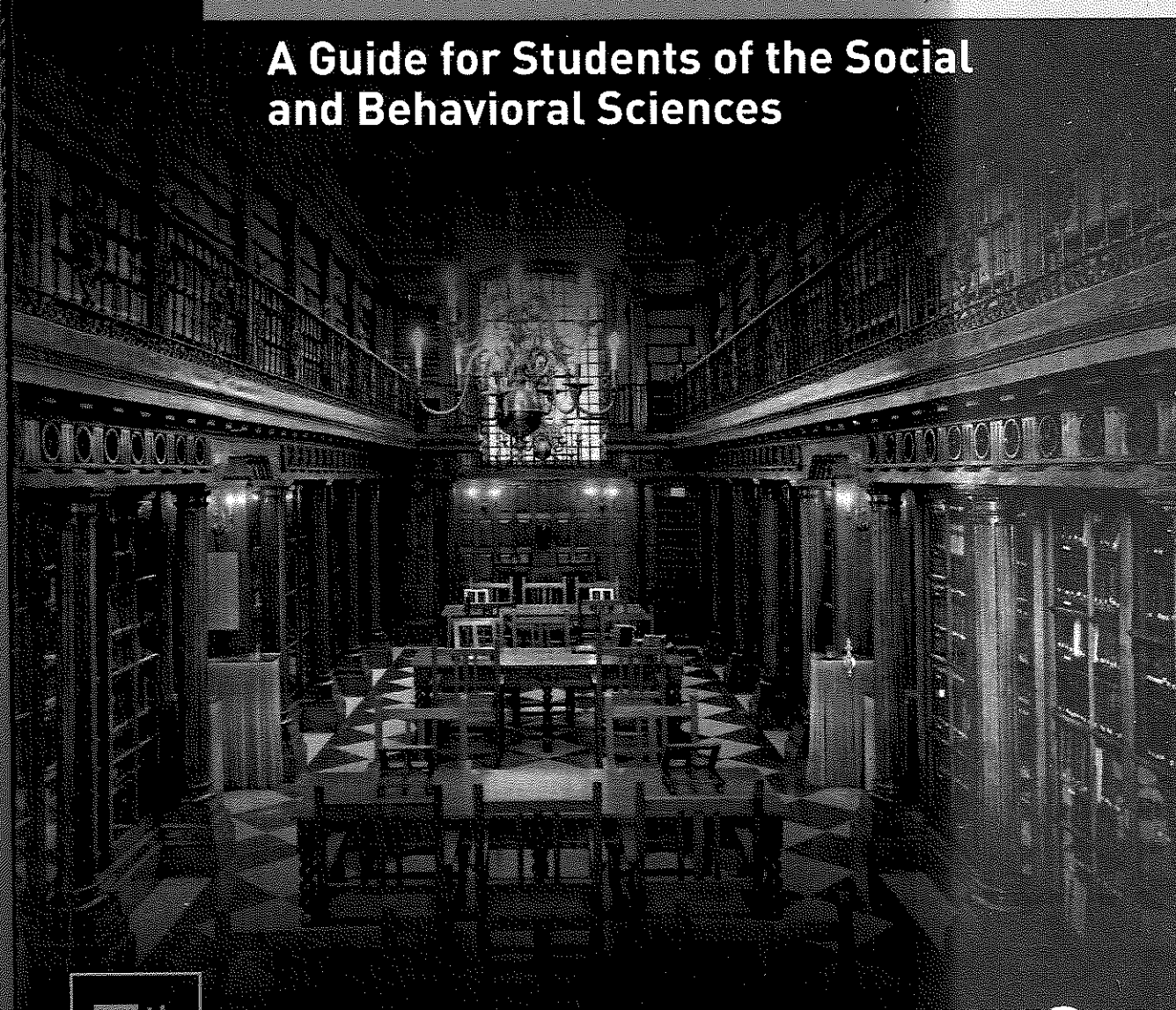


WRITING LITERATURE REVIEWS

**A Guide for Students of the Social
and Behavioral Sciences**



7th

EDITION

Jose L. Galvan and Melisa C. Galvan

ROUTLEDGE



Chapter 3

Selecting a Topic for Your Review

"Where should I begin?" This may be the question most commonly asked by students preparing to write a literature review. While there is no easy answer, this chapter was designed to illustrate the process used by many professional writers and researchers in getting started. Keep in mind that writing is an individual process, so the procedures described here are intended as a roadmap rather than a prescription. By working through this chapter, you will be able to develop two important products that will help you to begin writing an effective literature review: a written description of your topic and a working draft of your reading list.

