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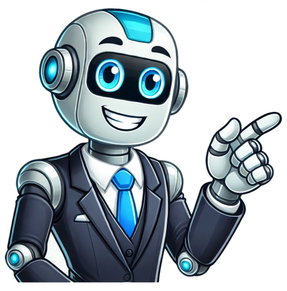

This article was written by Oliver Wilkin, one of our student Peer Writing Advisors. In a literature review, it is the literature itself that you should frame your argument around, by providing an in-depth analysis of the ‘conversation’ around your topic. Usually, when given a literature review assignment, you will have to answer a question or topic but do not take this as a prompt to just write an essay about the issue(s). A literature review is there to show your understanding of a topic by identifying major debates and trends between authors and/or schools of thought, and establishing which ideas and methods are most significant to it. It should also include an argument, and identify gaps and limitations in the literature to show why your research is important and how it fills these gaps. Your academic lead should give you an idea of how many sources they expect you to review, but you can always ask them for advice and look at other literature reviews in your field for inspiration. Just like any other assignment, use the key words from your essay or research question(s) to search for studies. To make sure your review is relevant, only discuss research from the timeframe considered ‘current’ in your field. When reading the literature you choose, try to answer these questions: What is the main idea? What points are used to develop this? What evidence is being used? What is the support for these claims? Do you agree? What are the strengths and weaknesses? Do other authors challenge or agree? What is the methodology? How relevant is this to my own research? Just like a typical essay, a literature review should include an introduction, themed paragraphs and a conclusion, but each section structured a little differently. Similar to most essays, the introduction of a literature review should state the assignment’s purpose, establish the key concepts and set expectations for the reader. Statement of purpose: what is the question you are setting out to answer? How does it fit into your field? Justify your question: why is it important and how will it contribute to knowledge in your field? Scope of review: provide a little information about the literature you will review and why you chose it. Signposting: map out the structure of the main body, with the theme or concept behind each section. Limitations of the review: does the amount of literature make it difficult to review the topic? Are there any issues you have not had a chance to discuss? When researching and planning, you will hopefully find some themes that the literature can be grouped into. Each main body section should review one specific theme and, even though you can compare to literature from other sections, you should keep the discussion of each study to its assigned section. Each paragraph or section should have: Topic sentence(s): introduce the theme of the section and the studies that will be discussed in it. Description: highlight the studies’ claims that are most relevant to the essay or research question(s). Analysis: compare and contrast the texts’ trends, tendencies, major findings, debates and methods. Evaluation: consider the texts’ strengths and limitations, maybe make suggestions that would improve them, and identify gaps in the field. Transition: introduce the next section and show how it is linked to this one. Like most essays, a literature review’s conclusion summarises and emphasises your main points, so should not contain any new information or insight. Topic sentence(s): indicate this is the end of the assignment and refer back to the essay or research question(s). Recap: summarise the key judgements that you have made and the gaps you have found in the field. Closing statement: give a final statement that proves you have completed the assignment’s objective(s), look to the future of the field and, if relevant, show how this connects to your thesis. As a library, NLM provides access to scientific literature. Inclusion in an NLM database does not imply endorsement of, or agreement with, the contents by NLM or the National Institutes of Health. Learn more: PMC Disclaimer | PMC Copyright Notice Literature reviews are in great demand in most scientific fields. Their need stems from the ever-increasing output of scientific publications [1]. For example, compared to 1991, in 2008 three, eight, and forty times more papers were indexed in Web of Science on malaria, obesity, and biodiversity, respectively [2]. Given such mountains of papers, scientists cannot be expected to examine in detail every single new paper relevant to their interests [3]. Thus, it is both advantageous and necessary to rely on regular summaries of the recent literature. Although recognition for scientists mainly comes from primary research, timely literature reviews can lead to new synthetic insights and are often widely read [4]. For such summaries to be useful, however, they need to be compiled in a professional way [5]. When starting from scratch, reviewing the literature can require a titanic amount of work. That is why researchers who have spent their career working on a certain research issue are in a perfect position to review that literature. Some graduate schools are now offering courses in reviewing the literature, given that most research students start their project by producing an overview of what has already been done on their research issue [6]. However, it is likely that most scientists have not thought in detail about how to approach and carry out a literature review. Reviewing the literature requires the ability to juggle multiple tasks, from finding and evaluating relevant material to synthesising information from various sources, from critical thinking to