How to Write a Literature Review

What Is a Literature Review

A literature review is much more than an annotated bibliography or a list of separate reviews of articles and books. It is a critical, analytical summary and synthesis of the current knowledge of a topic. It should compare and relate different theories, findings, etc., rather than just summarize them individually. In addition, it should have a particular focus or theme to organize the review. It does not have to be an exhaustive account of everything published on the topic, but it should discuss all the significant academic literature important for that focus.

The specific organization of a literature review depends on the type and purpose of the review, as well as on the specific field or topic being reviewed. But in general, it is a relatively brief but thorough exploration of past and current work on a topic. Rather than a chronological listing of previous work, though, literature reviews are usually organized thematically, such as different theoretical approaches, methodologies, or specific issues or concepts involved in the topic. A thematic organization makes it much easier to examine contrasting perspectives, theoretical approaches, methodologies, findings, etc., and to analyze the strengths and weaknesses of, and point out any gaps in, previous research. And this is the heart of what a literature review is about. A literature review may offer new interpretations, theoretical approaches, or other ideas. If it is part of a research proposal or report it should demonstrate the relationship of the proposed or reported research to others' work. But whatever else it does, it must provide a critical overview of the current state of research efforts.

Literature reviews are common and very important in the sciences and social sciences. They are less common and have a less important role in the humanities, but they do have a place, especially stand-alone reviews.

Types of Literature Reviews

There are different types of literature reviews, and different purposes for writing a review, but the most common are:

- **Stand-alone literature review articles**. These provide an extensive overview and analysis of the current state of research on a topic or question. The goal is to evaluate and compare previous research on a topic to provide an analysis of what is currently known, and also to reveal controversies, weaknesses, and gaps in current work, thus pointing to directions for future research. You can often find stand-alone reviews by searching in a database of academic articles such as Google Scholar for your topic along

with the phrase “literature review” since that phrase is often included in the title of review articles. If you have access to an academic library with a subscription to Annual Reviews (http://www.annualreviews.org/), you can find a large collection of stand-alone literature reviews from many science and social science disciplines.
Writing a stand-alone review is often an effective way to get a good handle on a topic and to develop ideas for your own research program. For example, contrasting theoretical approaches or conflicting interpretations of findings can be the basis of your research project: can you find evidence supporting one interpretation against another, or can you propose an alternative interpretation that overcomes their limitations?

- Part of a **research proposal**. This could be a proposal for a PhD dissertation, a senior thesis, or a class project. It could also be a submission for a grant. The literature review, by pointing out the current issues and questions concerning a topic, is a crucial part of demonstrating how your proposed research will contribute to the field, and thus of convincing your thesis committee to allow you to pursue the topic of your interest or a funding agency to pay for your research efforts.
- Part of a **research report**. When you finish your research and write your thesis or paper to present your findings, it should include a literature review to provide the context to which your work is a contribution. Your report, in addition to detailing the methods, results, etc. of your research, should show how your work relates to others' work.

A literature review for a research report is often a revision of the review for a research proposal, which can be a revision of a stand-alone review. Each revision should be a fairly extensive revision. With the increased knowledge of and experience in the topic as you proceed, your understanding of the topic will increase. Thus, you will be in a better position to analyze and critique the literature. In addition, your focus will change as you proceed in your research. Some areas of the literature you initially reviewed will be marginal or irrelevant for your eventual research, and you will need to explore other areas more thoroughly.

What Is the Literature

The "literature" that is reviewed is the collection of publications – academic journal articles, books, conference proceedings, association papers, dissertations, etc. – written by scholars and researchers for scholars and researchers. Most literature reviews in the sciences include primarily or exclusively peer reviewed journal articles. The social sciences and humanities often also include books from academic publishers. Other types of publications are less commonly included, but sometimes are relevant and worth covering in a review.