Obviously, the first step in any kind of academic writing is to decide what you will write about, but the specific path you follow in working through this step will vary depending on your purpose for writing a literature review. Chapter 1 described the three most common reasons for writing literature reviews.

✓ Step 1: Define Your General Topic

In any type of literature review you should narrowly define your topic. Example 3.1.1 presents a topic that is much too general. In fact, it is the title of a survey course taught at many major universities and represents a very extensive body of literature.

Example 3.1.1

Topic that is too general

General Topic: Child Language Acquisition

Obviously, the topic in Example 3.1.1 will have to be narrowed down considerably before it can be used as the basis for a literature review of manageable length. The steps that follow will guide you through a process that will result in better alternatives to this example.

✓ Step 2: Familiarize Yourself with the Basic Organization of Your Selected Online Database

As noted in Chapter 2, before you begin to narrow down your research topic it is important that you familiarize yourself with the organization of the online databases that you wish to search. WorldCat.org and the vast majority of university library catalogs contain entries for a diverse body of sources, including journal articles, books, conference presentations, archival material, government documents, and so on. Because this book focuses on reviewing articles in academic journals, it is critical that you know how to manipulate your database search results to limit your results to these types of source materials. Thus, while narrowing down your overall topic is an important step, teaching yourself how to manage your search results so that they provide a manageable corpus of entries for you to consult is equally important.

✓ Step 3: Begin Your Search with a General Keyword, then Limit the Output

Unless you have previous knowledge of a particular topic, you should begin a database search with a general *keyword*. It is advised that you use a label or phrase that best describes the topic that you are investigating. Your keywords may be broader or narrower depending on how far along you are in the research process.

If this procedure results in too many references, you can limit the search by adding additional keywords with *Boolean operators* such as AND, OR, and NOT. For instance, if you search for *social AND phobia*, you will get only those entries that mention *both* of these terms.

Some databases, including *PsycARTICLES (EBSCO)* self-generate alternative search keywords and phrases as you are inputting your own. For instance, when you input *social phobia*, the database also suggests *social anxiety*. You should make note of these alternative subject keywords in case you would like to use them for further searches in other databases.

Here is one example of how Boolean operators helped to narrow down a search. Searching one major database in psychology, *PsycARTICLES (EBSCO)*, with the keyword *phobia*, from 2006 to 2016 yields 188 articles.¹ A search for *social AND phobia* yields 125 articles. Finally, a search for *children AND social AND phobia* yields only 22 articles. The specific steps that you will follow to limit your search outputs will vary depending on the database that you are searching. Chapter 2 presented a number of general strategies to help you familiarize yourself with search options in online databases.

Some online databases will automatically use your keywords to search titles, abstracts, and the *full text* of their articles. If searching in a database that does this

by default, such as JSTOR, you may need to implement further strategies to limit your search results. As described above, one effective technique for limiting the number of search results is to limit the search to keywords that only appear in the title AND abstract (summary of the article). Using these restrictions will help to eliminate articles in which the keyword is mentioned only in passing in the body of the article.

For example, the same search of *PsycARTICLES* (EBSCO) with the keyword *phobia* that includes a search of the full text of all articles yields 2,210 results. This is a much larger number than the 188 articles mentioned above and could be overwhelming to manage. Alternatively, if you offer even greater restriction with Boolean operators and limit the search to articles where *phobia* appears in BOTH the title AND the abstract (See Figure 3.3.1), 37 articles were obtained, which is a much smaller and more manageable number, depending on the scope and purpose of your literature review.

The screenshot shows the EBSCOhost search interface. At the top, it says "Searching: PsycARTICLES | Choose Databases". The search term "phobia" is entered in the main search box. Below this, there are two rows of filters: "TI Title" and "AB Abstract", both with "AND" operators. There are also buttons for "Search" and "Clear". Below the search box, there are links for "Basic Search", "Advanced Search", and "Search History". The "Search Options" section is expanded, showing "Search Modes and Expanders" with radio buttons for "Boolean/Phrase" (selected), "Find all my search terms", "Find any of my search terms", and "SmartText Searching". There is also a "Limit your results" section with checkboxes for "Full Text", "Year of Publication" (set to 2006-2016), and "Scholarly (Peer Reviewed) Journals".