paraphrasing, evaluating, and citation skills [7]. In this contribution, I share ten simple rules I learned working on about 25 literature reviews as a PhD and postdoctoral student. Ideas and insights also come from discussions with coauthors and colleagues, as well as feedback from reviewers and editors. How to choose which topic to review? There are so many issues in contemporary science that you could spend a lifetime of attending conferences and reading the literature just pondering what to review. On the one hand, if you take several years to choose, several other people may have had the same idea in the meantime. On the other hand, only a well-considered topic is likely to lead to a brilliant literature review [8]. The topic must at least be: interesting to you (ideally, you should have come across a series of recent papers related to your line of work that call for a critical summary), an important aspect of the field (so that many readers will be interested in the review and there will be enough material to write it), and a well-defined issue (otherwise you could potentially include thousands of publications, which would make the review unhelpful). Ideas for potential reviews may come from papers providing lists of key research questions to be answered [9], but also from serendipitous moments during desultory reading and discussions. In addition to choosing your topic, you should also select a target audience. In many cases, the topic (e.g., web services in computational biology) will automatically define an audience (e.g., computational biologists), but that same topic may also be of interest to neighbouring fields (e.g., computer science, biology, etc.). After having chosen your topic and audience, start by checking the literature and downloading relevant papers. Five pieces of advice here: keep track of the search items you use (so that your search can be replicated [10]), keep a list of papers whose pdfs you cannot access immediately (so as to retrieve them later with alternative strategies), use a paper management system (e.g., Mendeley, Papers, Qiqqa, Sente), define early in the process some criteria for exclusion of irrelevant papers (these criteria can then be described in the review to help define its scope), and do not just look for research papers in the area you wish to review, but also seek previous reviews. The chances are high that someone will already have published a literature review (Figure 1), if not exactly on the issue you are planning to tackle, at least on a related topic. If there are already a few or several reviews of the literature on your issue, my advice is not to give up, but to carry on with your own literature review, The bottom-right situation (many literature reviews but few research papers) is not just a theoretical situation; it applies, for example, to the study of the impacts of climate change on plant diseases, where there appear to be more literature reviews than research studies [33]. discussing in your review the approaches, limitations, and conclusions of past reviews, trying to find a new angle that has not been covered adequately in the previous reviews, and incorporating new material that has inevitably accumulated since their appearance. When searching the literature for pertinent papers and reviews, the usual rules apply: be thorough, use different keywords and database sources (e.g., DBLP, Google Scholar, ISI Proceedings, JSTOR Search, Medline, Scopus, Web of Science), and look at who has cited past relevant papers and book chapters. If you read the papers first, and only afterwards start writing the review, you will need a very good memory to remember who wrote what, and what your impressions and associations were while reading each single paper. My advice is, while reading, to start writing down interesting pieces of information, insights about how to organize the review, and thoughts on what to write. This way, by the time you have read the literature you selected, you will already have a rough draft of the review. Of course, this draft will still need much rewriting, restructuring, and rethinking to obtain a text with a coherent argument [11], but you will have avoided the danger posed by staring at a blank document. Be careful when taking notes to use quotation marks if you are provisionally copying verbatim from the literature. It is advisable then to reformulate such quotes with your own words in the final draft. It is important to be careful in noting the references already at this stage, so as to avoid misattributions. Using referencing software from the very beginning of your endeavour will save you time. After having taken notes while reading the literature, you will have a rough idea of the amount of material available for the review. This is probably a good time to decide whether to go for a mini- or a full review. Some journals are now favouring the publication of rather short reviews focusing on the last few years, with a limit on the number of words and citations. A mini-review is not necessarily a minor review: it may well attract more attention from busy readers, although it will inevitably simplify some issues and leave out some relevant material due to space limitations. A full review will have the advantage of more freedom to cover in detail the complexities of a particular scientific development, but may then be left in the pile of the very important papers “to be read” by readers with little time to spare for major monographs. There is probably a continuum between mini- and full reviews. The same point applies to the dichotomy of descriptive vs. integrative reviews. While descriptive reviews focus on the methodology, findings, and interpretation of each reviewed study, integrative reviews attempt to find common ideas and concepts