

Research Methods

Prepared by

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Lecture No.3

جامعة الجميع الذكية

تسعى لتكون الكيان الأول الذي يتبنى مبدأ المجتمع التعليمي
التعاوني ويقدم العلم مقابل العمل لتنمية وبناء المجتمعات.

Research Methods



جامعة الجميع الذكية
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Content of Lecture

- Introduction
- Reviewing the literature
- What is a literature review?
- How is a literature review different from an academic research paper?
- Why do we write literature reviews?
- Ask yourself questions like these:
- What is the purpose of a literature review?
- The key steps to writing a literature review.
- Search for relevant sources.



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Introduction

The literature review is considered important steps in scientific research, and the basic steps associated with writing them must be reviewed.

Conducting a literature review helps you build your knowledge in your field. You'll learn about important concepts, research methods, and experimental techniques that are used in your field. You'll also gain insight into how researchers apply the concepts you're learning in your unit to real-world problems.



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Reviewing the Literature

“Reviewing the literature ” = background reading

Start with informal sources that provide
basic information about the education related
issue of interest,
then move on to more formal reports.



Literature Review



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What is a literature review?

A literature review is a survey of scholarly sources (journal articles, and theses) related to a specific topic or research question. It is often written as part of a thesis, dissertation, or research paper, in order to situate your work in relation to existing knowledge, allowing you to identify relevant theories, methods, and gaps in the existing research.



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What is a literature review?

A literature review discusses published information in a particular subject area, and sometimes information in a particular subject area within a certain time period.

A literature review can be just a simple summary of the sources, but it usually has an organizational pattern and combines both summary and synthesis. A summary is a recap of the important information of the source, but a synthesis is a re-organization, or a reshuffling, of that information. It might give a new interpretation of old material or combine new with old interpretations. Or it might trace the intellectual progression of the field, including major debates. And depending on the situation, the literature review may evaluate the sources and advise the reader on the most pertinent or relevant



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How is a literature review different from an academic research paper?

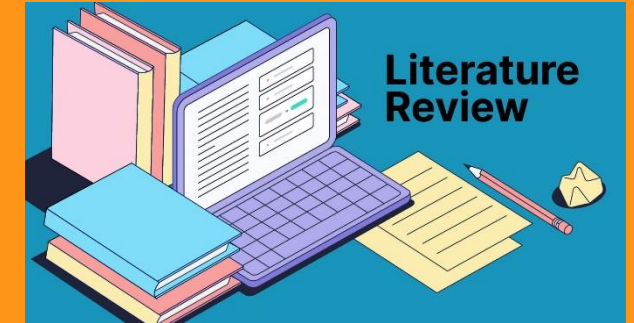
The main focus of an academic research paper is to develop a new argument, and a research paper is likely to contain a literature review as one of its parts. In a research paper, you use the literature as a foundation and as support for a new insight that you contribute. The focus of a literature review, however, is to summarize and synthesize the arguments and ideas of others without adding new contribution



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Why do we write literature reviews?

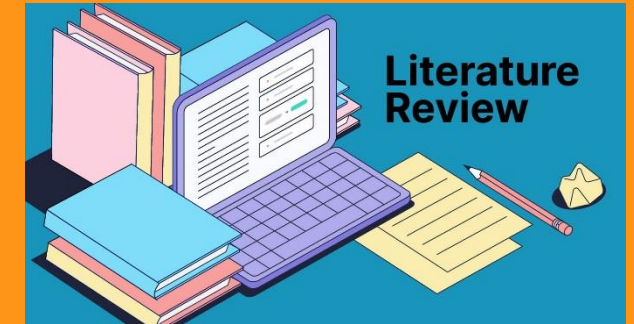
Literature reviews provide you with a handy guide to a particular topic. If you have limited time to conduct research, literature reviews can give you an overview or act as a steppingstone. For professionals, they are useful reports that keep them up to date with what is current in the field. For scholars, the depth and breadth of the literature review emphasizes the credibility of the writer in his or her field. Literature reviews also provide a solid background for a research paper's investigation. Comprehensive knowledge of the literature of the field is essential to most research papers



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Importance of literature review in research