Figure 3.3.1 Sample database search with limited output criteria

Even though you may be in the early stages of experimenting with search keywords and their outputs, it is important that you save any results that appear to be of particular relevance to your topic. See Step 11 for more information about this process.

✓ Step 4: Identify Narrower Topic Areas If Your Initial List of Search Results Is Too Long

If the initial list of search results is too long, you should classify and clump recurring subtopics. Clumping search results into smaller topic areas will help facilitate the narrowing down of your overall topic. After having done this, you can then choose from one of the identified topic areas, according to your interest and the potential relevance to your course of study. Example 3.4.1 presents five possible revised topics that have been reclassified according to major themes discerned from a review of the titles and abstracts of the preliminary database search results of the broad topic, *Second Language Acquisition*.

Example 3.4.1

Identifying possible topic areas amongst initial search results

- Disorders Affecting Language Acquisition
- Role of Parents in Child Language Acquisition
- Language Acquisition Specifically Limited to Spanish-Speaking Children
- Acquisition of Grammatical Structures and Categories
- Language Acquisition in Infancy

These classifications are given merely to illustrate the process. In fact, search results could be reclassified into numerous other categories, and it is not necessary to sub-categorize them all. The objective here is to get a feel for the topics of interest or for methods of study represented within the broader spectrum of research articles suggested by your initial database search. It should be noted that some of the articles that you classify may appear in more than one topic area.

After classifying your results as shown in Example 3.4.1, examine them carefully for subsets that might serve as a topic for your literature review. For instance, a number of the articles for "Language Acquisition in Infancy" deal specifically with infant vocalization. If the number of articles identified for this identified subset is not sufficient for your purposes, proceed to Step 5 below. If not, you may choose to proceed to Step 6.

✓ Step 5: Increase the Size of Your Reference List, If Necessary

There are a number of ways to increase the number of search results once you have identified a manageable topic. First and foremost, if you have used date restrictions (i.e. 2006 to 2016) and do not have enough references for your literature review, you can, of course, expand your time frame.

Depending on the database you are searching, you might also find additional references by clicking on the author's name. You should do this with articles that you have identified as being particularly relevant to your topic. You can usually tell that a link is available if their name is underlined and/or in blue font. Clicking on the authors' names in co-authored articles may provide a number of additional references written by the same set of authors, including research reports and journal articles. Because academic scholars tend to conduct research and write on a given topic over an extended period of time, additional references that you identify may also prove to be relevant to the topic at hand.

In addition, as noted in Chapter 2, when examining an article entry, you may also choose to examine the list of hyperlink "Subject Keywords" for that article (see Figure 3.5.1 for an example of such a list). These descriptors may point you to related topics and other sources. By clicking on any one of these, you will conduct a new search of articles on whichever topic you select, potentially increasing the size of your reference list by identifying additional related articles.

Subjects: *Infant Development; *Language Development; *Learning; *Speech Perception; *Words (Phonetic Units); Statistics

Figure 3.5.1 Sample subject keywords in a PsycARTICLES (EBSCO) entry

It is also possible to search databases for other types of sources such as conference papers, curriculum guides, and theses and dissertations, which can be used to supplement the journal articles already identified. Refer to Chapter 2 for ways that you can expand or contract the type of entries displayed within your search results.

Note that for a report to be published in a journal, it usually must pass the scrutiny of one or more editors and editorial consultants or reviewers with special knowledge of the area. This is *not* the case, however, for many of the other types of sources included in online databases. Also, note that most databases do not attempt to judge the soundness or quality of the information in their entries. Thus, some nonjournal documents may be less useful than journal articles as sources of information.

✓ Step 6: Consider Searching for Unpublished Studies

Searching for *unpublished studies* is another way to increase the size of your reference list. In addition, you may want to search for studies not published in academic journals² because some of these unpublished studies may still prove to be relevant. Just because a study is not published in a journal does not mean it is not important. A potentially important study may not be published in a journal for the following reasons:

1. Some studies of potential importance are never even submitted to journals for possible publication. For instance, theses and dissertations tend to be too long to publish in an academic journal and must undergo extensive rewriting for publication. Many authors of theses and dissertations do not undertake this re-writing process. In addition, some researchers may become discouraged when the results of their studies are not consistent with their hypotheses. Instead of writing up such studies for submission to a journal, they may move on to conduct research in what they consider more fruitful areas using alternative research methods.
2. Some journal editors and expert reviewers may be biased against studies that show no significant difference or that fail to confirm the research hypotheses posed by the researchers.