Peer Review - An important part of academic publishing is the peer review, or refereeing, process. When a scholar submits an article to an academic journal or a book manuscript to a university publisher, the editors or publishers will send copies to other scholars and experts in that field who will review it. The reviewers will check to make sure the author

has used methodologies appropriate to the topic, used those methodologies properly, taken other relevant work into account, and adequately supported the conclusions, as well as consider the relevance and importance to the field. A submission may be rejected, or sent back for revisions before being accepted for publication.

Peer review does not guarantee that an article or book is 100% correct. Rather, it provides a "stamp of approval" saying that experts in the field have judged this to be a worthy contribution to the professional discussion of an academic field.

Peer reviewed journals typically note that they are peer reviewed, usually somewhere in the first few pages of each issue. Books published by university presses typically go through a similar review process. Other book publishers may also have a peer review process. But the quality of the reviewing can vary among different book or journal publishers. Use academic book reviews or check how often and in what sources articles in a journal are cited, or ask a professor or two in the field, to get an idea of the reliability and importance of different authors, journals, and publishers.

Journals - Articles in journals contain specific analyses of particular aspects of a topic. Since journal articles can be written and published more quickly than books, academic libraries subscribe to many journals, and the contents of these journals are indexed in a variety of sources so others can easily find them, researchers commonly use articles to report their findings to a wide audience. Thus, journals are also a good readily available source for current information on a topic.

- Academic/Scholarly journals - Usually (but not always) peer reviewed, they come in a few different types:
    - Research journals - Articles reporting in detail the results of research.
    - Review journals - Articles reviewing the literature and work done on particular topics.
    - News/Letters journals - News reports, brief research reports, short discussions of current issues.
    - Proceedings/Transactions journals - A common venue for publishing conference papers or other proceedings of academic conferences.
- General interest magazines - News and other magazines that report scholarly findings for a general, nonacademic audience. These are usually written by journalists (who are usually not academically trained in the field), but sometimes are written by researchers (or at least by journalists with training in the field). Magazines are not peer reviewed, and are usually not academically useful sources of information for research purposes, but they can alert you to work being done in your field and give you a quick summary.

Books - Books take a longer time to get from research to publication, but they can cover a broader range of topics, or cover a topic much more thoroughly, than articles or conference presentations. University press books typically go through some sort of a peer review process.

There is a wide range of review processes (from rigorous to none at all) among other book publishers.

Dissertations/Theses - Graduate students working on advanced degrees typically must perform a substantial piece of original work, and then present the results in the form of a thesis or dissertation. Usually, only the library and/or department at the school where the work was done has copies of the dissertation, though especially significant ones are often collected by other libraries. Increasingly, though, these are being made available online.

Conference Presentations - Many academic organizations sponsor conferences at which scholars read papers, display at poster sessions, or otherwise present the results of their work. To give a presentation, scholars must submit a proposal which is reviewed by those sponsoring the conference. Unless a presentation is published in another venue, it will likely be difficult to find a copy, or even to know what was presented. Some subject specific indexes and other sources list conference proceedings along with the author and contact information.

Conference Papers / **Association Papers / Working Papers** - Papers presented at a conference, submitted but not yet accepted for publication, works in progress, or not otherwise published are sometimes made available by academic associations. These are often not easy to find, but many are indexed in subject specific indexes or available in subject databases. Sometimes a collection of papers presented at a conference will be published in a book.

Informal Sharing - In person or online, researchers discuss their ongoing projects to let others know what they are up to or to give or receive assistance in their work. Conferences, listservs, and online discussion boards are common avenues for these discussions. Increasingly, scholars are using personal or institutional web sites to present their work.

Web sites - In addition to researchers informally presenting and discussing their work on personal web pages, there are an increasing number of peer reviewed web sites publishing academic work. The rigor, and even existence, of peer reviewing can vary widely on the web, and it can be difficult to determine the reliability of information presented on the web, so always be careful in relying on a web-based information source. Do your own checking and reviewing to make sure the web site and the information it presents are reliable.