from the reviewed material [12]. A similar distinction exists between narrative and systematic reviews: while narrative reviews are qualitative, systematic reviews attempt to test a hypothesis based on the published evidence, which is gathered using a predefined protocol to reduce bias [13], [14]. When systematic reviews analyse quantitative results in a quantitative way, they become meta-analyses. The choice between different review types will have to be made on a case-by-case basis, depending not just on the nature of the material found and the preferences of the target journal(s), but also on the time available to write the review and the number of coauthors [15]. Whether your plan is to write a mini- or a full review, it is good advice to keep it focused 16,17. Including material just for the sake of it can easily lead to reviews that are trying to do too many things at once. The need to keep a review focused can be problematic for interdisciplinary reviews, where the aim is to bridge the gap between fields [18]. If you are writing a review on, for example, how epidemiological approaches are used in modelling the spread of ideas, you may be inclined to include material from both parent fields, epidemiology and the study of cultural diffusion. This may be necessary to some extent, but in this case a focused review would only deal in detail with those studies at the interface between epidemiology and the spread of ideas. While focus is an important feature of a successful review, this requirement has to be balanced with the need to make the review relevant to a broad audience. This square may be circled by discussing the wider implications of the reviewed topic for other disciplines. Reviewing the literature is not stamp collecting. A good review does not just summarize the literature, but discusses it critically, identifies methodological problems, and points out research gaps [19]. After having read a review of the literature, a reader should have a rough idea of: the major achievements in the reviewed field, the main areas of debate, and the outstanding research questions. It is challenging to achieve a successful review on all these fronts. A solution can be to involve a set of complementary coauthors: some people are excellent at mapping what has been achieved, some others are very good at identifying dark clouds on the horizon, and some have instead a knack at predicting where solutions are going to come from. If your journal club has exactly this sort of team, then you should definitely write a review of the literature! In addition to critical thinking, a literature review needs consistency, for example in the choice of passive vs. active voice and present vs. past tense. Like a well-baked cake, a good review has a number of telling features: it is worth the reader's time, timely, systematic, well written, focused, and critical. It also needs a good structure. With reviews, the usual subdivision of research papers into introduction, methods, results, and discussion does not work or is rarely used. However, a general introduction of the context and, toward the end, a recapitulation of the main points covered and take-home messages make sense also in the case of reviews. For systematic reviews, there is a trend towards including information about how the literature was searched (database, keywords, time limits) [20]. How can you organize the flow of the main body of the review so that the reader will be drawn into and guided through it? It is generally helpful to draw a conceptual scheme of the review, e.g., with mind-mapping techniques. Such diagrams can help recognize a logical way to order and link the various sections of a review [21]. This is the case not just at the writing stage, but also for readers if the diagram is included in the review as a figure. A careful selection of diagrams and figures relevant to the reviewed topic can be very helpful to structure the text too [22]. Reviews of the literature are normally peer-reviewed in the same way as research papers, and rightly so [23]. As a rule, incorporating feedback from reviewers greatly helps improve a review draft. Having read the review with a fresh mind, reviewers may spot inaccuracies, inconsistencies, and ambiguities that had not been noticed by the writers due to rereading the typescript too many times. It is however advisable to reread the draft one more time before submission, as a last-minute correction of typos, leaps, and muddled sentences may enable the reviewers to focus on providing advice on the content rather than the form. Feedback is vital to writing a good review, and should be sought from a variety of colleagues, so as to obtain a diversity of views on the draft. This may lead in some cases to conflicting views on the merits of the paper, and on how to improve it, but such a situation is better than the absence of feedback. A diversity of feedback perspectives on a literature review can help identify where the consensus view stands in the landscape of the current scientific understanding of an issue [24]. In many cases, reviewers of the literature will have published studies relevant to the review they are writing. This could create a conflict of interest: how can reviewers report objectively on their own work [25]? Some scientists may be overly enthusiastic about what they have published, and thus risk giving too much importance to their own findings in the review. However, bias could also occur in the other direction: some scientists may be unduly dismissive of their own achievements, so that they will tend to downplay their contribution (if any) to a field when reviewing it. In general, a review of the literature should neither be a public relations brochure nor an exercise in competitive self-denial. If a reviewer