One way to locate unpublished studies is to contact authors of published studies to ask them if they are aware of any unpublished studies on your topic.³ For instance, they may have conducted studies that they decided not to submit for publication, or they may know of students or colleagues working on related topics. A second way is to expand your search to databases like ERIC (ProQuest) and *Dissertations & Theses* (ProQuest), that include such items.

✓ Step 7: Start with the Most Current Research, and Work Backward

As noted in Chapter 2, the most effective way to begin a search in a field that is new to you is to start with the most current journal articles. If you judge a recently published article to be relevant to your topic, the article's reference list or bibliography will provide useful clues about how to pursue your review of the literature. A good strategy would be to obtain articles relevant to your research topic, photocopy the reference lists at the end of each one, compare the lists for commonalities, and then locate any potential candidates for additional references. Keep in mind two important criteria for developing your reading list: The reading list should (1) represent the extent of knowledge about the topic and (2) provide a proper context for your own research if you are writing a literature review as part of an introduction to a research study you will be conducting.

✓ Step 8: Search for Theoretical Articles on Your Topic

As you learned in Chapter 1, theoretical articles that relate directly to your topic should be included in your literature review. However, a typical search of the literature in the social and behavioral sciences will yield primarily original reports of empirical research because these types of documents dominate academic journals. If you have difficulty locating theoretical articles on your topic, include *theory* as one of your search keywords. Example 3.8.1 is an article abstract that may be useful for someone planning to write about *theories* relating to social phobia.

Example 3.8.1**An abstract of an article using the search keywords social, phobia, and theory**

Martel (2013) proposed a metatheory, based on sexual selection theory and broad evolutionary psychological (EP) principles, to account for well-known sex differences in the emergence of common behavioral and certain internalizing disorders across childhood and adolescence, respectively. In this comment, I first enumerate several strengths and then offer 2 primary critiques about Martel's proposal. Martel provides an exceptional, integrative review that organizes several disparate literatures that hold promise to enhance understanding of such sex differences. At the same time, I raise critical questions regarding EP generally, and sexual selection theory specifically, as the metatheoretical framework chosen to bind together these different influences and mechanisms as drivers of the sex difference in different psychopathologies. Indeed, it is not clear that EP is necessary—nor does it provide unique explanatory power—to explicate the emergence of sex differences in internalizing and externalizing disorders among youth. Moreover, Martel's EP-based proposal pertains to adolescent-onset depression and social phobia but does not provide an explanation for known sex differences in other common childhood-onset and early adult-onset anxiety disorders.⁴

It is important to note that writers of empirical research reports will often discuss the relationship of their studies to theoretical literature and, of course, provide references to this literature. You should follow these leads by looking up the articles that they reference for yourself.

✓ Step 9: Look for Review Articles

A corollary to the search technique described in the previous step is to use the keyword *review* when searching databases for review articles.⁵ Previously published review articles are very useful in planning a new literature review because they are helpful in identifying the breadth and scope of the literature in a field of study. They usually will include a much more comprehensive reference list than is typical in a research article.

Note that some journals publish only literature reviews, some emphasize original reports of empirical research but occasionally will publish literature review articles by leading researchers in a field, and other journals have editorial policies that prohibit

publishing reviews. If you know the names of journals in your field that publish reviews, you might specify their names in a database search.⁶ Because this will restrict your search to just those journals, this should be a separate search from your main one.

A search of *PsycARTICLES* (EBSCO) using the phrase *substance abuse AND treatment* as keywords in any field AND *literature review* in the "TI Title" field identified a number of useful articles that contain reviews on the treatment of substance abusers. Two are shown in Example 3.9.1.

Example 3.9.1**Two articles obtained through using literature review in the search**

Bayles, C. (2014). Using mindfulness in a harm reduction approach to substance abuse treatment: A literature review. *International Journal of Behavioral Consultation and Therapy*, 9, 22–25.

Clifford, P.R., & Davis, C.M. (2012). Alcohol treatment research assessment exposure: A critical review of the literature. *Psychology of Addictive Behaviors*, 26, 773–781.