Reference Sources - Subject encyclopedias, dictionaries, and other reference sources present brief introductions to or summaries of the current work in a field or on a topic. These are typically produced by a scholar and/or publisher serving as an editor who invites submissions for articles from experts on the topics covered.

How to Find the Literature

Just as there are many avenues for the literature to be published and disseminated, there are many avenues for searching for and finding the literature. There are, for example, a variety of general and subject specific indexes which list citations to publications (books, articles, conference proceedings, dissertations, etc). Unfortunately, a large amount of academic literature and many databases to search it are available by subscription or purchase only. But there is still a lot which is freely accessible online. If you have access to an academic library, its subscription resources will significantly increase the resources you can access, but using Google Scholar can take you a long way on its own.

Google Scholar (https://scholar.google.com/) covers a very large body of scholarly literature from all academic disciplines. Its focus is peer reviewed journals, but it also searches for academic books, academic journals that are not peer reviewed, technical reports, university repositories, theses, and other online scholarly resources. Many of the articles in your results will be behind a paywall, but you will also likely find articles with links to freely accessible full text.

To make the most of searching in Google Scholar, think of different ways to describe what you are looking for and come up with a list of different relevant keywords. Try various combinations of keywords, and when you find some good articles, read them to see what other terms the authors use to discuss the topic, then add those terms to your list of keywords to search.

When you find good sources for your literature review, remember to look in their bibliographies to find citations to other relevant articles, and authors' names to search to see what else they have published. Google Scholar also has a "cited by" feature which allows you to find more recent articles which cited an article you are interested in.

Writing the Review

Why Are You Writing This?

There are two primary points to remember as you are writing your literature review:

- Keep in mind your purpose(s) for the literature review, and make sure your review specifically addresses your purpose(s). A literature review is part of a larger project. Even a stand-alone review refers to how the topic reviewed fits into the wider subject or discipline and points toward avenues for future research. Depending on the type of review, your goals may be different.
    - Stand-alone review: provide an overview and analysis of the current state of research on a topic or question

    - Research proposal: explicate the current issues and questions concerning a topic to demonstrate how your proposed research will contribute to the field
    - Research report: provide the context to which your work is a contribution
- Write as you read, and revise as you read more. Rather than wait until you have read everything you are planning to review, start writing as soon as you start reading. You will need to reorganize and revise it all later, but writing a summary of an article when you read it helps you to think more carefully about the article. Having drafts and annotations to work with will also make writing the full review easier since you will not have to rely completely on your memory or have to keep thumbing back through all the articles. Your draft does not need to be in finished, or even presentable, form. The first draft is for you, so you can tell yourself what you are thinking. Later you can rewrite it for others to tell them what you think.

General Steps for Writing a Literature Review

Here is a general outline of steps to write a thematically organized literature review. Remember, though, there are many ways to approach a literature review, depending on its purpose.

1. Stage one: annotated bibliography. As you read articles, books, etc., on your topic, write a brief critical synopsis of each. After going through your reading list, you will have an abstract or annotation of each source you read. Later annotations are likely to include more references to other works since you will have your previous readings to compare, but at this point the important goal is to get accurate critical summaries of each individual work.
2. Stage two: thematic organization. Find common themes in the works you read, and organize the works into categories. Typically, each work you include in your review can fit into one category or sub-theme of your main theme, but sometimes a work can fit in more than one. (If each work you read can fit into all the categories you list, you probably need to rethink your organization.) Write some brief paragraphs outlining your categories, how in general the works in each category relate to each other, and how the categories relate to each other and to your overall theme.
3. Stage three: more reading. Based on the knowledge you have gained in your reading, you should have a better understanding of the topic and of the literature related to it. Perhaps you have discovered specific researchers who are important to the field, or research methodologies you were not aware of. Look for more literature by those authors, on those methodologies, etc. Also, you may be able to set aside some less relevant areas or articles which you pursued initially. Integrate the new readings into your literature review draft. Reorganize themes and read more as appropriate.
4. Stage four: write individual sections. For each thematic section, use your draft annotations (it is a good idea to reread the articles and revise annotations, especially the ones you read initially) to write a section which discusses the articles relevant to

that theme. Focus your writing on the theme of that section, showing how the articles relate to each other and to the theme, rather than focusing your writing on each individual article. Use the articles as evidence to support your critique of the theme rather than using the theme as an angle to discuss each article individually.