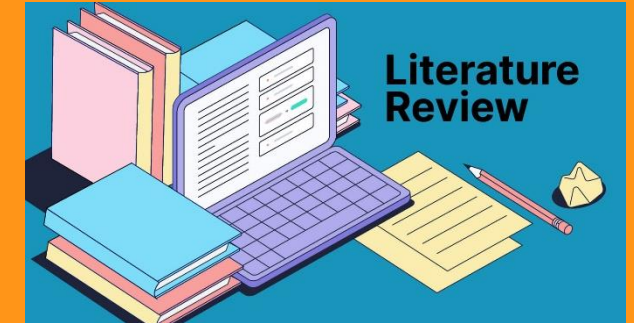
1. Provides the interpretation of existing literature in light of updated developments in the field to help in establishing the consistency in knowledge and relevancy of existing materials
2. It helps in calculating the impact of the latest information in the field by mapping their progress of knowledge.
3. It brings out the dialects of contradictions between various thoughts within the field to establish facts
4. The research gaps scrutinized initially are further explored to establish the latest facts of theories to add value to the field
5. Indicates the current research place in the schema of a particular field
6. Provides information for relevancy and coherency to check the research
7. Apart from elucidating the continuance of knowledge, it also points out areas that require further investigation and thus aids as a starting point of any future research



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Importance of literature review in research

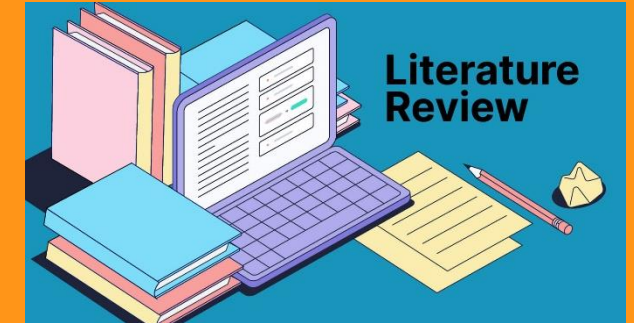
1. Justifies the research and sets up the research question
2. Sets up a theoretical framework comprising the concepts and theories of the research upon which its success can be judged
3. Helps to adopt a more appropriate methodology for the research by examining the strengths and weaknesses of existing research in the same field
4. Increases the significance of the results by comparing it with the existing literature



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Importance of literature review in research

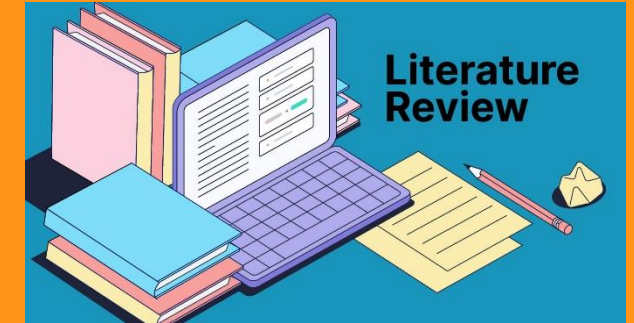
1. Provides a point of reference by writing the findings in the scientific manuscript
2. Helps to get the due credit from the audience for having done the fact-finding and fact-checking mission in the scientific manuscripts
3. The more the reference of relevant sources of it could increase more of its trustworthiness with the readers
4. Helps to prevent plagiarism by tailoring and uniquely tweaking the scientific manuscript not to repeat other's original idea



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Importance of literature review in research

1. By preventing plagiarism, it saves the scientific manuscript from rejection and thus also saves a lot of time and money
2. Helps to evaluate, condense and synthesize gist in the author's own words to sharpen the research focus
3. Helps to compare and contrast to show the originality and uniqueness of the research than that of the existing other researches
4. Rationalizes the need for conducting the particular research in a specified field
5. Helps to collect data accurately for allowing any new methodology of research than the existing ones



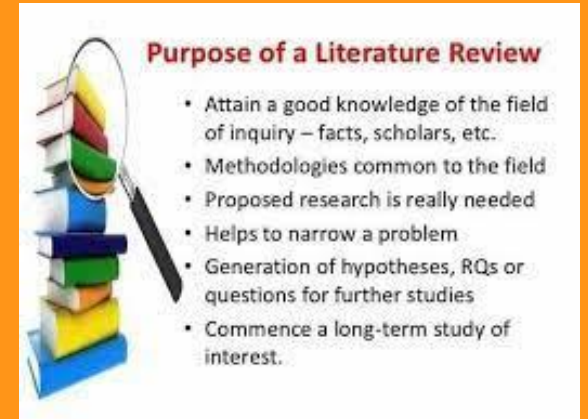
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What is the purpose of a literature review?