✓ Step 10: Identify the Landmark or Classic Studies and Theorists

Finally, it is important to identify the landmark studies and theorists on your topic (i.e., those of *historical importance* in developing an understanding of a topic or problem). Unfortunately, some students believe that this is an optional nicety. However, without at least a passing knowledge of landmark studies, you will not understand the present context for your chosen topic. If you are writing a thesis or dissertation, in which fairly exhaustive reviews are expected, a failure to reference the landmark studies might be regarded as a serious flaw.

It is not always easy to identify historically important studies at the very beginning of a literature search. However, authors of some journal articles explicitly note these, as is done in Example 3.10.1 (see next page).

While reading the articles you selected, you will often notice that certain authors' names are mentioned repeatedly. For instance, if you read extensively on how social factors affect learning, you will find that Albert Bandura's social-learning theory is cited by numerous authors of research articles. At this point, you would want to search the databases again using Bandura's first and last names, for two reasons: (1) to locate material he has written on his theory (keep in mind that you want it from the *original source* and not just someone else's paraphrasing of the theory) and (2) to try to locate any early studies that he may have conducted that led him to the theory,

Example 3.10.1⁷

Excerpt from a research article that identifies a landmark theorist and related studies

Among the particularly influential theories of classical conditioning from the 20th century (e.g., Mackintosh, 1975; McLaren & Mackintosh, 2000; Pearce & Hall, 1980; Pearce, 1987; Rescorla & Wagner, 1972; Wagner & Rescorla, 1972), only Wagner (1981), Wagner and Brandon (2001), and the real-time model of Sutton and Barto (1981) offer any account of temporal contiguity. Disinterest among many major theorists has been accompanied by relatively little experimental attention to temporal contiguity, with the notable recent exception of research related to timing that is considered in the final section of this review. The last review of research on temporal contiguity in classical conditioning was published over 30 years ago (Gormezano & Kehoe, 1981).

or that he originally presented, to lend credence to the theory. Sorting search results by “Oldest First” or “Date Oldest” may help. Keep in mind that individuals who present theories very often conduct research and publish it in support of their theories. Their early studies that helped establish their theories are the ones that are most likely to be considered “landmark” or “classic.” Note that when you conduct such a search of the database for this purpose, you should *not* restrict the search to only articles published in recent years. Searching all years of the PsycARTICLES database while restricting the search to the name *Albert Bandura*⁸ as the author, AND *social* in the title, AND *learning* in all fields (Figure 3.10.1) yields five entries, including an early single-authored piece, which is shown in Example 3.10.2.

Figure 3.10.1 A PsycARTICLES search for landmark studies by Albert Bandura

Example 3.10.2

An early study by a leading researcher and theoretician

Bandura, A. (1969). Social learning of moral judgments. *Journal of Personality and Social Psychology*, 11, 275–279.

Finally, consult any relevant college textbooks. Textbook authors often briefly trace the history of thought on important topics and may well mention what they believe to be the classic studies on a particular topic.

✓ Step 11: Assemble the Collection of Sources You Plan to Include in Your Review

You will need to assemble the collection of sources that you have identified throughout your searches before you proceed to make a final selection of your topic. There are a number of ways that you can undertake this task, so it will be up to you how you choose to organize your data. Those already proficient in your campus's online citation tools (discussed in Chapter 13) may choose to utilize these programs to help save time compiling a formatted reference list later. Others may choose to use their computer's copy and paste features to create a separate Word document. It is really up to you how you choose to do this, but as noted, it is a prerequisite for you to identify which articles you will actually read closely for your review.

Most online databases offer the ability to save selected citations into their own folder. Given the fact that you probably have been experimenting with a number of different search keywords and criteria, this is a handy way for you to keep track of relevant articles. If you choose not to use these features, it is recommended that you adopt your system for saving citations early. Otherwise, it may prove very difficult to retrace your steps and locate articles that you have not already saved. See the arrow in Figure 3.11.1 for an example of where this option is located within the EBSCOhost database platform.