is up to the job of producing a well-organized and methodical review, which flows well and provides a service to the readership, then it should be possible to be objective in reviewing one's own relevant findings. In reviews written by multiple authors, this may be achieved by assigning the review of the results of a coauthor to different coauthors. Given the progressive acceleration in the publication of scientific papers, today's reviews of the literature need awareness not just of the overall direction and achievements of a field of inquiry, but also of the latest studies, so as not to become out-of-date before they have been published. Ideally, a literature review should not identify as a major research gap an issue that has just been addressed in a series of papers in press (the same applies, of course, to older, overlooked studies (“sleeping beauties” [26])). This implies that literature reviewers would do well to keep an eye on electronic lists of papers in press, given that it can take months before these appear in scientific databases. Some reviews declare that they have scanned the literature up to a certain point in time, but given that peer review can be a rather lengthy process, a full search for newly appeared literature at the revision stage may be worthwhile. Assessing the contribution of papers that have just appeared is particularly challenging, because there is little perspective with which to gauge their significance and impact on further research and society. Inevitably, new papers on the reviewed topic (including independently written literature reviews) will appear from all quarters after the review has been published, so that there may soon be the need for an updated review. But this is the nature of science [27]–[32]. I wish everybody good luck with writing a review of the literature. Many thanks to M. Barbosa, K. Dehnen-Schmutz, T. Döring, D. Fontaneto, M. Garbelotto, O. Holdenrieder, M. Jeger, D. Lonsdale, A. MacLeod, P. Mills, M. Moslonka-Lefebvre, G. Stancanelli, P. Weisberg, and X. Xu for insights and discussions, and to P. Bourne, T. Matoni, and D. Smith for helpful comments on a previous draft. This work was funded by the French Foundation for Research on Biodiversity (FRB) through its Centre for Synthesis and Analysis of Biodiversity data (CESAB), as part of the NETSEED research project. 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Tsafnat G, Dunn A, Glasziou P, Coiera E (2013) The automation of systematic reviews. BMJ 346: f139 doi:10.1136/bmj.f139 [DOI] [PubMed] [Google Scholar] 33. Pautasso M, Döring TF, Garbelotto M, Pellis L, Jeger MJ (2012) Impacts of climate change on plant diseases - opinions and trends. Eur J Plant Pathol 133: 295–313 doi:10.1007/s10658-012-9936-1 [Google Scholar] Articles from PLoS Computational Biology are provided here courtesy of PLOS Are you writing a literature review as part of a final year project, dissertation, or thesis, or as a standalone piece of work? This page will work through a process of organising and synthesising your sources and then writing a clear and critical final review. A literature review is an account of the current thinking in a specific area of study. Its purpose is to introduce the reader to what has gone before and often to provide you with a foundation that you can build on with your own research. This traditional form of review is sometimes also referred to as a narrative review. A literature review will often form a section or chapter of a larger piece of research work, such as a dissertation, thesis, or final year project. It can also be a standalone piece of work. A literature review will usually do some or all of the following: Introduce the reader to a specific area of interest. Organise relevant sources thematically, starting with the more general, broader themes and narrowing towards the most specific themes. Introduce key theories relevant to the area of study. Define your understanding of important terms or language used in the research. Include only the most relevant, important or influential sources, carefully selected. It is about quality not quantity! Identify gaps or limitations in existing research. Considering a body of scholarship as a whole (or in relation to each of your themes) will allow you to 'synthesise' multiple sources and produce an overall summary. Developing a literature review will help you to develop a level of expertise in your chosen area. By consulting and including a unique combination of sources, you will be able to formulate an informed and original perspective. Where relevant, this can drive forward your ongoing research. Writing a Literature Review workshop: book here A systematic review is a research methodology, often following a standardised and replicable search method and reporting structure that is specific to your discipline. Visit our guidance on systematic reviews for more information. Organising your sources As you encounter more and more relevant sources, you will face an ever-expanding amount of reading for yourself. It would take years to read through all of the literature in a specific field from start to finish. Academic reading, and particularly the process of 'reading around' a topic, is about selective, or targeted reading. Visit our Reading and understanding information Hub to explore approaches to reading for different purposes. Creating a Literature Matrix can help you to identify the key things that you want to take away from each source. A literature matrix is a simple spreadsheet where you select column titles to suit the aims of your literature review. Are you interested in the research methodology, the scale of the research, the main conclusions, or something else entirely? Once you have scanned through a source and pulled out the points you