When you write a thesis, dissertation, or research paper, you will likely have to conduct a literature review to situate your research within existing knowledge. The literature review gives you a chance to:

1. Demonstrate your familiarity with the topic and its scholarly context
2. Develop a theoretical framework and methodology for your research
3. Position your work in relation to other researchers and theorists
4. Show how your research addresses a gap or contributes to a debate
5. Evaluate the current state of research and demonstrate your knowledge of the scholarly debates around your topic.

Writing literature reviews is a particularly important skill if you want to apply for graduate school or pursue a career in research.



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Ask yourself questions like these:

1. What is the **specific thesis, problem, or research question** that my literature review helps to define?
2. What **type** of literature review am I conducting? Am I looking at issues of theory? methodology? policy? quantitative research (e.g. on the effectiveness of a new procedure)? qualitative research (e.g., studies of loneliness among migrant workers)?
3. What is the **scope** of my literature review? What types of publications am I using (e.g., journals, books, government documents, popular media)? What discipline am I working in (e.g., nursing psychology, sociology, medicine)?



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Ask yourself questions like these:

4. How good was my **information seeking**? Has my search been wide enough to ensure I've found all the relevant material? Has it been narrow enough to exclude irrelevant material? Is the number of sources I've used appropriate for the length of my paper?

5. Have I **critically analysed** the literature I use? Do I follow through a set of concepts and questions, comparing items to each other in the ways they deal with them? Instead of just listing and summarizing items, do I assess them, discussing strengths and weaknesses?

6. Have I cited and discussed studies **contrary** to my perspective?

7. Will the reader find my literature review **relevant, appropriate, and useful**?



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Consider organization

You've got a focus, and you've stated it clearly and directly.

- Now what is the most effective way of presenting the information? What are the most important topics, subtopics, etc., that your review needs to include? And in what order should you present them? Develop an organization for your review at both a global and local level.



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The key steps to writing a literature review

There are five key steps to writing a literature review:

1. **Search for relevant literature**
2. **Evaluate sources**
3. **Identify themes, debates, and gaps**
4. **Outline the structure**
5. **Write your literature review**

A good literature review doesn't just summarize sources—it analyzes, synthesizes, and critically evaluates to give a clear picture of the state of knowledge on the subject.



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Step 1 – Search for relevant literature

Before you begin searching for literature, you need a clearly defined topic.

If you are writing the literature review section of a dissertation or research paper, you will search for literature related to your research problem and questions.

Literature review research question example

What is the impact of social media on body image among Generation Z?



Purpose of a Literature Review

- Attain a good knowledge of the field of inquiry – facts, scholars, etc.
- Methodologies common to the field
- Proposed research is really needed
- Helps to narrow a problem
- Generation of hypotheses, RQs or questions for further studies
- Commence a long-term study of interest.



Make a list of keywords

Make a list of keywords

Start by creating a list of keywords related to your research question. Include each of the key concepts or variables you're interested in, and list any synonyms and related terms. You can add to this list as you discover new keywords in the process of your literature search.

Research Title

What is the impact of social media on body image among Generation Z?

Keywords example

Social media, Facebook, Instagram, Twitter, Snapchat, TikTok

Body image, self-perception, self-esteem, mental health

Generation Z, teenagers, adolescents, youth

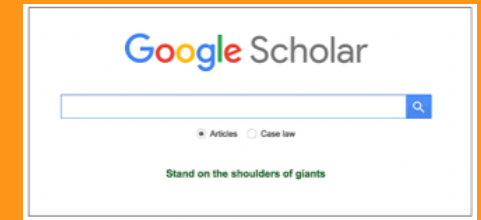


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Search for relevant sources

Use your keywords to begin searching for sources. Some useful databases to search for journals and articles include:

- Your university's library catalogue
- Google Scholar
- ResearchGate
- JSTOR
- EBSCO
- SAGE Journals



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Search for relevant sources

Use your keywords to begin searching for sources. Some useful databases to search for journals and articles include:

- Science Direct
- Elsevier journal
- Springer journal
- emerald
- Taylor and Francis



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Sources of literature review

Abstract Databases

Abstract: paragraph-length summary of an article, chapter, or book

Abstract databases: searchable collections of thousands of abstracts

- Some are subscription services available through university libraries
- Some are open access and available for free to everyone



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Sources of literature review

Full-Text Articles

The only way to truly understand a study is to read the full text of the article.