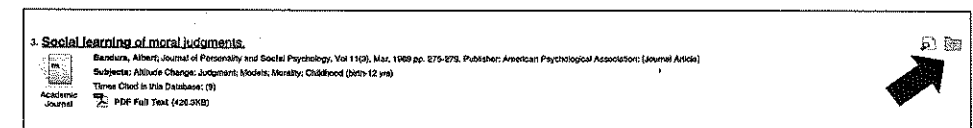


Figure 3.11.1 Locating EBSCOhost's “save citation to folder” feature

Once you have located the folder or save feature within your database you should familiarize yourself with the steps necessary to create a personalized repository of your articles. In EBSCOhost you simply click on the blue folder icon, which then turns yellow and a new dialog box appears noting that the reference has been placed in a pre-generated folder. See Figure 3.11.2 (on the following page). Please note that you may choose to go into the folder settings to create or rename different folders.

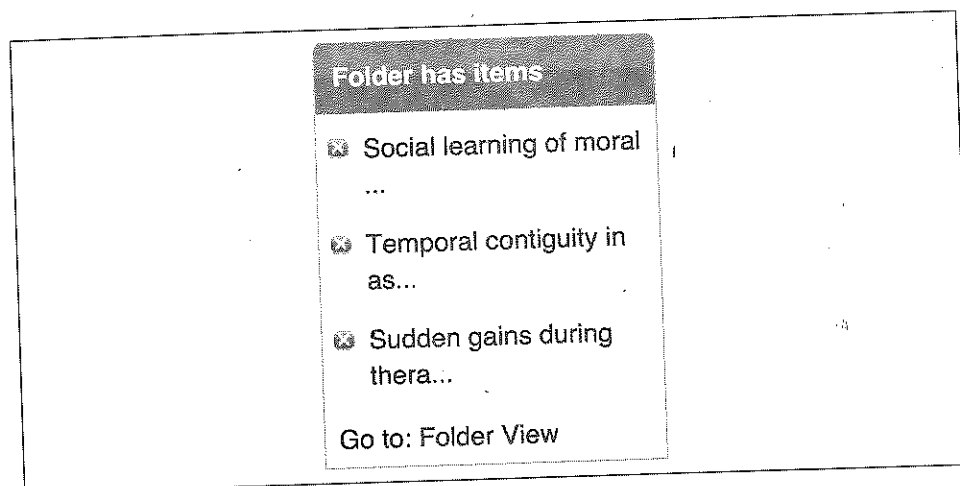


Figure 3.11.2 Saved to folder citations in EBSCOhost

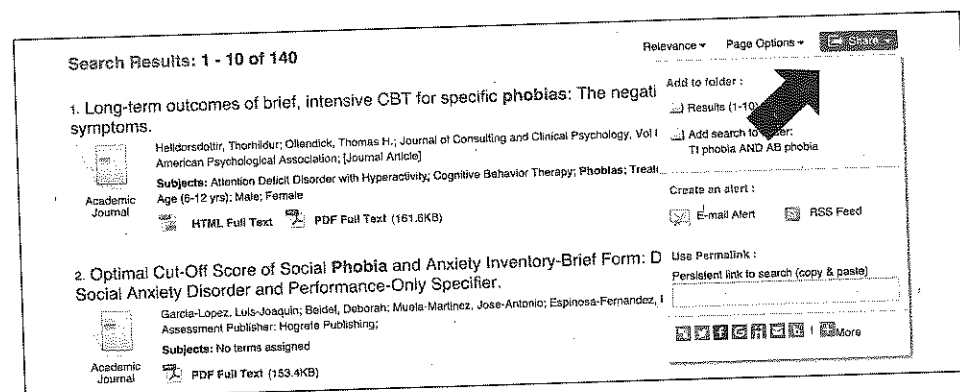


Figure 3.11.3 Export options in EBSCOhost.

If you wish to save all results for a specific search, you can use the “Share” feature. This allows you to (1) export all entries into their own folder, (2) email yourself the list, (3) create a permalink that will allow you to easily access your search at a later time, or (4) share to a number of other online media platforms. See Figure 3.11.3 to see where to locate this information in EBSCOhost databases.

Regardless of how you choose to save this information, it is important that it be saved somewhere. You will be referring to this list at the beginning of Chapter 4, and it is necessary before you identify which articles you will actually be reading. If you chose to use the database’s folder option, you may wish to print, save, or export the file to Word. See Figure 3.11.4 on the following page.