are interested in, you can move onto the next source. Organising your reading in this way will also allow you to identify key themes that are emerging in your reading, which you will be able to use later on to plan your review. You may want to use a reference management tool to help organise and produce your bibliography. Visit the University of Sheffield Library Reference Management pages here. Make a copy of our Literature matrix template (Google Sheet) and add/delete columns based on the information you want to collect during your search. Using a spreadsheet means that you can filter and sort your sources, for example, into chronological order, or alphabetically by author. This downloadable example literature matrix shows how you can lay out your columns. Synthesising your sources Once you have a number of sources to work with, you will start to identify key themes emerging. At this point you can start to organise your sources systematically to develop and explore those themes. Can you organise your themes from the broadest to the narrowest and most specific? A synthesis matrix will help you to identify a thematic structure for your literature review and to understand how the sources that you have found relate to one another. A synthesis matrix is a further spreadsheet that organises your sources by theme and includes a synthesis column, where you can begin to draw out comparisons between the sources. Once you have identified a number of sources for each theme in your matrix, you should be able to identify the following: Do the sources build on or develop one another? This may be a chronological process. Do the sources challenge or contradict one another? Do they reveal a debate within the field? Do the sources identify an area of particular interest or a gap in the field? Do the sources help to fill in gaps or complete a bigger picture? Your synthesis column provides an opportunity for you to comment on multiple sources considered as a whole. It is a space for your critical voice and interpretation, which is a key part of writing a successful literature review. Visit our Producing a literature review interactive tutorial - for further guidance. View tutorial as a DOCX (349 KB) Writing your review Once you have done the background reading and organised your sources using a synthesis matrix, the job of writing your review is simply about adding flesh to the bones. You will need to write your review as a narrative account, but you can use your matrix as a framework to help you do so. A literature review will usually follow a simple structure: Introduction: what is the overall topic area and how have you broken your review down into themes? Theme 1: the broadest, most top-level area (perhaps including some background theory that may have influenced your thinking). Theme 2, theme 3, theme 4, etc. Your themes should get progressively more specific and closer to the focus of your research. Conclusion: how has this informed your thinking and (if the review is part of a bigger project) what are your research aims and objectives? Your review may be broken down by section headings or be a continuous flow with themes clearly separated in a paragraph structure. Each section or paragraph will describe that theme and finish by summarising your overview of a theme (the synthesis part of the matrix above, which includes your critical analysis). Our web page How to structure a paragraph has further guidance to ensure your paragraphs are clear and contain your synthesis and critical analysis. For advice and feedback on your own review, including referencing, synthesis and academic arguments, please book a writing advisory service appointment. Make an appointment (student login required) Next steps A well-crafted literature review is a cornerstone of academic research. It allows scholars to establish a foundation for their work, critically assess existing knowledge, and identify gaps that need further exploration. Whether you’re working on a research paper, a dissertation, or a thesis, mastering the art of literature review writing is essential. This guide will walk you through the process, from defining your research question to synthesizing and writing your review effectively. Table of contents What is a literature review? Steps to writing a literature review Examples of well-written literature reviews Tips for effective writing Common pitfalls to avoid Literature review FAQs What is a literature review? A literature review is a critical analysis of existing research on a specific topic. Unlike a research paper, which presents original findings, a literature review synthesizes previous studies to provide a comprehensive overview of the topic. It helps to: Contextualize A literature review situates your research within the existing body of knowledge. It provides an overview of previous studies, highlighting the evolution of ideas and key developments in your field. Identify research gaps By critically analyzing past research, you can identify areas that need further exploration, providing justification for your study. Avoid duplication Conducting a literature review ensures that your study does not merely replicate previous research. Instead, it helps you build upon existing work, fostering originality. Create a theoretical framework A literature review plays a crucial role in shaping the theoretical foundation of your research. Understanding past theories and methodologies can help you construct a strong framework to support your study. Steps to writing a literature review 1. Define your research question Before you start searching for literature, clearly articulate your research question. A well-defined question will guide your search and help maintain focus. Example of an effective research question: How does social media usage impact the mental health of college students? 