How to acquire full text articles:

- Library websites (e-journals) and physical collections
- Journal websites / Internet searches
- Request an “interlibrary loan” from a university library
- Email the author and request an electronic copy

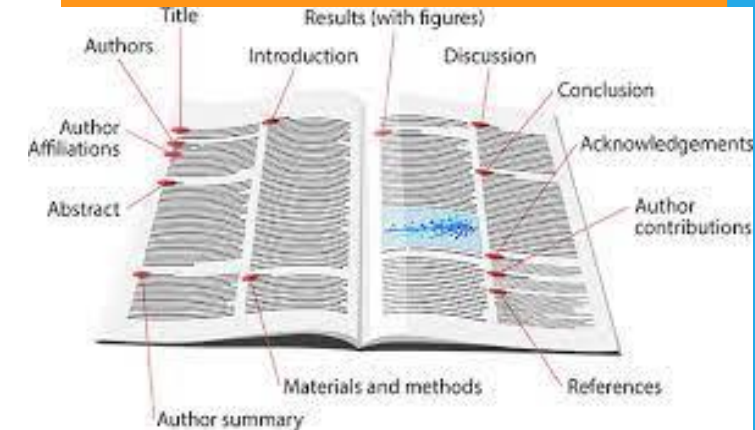


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Sources of literature review

Steps for Reading Articles

1. Re-read the abstract
2. Look carefully at the tables and figures for important results
3. Read the entire text of the article
 - Take notes about which exposures, diseases, and populations the study examined – and how they might relate to a new research project
4. Review of the reference lists for related papers



Case study: Reading a Primary Research Article from *Plant Physiology*

This case study examines a recent article published in the journal *Plant Physiology*. The full article is appended to this PDF. Because of space constraints, only the major points from the paper are covered in the case study, and the biochemical pathway is presented in simplified form.

Title The *b* Gene of Pea Encodes a Defective Flavonoid 3',5'-Hydroxylase, and Confers Pink Flower Color¹

Authors and author information Carol M. Mason, Mike J. Anthony, Lynda Turner, Daniel Hill, T.H. Nott, and Julie M.J. Baker²

Abstract A summary written by the authors

Introduction Not all journals mark it with a subheading

Footnotes including contact information for corresponding author and funding sources

Citation for this paper

In-text citation: Full citation is found at the end of the article

Indicates footnotes

Indicates footnotes

The first page of a typical article from *Plant Physiology*.
(See text for more information about each section)

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Literature Review

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Select a Topic

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Search & choose the literature

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Analysis & Interpret the literature

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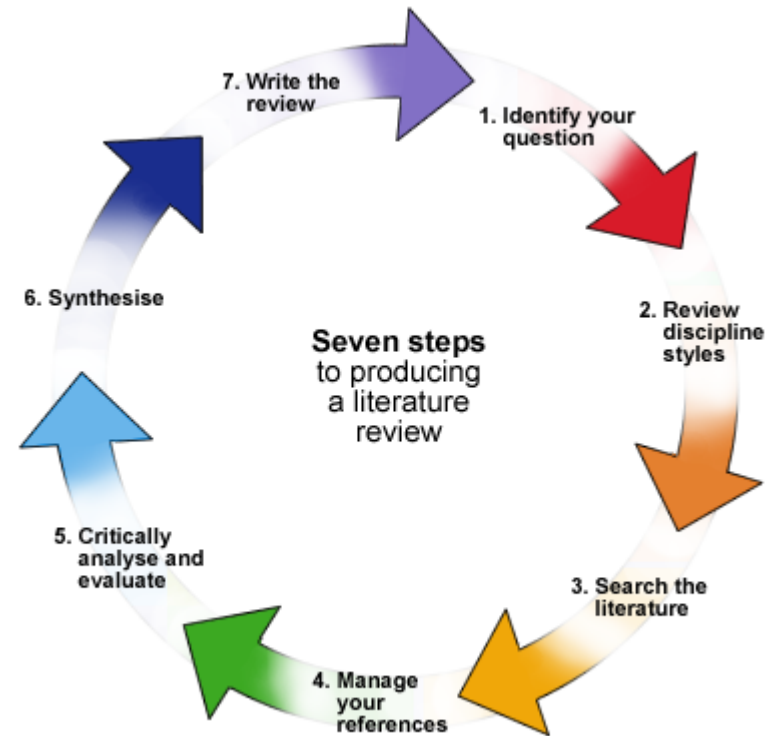


Write the review

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Strategies for writing the literature review



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How to Write a literature review?