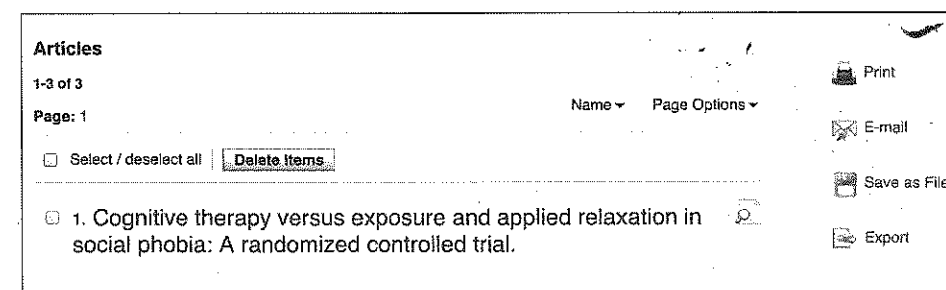


Figure 3.11.4 Further export options in EBSCOhost

At this point you should have compiled a list of possible sources that you intend to include in your literature review. The size of this list will depend on the scope of your literature review. Theses or doctoral students may have hundreds of potential sources. Students writing a literature review as a term paper for a specific course may choose to have a manageable corpus of closer to 50. The number of sources you consult may depend on the requirements of your specific instructor.

✓ Step 12: Write the First Draft of Your Topic Statement

Now that you have identified appropriate references, you can reexamine the list of articles you have generated and choose a more specific topic for your literature review.⁹ The first draft of your topic statement should attempt to name the area you will investigate. Think of this statement as a descriptive phrase rather than as a paper or chapter title. Example 3.12.1 presents two statements: one for a literature review topic in the area of psychology and the other in linguistics. Note that these first drafts are still very general.

Example 3.12.1

Draft topic statements

Psychology:

Language Acquisition by Children with Speech Disorders

Linguistics:

Acquisition of Grammatical Structures and Categories

Each of the topics in Example 3.12.1 could be further narrowed by restricting it to a particular group, such as very young children (e.g., Language Acquisition by *Very Young Children* with Speech Disorders).

✓ Step 13: Redefine Your Topic More Narrowly

Selecting a reasonably narrow topic is essential if you are to defend your selection of a topic and write an effective review on it. Topics that are too broad will stretch the limits of your energy and time—especially if you are writing a review for a term project in a single-semester class. A review of a topic that is too broad very likely will lead to a review that is superficial, jumps from area to area within the topic, and fails to demonstrate to your reader that you have thoroughly mastered the literature on the topic. Thus, at this point, you should consider redefining your topic more narrowly.

Example 3.13.1 presents a topic that is much too broadly defined. Even though the writer has limited the review to English-speaking children as old as 4 years of age, it is still quite broad. Apparently, the writer has chosen to consider studies of children acquiring both the sound and the grammatical systems. If so, the finished review will either be a book-length manuscript (or two) or a shorter manuscript that presents a superficial treatment of the literature on this broad topic.

Example 3.13.1

A topic that is too broad for most purposes

This paper deals with child language acquisition. I will review the literature that deals with how children learn to speak in a naturalistic setting, starting with the earliest sounds and progressing to fully formed sentences. I will limit myself to English-speaking children, from birth to 4 years old.

Example 3.13.2 (see following page) is an improved version of the topic in Example 3.13.1. Note that the writer has narrowed the focus of the review to a specific aspect of language. The writer has stated clearly that the review has two main goals: (1) to catalog the range of verbal features that have been studied and (2) to describe what is known about the route children follow in acquiring them. Even though it is very likely that this topic will be modified several more times based on a careful reading of the studies found, it is sufficiently focused to provide the writer with a suitable initial statement of the topic for his or her literature review.

Example 3.13.2

An improved, more specific version of Example 3.13.1

This paper describes what is known about how children acquire the ability to describe time and to make references to time, including the use of verbs and other features contained in the verb phrase. I will attempt, first, to describe the range of verb-phrase features that have been studied, and second, to describe the path children follow as they develop greater linguistic competence with reference to time.

✓ Step 14: Ask for Feedback from Your Instructor or Advisor

Before you begin to read the full texts of the articles that you have identified, it is always a good idea to consult with your instructor or advisor about your proposed topic. Not only would they possibly be able to offer feedback and validation of your topic, but they may also help you identify gaps within your references.