5. Stage five: integrate sections. Now that you have the thematic sections, tie them together with an introduction, conclusion, and some additions and revisions in the sections to show how they relate to each other and to your overall theme.

Specific Points to Include

More specifically, here are some points to address when writing about specific works you are reviewing. In dealing with a paper or an argument or theory, you need to assess it (clearly understand and state the claim) and analyze it (evaluate its reliability, usefulness, validity). Look for the following points as you assess and analyze papers, arguments, etc. You do not need to state them all explicitly, but keep them in mind as you write your review:

- Be specific and be succinct. Briefly state specific findings listed in an article, specific methodologies used in a study, or other important points. Literature reviews are not the place for long quotes or in-depth analysis of each point.
- Be selective. You are trying to boil down a lot of information into a small space. Mention just the most important points (i.e. those most relevant to the review's focus) in each work you review.
- Is it a current article? How old is it? Have its claims, evidence, or arguments been superseded by more recent work? If it is not current, is it important for historical background?
- What specific claims are made? Are they stated clearly?
- What support is given for those claims?
    - What evidence, and what type (experimental, statistical, anecdotal, etc.) is offered? Is the evidence relevant? sufficient?
    - What arguments are given? What assumptions are made, and are they warranted?
- What is the source of the evidence or other information? The author's own experiments, surveys, etc.? Historical records? Government documents? How reliable are the sources?
- Does the author take into account contrary or conflicting evidence and arguments? How does the author address disagreements with other researchers?
- What specific conclusions are drawn? Are they warranted by the evidence?
- How does this article, argument, theory, etc., relate to other work?

These, however, are just the points that should be addressed when writing about a specific work. It is not an outline of how to organize your writing. Your overall theme and categories

within that theme should organize your writing, and the above points should be integrated into that organization. That is, rather than write something like:

Smith (2009) claims that blah, and provides evidence x to support it, and says it is probably because of blip. But Smith seems to have neglected factor b.
Jones (2011) showed that blah by doing y, which, Jones claims, means it is likely because of blot. But that methodology does not exclude other possibilities.
Johnson (2012) agrees that blah, but hypothesizes it might be because of some other cause.

list the themes and then say how each article relates to that theme. For example:

Researchers agree that blah (Smith 2009, Jones 2011, Johnson 2012), but they do not agree on why. Smith claims it is probably due to blip, but Jones, by doing y, tries to show it is likely because of blot. Jones' methodology, however, does not exclude other possibilities. Johnson hypothesizes a different cause...

Formatting Your Bibliography

Your literature review should include a bibliography listing all the sources you cover in your review, with all the citation information your readers need to find those sources. There are many different citation styles you can use to format your bibliography. Here are a few frequently used styles:

- APA (American Psychological Association) is commonly used in sciences and social sciences.
- MLA (Modern Language Association) is the primary citation style for writing about literature and linguistics.
- Chicago Manual of Style is a favorite of historians.

Ask your course instructor which style to use.

To format each source in your bibliography, you can consult a style guide for the appropriate style, or you can use a program or online tool to format a source for you.

Free citation generators cover some of the most commonly cited types of courses and the most commonly used styles, and for most purposes are all you will need:

- Zotero – https://www.zotero.org/
- EasyBib – http://www.easybib.com/

For a more robust program covering many more styles and types of resources, there are programs you can purchase or subscribe to, and which may be available from an academic institution if you are a student, faculty, or staff member:

- EndNote – http://endnote.com/
- RefWorks – http://www.refworks.com/