2. Conduct a comprehensive literature search Gather relevant sources by exploring academic databases, journals, and libraries. Some useful resources include: Tips for effective searching: Use Boolean operators (AND, OR, NOT) to refine your search. Check citations and references in key articles for additional sources. Ensure the sources are peer-reviewed, current, and relevant to your research question. 3. Evaluate and select sources Not all sources are created equal. Critically assess each study for quality and relevance using these criteria: Credibility—Is the study published in a reputable, peer-reviewed journal? Methodology—Are the research methods rigorous and appropriate? Findings—Are the results significant and relevant? Limitations—Are there biases or gaps in the study? Read the abstract for each source to help you answer the questions above. Keep detailed notes on each source, summarizing key points and identifying connections between studies. 4. Organize the literature Structure your review logically and coherently. Common ways to organize a literature review include: Thematic approach (best for interdisciplinary topics) Group studies based on key themes or concepts. Example: If you’re researching social media and mental health, themes might include: Social media and anxiety Social media and depression The role of screen time in mental well-being Chronological approach (best for tracing research evolution) Present research findings in the order they were published to show how perspectives have evolved. Example: How studies of social media’s impact on mental health have changed from 2005 to 2024. Methodological approach (best for comparing research methods) Categorize studies based on research designs (e.g., qualitative, quantitative, mixed methods). Example: Comparing surveys, experimental studies, and case studies on social media and mental health. 5. Synthesize the information Rather than simply summarizing each study, integrate the findings to provide a cohesive analysis. Highlight: Themes or trends—Where multiple studies support the same conclusion. Contradictions—Where research findings differ. Gaps—Areas where research is missing or inconclusive. Example of synthesis: While most studies agree that excessive social media usage is linked to increased anxiety, some research suggests that certain online communities provide mental health support and can have positive effects. Use direct comparisons (e.g., “While Study A found that …, Study B suggests otherwise …”) to engage with the literature critically. Here’s a tip: You can ask Grammarly to summarize sources to help you synthesize the research and craft effective comparisons. 6. Write your review Your literature review should follow a structured format: a. Introduction Introduce the research question and explain the scope of your review. Provide a brief overview of key themes. Explain why this topic is important and how your review contributes to the field. b. Body Present the literature according to your chosen structure (thematic, chronological, or methodological). Discuss key findings and provide critical analysis. Highlight research gaps and contradictions. Use subheadings to improve readability. c. Conclusion Summarize key insights from the review. Identify unresolved issues and suggest directions for future research. Reinforce the significance of your study. Maintain a neutral and objective tone—your goal is to analyze and synthesize existing research, not advocate for a specific viewpoint. Examples of well-written literature reviews Studying high-quality literature reviews can help you understand structuring, synthesis, and critical analysis. Here are some excellent resources: University of Leeds—Provides examples of literature review introductions, illustrating how to engage readers effectively. Oxford University Press—Offers comparative examples, demonstrating varying levels of effectiveness to guide best practices. By analyzing these examples, you can gain insights into structuring your literature review, synthesizing multiple sources, and presenting a cohesive academic narrative. Here’s a tip: Once you have your first draft, ask Grammarly to review it and suggest areas for improvement. Tips for effective writing 1. Maintain objectivity Present an unbiased view of the literature by evaluating studies critically rather than favoring one perspective. 2. Be concise Avoid unnecessary details. Focus on conveying your analysis clearly and succinctly. 3. Use proper citations Accurately reference all sources using the required academic citation style (three of the most used styles are APA, MLA, and Chicago) to avoid plagiarism. 4. Use an appropriate academic writing style Do not use contractions, colloquialisms, or informal language. Distinguish between your analysis and prior scholarly work by using the past tense when discussing research and the present tense when discussing your analysis or plans for your research. 5. Revise thoroughly Proofread your review multiple times to ensure clarity, coherence, and grammatical accuracy. Consider using tools like Grammarly to refine your writing. Common pitfalls to avoid 1. Oversummarization A literature review is not just a collection of summaries. Instead, it should offer a critical analysis and synthesis of existing research. 2. Lack of focus Ensure all discussed literature directly relates to your research question. Avoid including irrelevant studies. 