1979), much like the paragraph might appear in a review of the literature section of a dissertation or a journal article. In this passage, I have chosen key components to be abstracted.

> Creswell, Seagren, and Henry (1979) tested the Biglan model, a three-dimensional model clustering 36 academic areas into hard or soft, pure or applied, life or nonlife areas, as a predictor of chairpersons' professional development needs. Eighty department chairpersons located in four state colleges and one university of a Midwestern state participated in the study. Results showed that chairpersons in different academic areas differed in terms of their professional development needs. Based on the findings, the authors recommended that those who develop inservice programs need to consider differences among disciplines when they plan for programs.

My colleagues and I began with an in-text reference in accord with the format in the APA (2001) style manual. Next, we reviewed the central purpose of the study, followed by information about the data collection. The abstract ended by stating the major results and presenting the practical implications of these results.

How are essays, opinions, typologies, and syntheses of past research abstracted, since these are not research studies? The material to be extracted from these nonempirical studies would be as follows:

- Mention the problem being 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.

Consider the following example that illustrates the inclusion of these aspects:

Example 2.2 *Literature Review in a Study Advancing a Typology*

Sudduth (1992) completed a quantitative dissertation in political science on the topic of the use of strategic adaptation in rural hospitals. He reviewed

(Continued)