Activities for Chapter 3

1. First, become familiar with the electronic databases in your field. You can do so either by attending a workshop in your university library or by reading the documentation and practicing on your own. Note that many libraries now allow you to search their databases online from your home, but you will probably need to use a university computer account to do so. Once you are familiar with the databases, select one database to complete the rest of this exercise.
2. If your instructor has assigned a term paper on a specific topic, search the database using a simple phrase that describes this topic. If you are working on your own, select an area that interests you, and search the database using a simple phrase that describes your area of interest. How many citations for the literature did the search produce?
3. Retrieve two or three records from your search and locate the lists of descriptors. Compare the lists and note the areas of commonality as well as differences.
 - Write down the exact wording of three descriptors that relate to your intended topic. Choose descriptors that reflect your personal interest in the topic.
 - Compared to the simple phrase you used when you started, do you think these descriptors are more specific or more general? Why?

4. Now use the descriptors you just located to modify the search.
 - First, modify the search to select more records.
 - Then, modify the search to select fewer records.
 - If you used the connector AND, did it result in more *or* fewer sources? Why do you think this happened?
 - If you used the connector OR, did it result in more *or* fewer sources? Why do you think this happened?
5. If necessary, narrow the search further until you have between 50 and 150 sources, and print out the search results.
 - Carefully scan the printed list to identify several possible subcategories.
 - Compare the new categories with your original topic.
 - Redefine your topic more narrowly, and identify the articles that pertain to your new topic. Prepare a list of the references for these articles.

Notes

- 1 It is important to note that this database by default does not initially search the “full text” for these search terms. If your initial search presents too few results, you may wish to check the box “Also search within the full text of the articles.”
- 2 Studies not published in journals are commonly referred to as “unpublished studies” even though they may be available in print form in certain academic libraries.
- 3 Contact information such as an email address is usually provided either as a footnote on the first page of a research article or near the end of an article—just before or after the reference list.
- 4 Hankin, B. L. (2013). Critical reflections on evolutionary psychology and sexual selection theory as explanatory account of emergence of sex differences in psychopathology: Comment on Martel (2013). *Psychological Bulletin*, 139, 1260–1264.
- 5 You should not limit yourself to just one iteration of the term. Some databases will allow you to search using multiple phrasings of the same general concept. For instance, if you type *review* in your search in PsycARTICLES, a dialog box will suggest that you search *review*, *literature review*, *a review of the literature*, among others.
- 6 In psychology, for instance, *Psychological Bulletin* is an important journal devoted to literature reviews. A premier review journal in education is the *Review of Educational Research*.
- 7 Kahn, E., & Rachman, A. W. (2000). Carl Rogers and Heinz Kohut: A historical perspective. *Psychoanalytic Psychology*, 17, 294–312.
- 8 When specifying an author's name, use both first and last names but do not enclose the full name with quotation marks, as this would exclude instances where the last name is listed first.
- 9 At this point, it is still premature for you to decide on a *final topic*. You should do this only after reading some of the articles you have located.

Chapter 4

Organizing Yourself to Begin the Selection of Relevant Titles

Now that you have identified the preliminary set of articles for your review, you should begin the process of analyzing them *prior* to writing your review. This chapter is designed to help you through this process. The end result will be a comprehensive compilation of notes that you will make as you read the articles, with specific, detailed information about each reference.

✓ Step 1: Scan the Articles to Get an Overview of Each One

Obviously, you have already read the titles of the articles when you selected them, and you probably also read the abstracts (i.e., summaries) that most journals place near the beginning of each article. Now you need to read the first few paragraphs of each article, where the author usually provides a general introduction to the problem area. This will give you a feel for the author's writing style as well as their general perspectives on the research problem. Then, jump to the paragraph that precedes the heading “Method,” which is usually the first major heading in the text of a research article (sometimes labeled “Research Methods” or “Methodology”). This is the paragraph in which it is traditional for researchers to state their specific hypotheses, research questions, or research purposes. Next, scan the rest of the article, noting all headings and subheadings. Scan the text in each subsection, but do not allow yourself to get caught up in the details or any points that seem difficult or confusing. Your purpose at this point is to get an overview of the article.

Note that the process described in the paragraph above is what reading specialists call *prereading*. This is a technique widely recommended as the first step in reading technical reports. Because prereading gives you an overview of the purpose and contents of a report, it helps you to keep your eye on the big picture as you subsequently work through the details of a research report from beginning to end. The information you gain by prereading will also help you group the articles into categories, as suggested in the next guideline.