3. Inadequate coverage Strive to include all relevant studies to provide a well-rounded review. Excluding key research can weaken the credibility of your work. Conclusion Writing a literature review is a meticulous yet rewarding process. By following the steps outlined in this guide, you can develop a well-structured and insightful review that strengthens your research foundation. A strong literature review demonstrates your understanding of the field and highlights your study’s originality and significance. Grammarly can help you write a polished, comprehensive review that stands out. Literature review FAQs What are the 3 parts of a literature review? A literature review typically consists of three key components: Introduction—Establishes the purpose, scope, and significance of the review. Body—Summarizes and synthesizes existing research, often organizing sources by themes, trends, or methodologies. Conclusion—Highlights key insights, identifies research gaps, and explains how the review informs your own study. What are the 5 C’s of writing a literature review? To craft a strong literature review, keep the five C’s in mind: Cite—Reference relevant studies to support your discussion. Compare—Highlight similarities and differences between sources. Contrast—Show opposing viewpoints and debates in the field. Critique—Evaluate the credibility, strengths, and limitations of the research. Connect—Explain how the reviewed literature relates to your research question. Where does the literature review go in a dissertation? The literature review typically appears after the introduction and before the methodology section. It sets the stage by providing background research, identifying gaps in the field, and justifying the need for your study. What is the difference between a literature review and an abstract? An abstract is a concise summary of your research, typically around 150–250 words, highlighting key findings and conclusions. A literature review, on the other hand, is a comprehensive analysis of existing research related to a topic, synthesizing different sources to establish context and direction for a study. What is the difference between a literature review and an annotated bibliography? An annotated bibliography is a list of sources with brief descriptions and evaluations of each, often written as individual summaries. A literature review, however, weaves multiple sources together into a structured narrative, analyzing relationships and themes across the research. While an annotated bibliography focuses on each source independently, a literature review synthesizes information to provide a cohesive overview of a topic. The format of a review of literature may vary from discipline to discipline and from assignment to assignment. A review may be a self-contained unit — an end in itself — or a preface to and rationale for engaging in primary research. A review is a required part of grant and research proposals and often a chapter in theses and dissertations. Generally, the purpose of a review is to analyze critically a segment of a published body of knowledge through summary, classification, and comparison of prior research studies, reviews of literature, and theoretical articles. Writing the introduction In the introduction, you should: Define or identify the general topic, issue, or area of concern, thus providing an appropriate context for reviewing the literature. Point out overall trends in what has been published about the topic; or conflicts in theory, methodology, evidence, and conclusions; or gaps in research and scholarship; or a single problem or new perspective of immediate interest. Establish the writer’s reason (point of view) for reviewing the literature; explain the criteria to be used in analyzing and comparing literature and the organization of the review (sequence); and, when necessary, state why certain literature is or is not included (scope). Writing the body In the body, you should: Group research studies and other types of literature (reviews, theoretical articles, case studies, etc.) according to common denominators such as qualitative versus quantitative approaches, conclusions of authors, specific purpose or objective, chronology, etc. Summarize individual studies or articles with as much or as little detail as each merits according to its comparative importance in the literature, remembering that space (length) denotes significance. Provide the reader with strong “umbrella” sentences at beginnings of paragraphs, “signposts” throughout, and brief “so what” summary sentences at intermediate points in the review to aid in understanding comparisons and analyses. Writing the conclusion In the conclusion, you should: Summarize major contributions of significant studies and articles to the body of knowledge under review, maintaining the focus established in the introduction. Evaluate the current “state of the art” for the body of knowledge reviewed, pointing out major methodological flaws or gaps in research, inconsistencies in theory and findings, and areas or issues pertinent to future study. Conclude by providing some insight into the relationship between the central topic of the literature review and a larger area of study such as a discipline, a scientific endeavor, or a profession. For further information see our handouts on Writing a Critical Review of a Nonfiction Book or Article or Reading a Book to Review It. To learn more about literature reviews, take a look at our workshop on Writing Literature Reviews of Published Research. Sample Literature Reviews An important strategy for learning how to compose literature reviews in your field or within a specific genre is to locate and analyze representative examples. The following collection of annotated sample literature reviews written and co-written by colleagues associated with UW-Madison showcases how these reviews can do different kind of work for different purposes. Use these successful examples as a starting point for understanding how other writers have approached the challenging and important task of situating their idea in the context of established research. When writing a research paper on a specific topic, you will often need to include an overview of any prior research that has been conducted on that topic. For example, if your research paper is describing an experiment on fear conditioning, then you will probably need to provide an overview of prior research on fear conditioning. That overview is typically known as a literature review. Please note that a full-length literature review article may be suitable for fulfilling the requirements for the Psychology B.S. Degree Research Paper. For further details, please check with your faculty advisor. Different Types of Literature Reviews Literature reviews come in many forms. They can be part of a research paper, for example as part of the Introduction section. They can be one chapter of a doctoral dissertation. Literature reviews can also “stand alone” as separate articles by themselves. For instance, some journals such as Annual Review of Psychology, Psychological Bulletin, and others typically publish full-length review articles. Similarly, in courses at UCSD, you may be asked to write a research paper that is itself a literature review (such as, with an instructor’s permission, in fulfillment of the B.S. Degree Research Paper requirement). Alternatively, you may be expected to include a literature review as part of a larger research paper (such as part of an Honors Thesis). Literature reviews can be written using a variety of different styles. These may differ in the way prior research is reviewed as well as the way in which the literature review is organized. Examples of stylistic variations in literature reviews include: Summarization of prior work vs. critical evaluation. In some cases, prior research is simply described and summarized; in other cases, the writer compares, contrasts, and may even critique prior research (for example, discusses their strengths and weaknesses). Chronological vs. categorical and other types of organization. In some cases, the literature review begins with the oldest research and advances until it concludes with the latest research. In other cases, research is discussed by category (such as in groupings of closely related studies) without regard for chronological order. In yet other cases, research is discussed in terms of opposing views (such as when different research studies or researchers disagree with one another). Overall, all literature reviews, whether they are written as a part of a larger work or as separate articles unto themselves, have a common feature: they do not present new research; rather, they provide an overview of prior research on a specific topic. How to Write a Literature Review When writing a literature review, it can be helpful to rely on the following steps. Please note that these procedures are not necessarily only for writing a literature review that becomes part of a larger article; they can also be used for writing a full-length article that is itself a literature review (although such reviews are typically more detailed and exhaustive; for more information please refer to the Further Resources section of this page). Steps for Writing a Literature Review The topic, which is commonly a research question (or problem) of some kind, needs to be identified and defined as clearly as possible. You need to have an idea of what you will be reviewing in order to effectively search for references and to write a coherent summary of the research on it. At this stage it can be helpful to write down a description of the research question, area, or topic that you will be reviewing, as well as to identify any keywords that you will be using to search for relevant research. Use a range of keywords to search databases such as PsycINFO and any others that may contain relevant articles. You should focus on peer-reviewed, scholarly articles. Published books may also be helpful, but keep in mind that peer-reviewed articles are widely considered to be the “gold standard” of scientific research. Read through titles and abstracts, select and obtain articles (that is, download, copy, or print them out), and save your searches as needed. For more information about this step, please see the Using Databases and Finding Scholarly References section of this website. Absorb as much information as you can. Read through the articles and books that you have found, and as you do, take notes. The notes should include anything that will be helpful in advancing your own thinking about the topic and in helping you write the literature review (such as key points, ideas, or even page numbers that index key information). Some references may turn out to be more helpful than others; you may notice patterns or striking contrasts between different sources; and some sources may refer to yet other sources of potential interest. This is often the most time-consuming part of the review process. However, it is also where you get to learn about the topic in great detail. For more details about taking notes, please see the “Reading Sources and Taking Notes” section of the Finding Scholarly References page of this website. At this stage, you are close to writing the review itself. However, it is often helpful to first reflect on all the reading that you have done. What patterns stand out? Do the different sources converge on a consensus? Or not? What unresolved questions still remain? You should look over your notes (it may also be helpful to reorganize them), and as you do, to think about how you will present this research in your literature review. Are you going to summarize or critically evaluate? Are you going to use a chronological or other type of organizational structure? It can also be helpful to create an outline of how your literature review will be