How to write a literature review



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Step 2 – Evaluate and select sources

You likely won't be able to read absolutely everything that has been written on your topic, so it will be necessary to evaluate which sources are most relevant to your research question.

For each publication, ask yourself:

What question or problem is the author addressing?

What are the key concepts and how are they defined?

What are the key theories, models, and methods?



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Step 2 – Evaluate and select sources

What are the results and conclusions of the study?

How does the publication relate to other literature in the field?

Does it confirm, add to, or challenge established knowledge?

What are the strengths and weaknesses of the research?

Make sure the sources you use are credible and make sure you read any landmark studies and major theories in your field of research.



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Step 2 – Evaluate and select sources

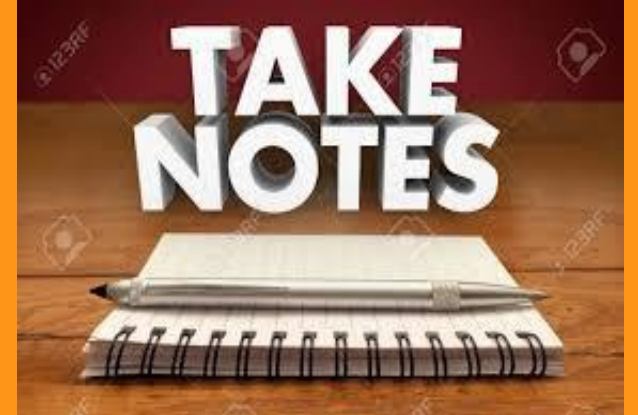
Take notes and cite your sources

As you read, you should also begin the writing process.

Take notes that you can later incorporate into the text of your literature review.

It is important to keep track of your sources with citations to avoid plagiarism.

It can be helpful to make an annotated bibliography, where you compile full citation information and write a paragraph of summary and analysis for each source. This helps you remember what you read and saves time later in the process.



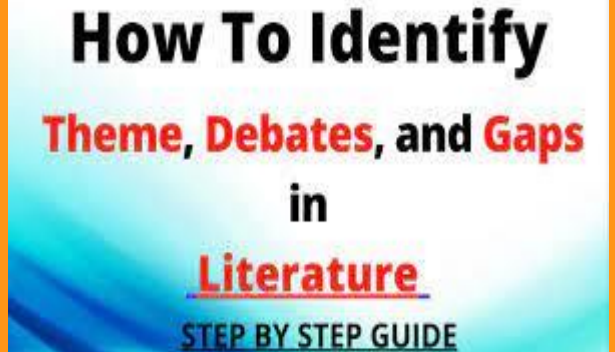
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Step 3 – Identify themes, debates, and gaps

To begin organizing your literature review's argument and structure, be sure you understand the connections and relationships between the sources you've read. Based on your reading and notes, you can look for:

- **Trends and patterns** (in theory, method or results): do certain approaches become more or less popular over time?
- **Themes**: what questions or concepts recur across the literature?
- **Debates, conflicts and contradictions**: where do sources disagree?
- **Pivotal publications**: are there any influential theories or studies that changed the direction of the field?
- **Gaps**: what is missing from the literature? Are there weaknesses that need to be addressed?

This step will help you work out the structure of your literature review and (if applicable) show how your own research will contribute to existing knowledge.



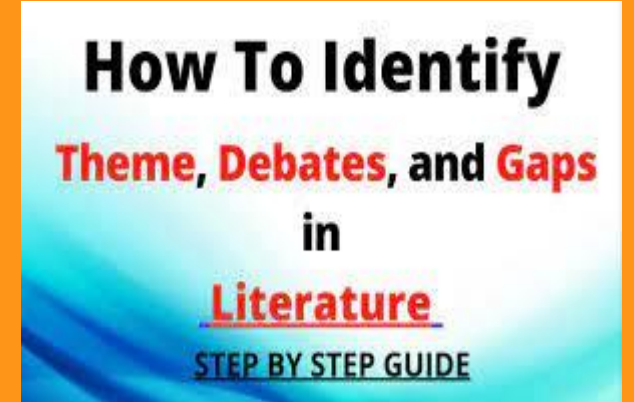
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Step 3 – Identify themes, debates, and gaps

Example of trends and gaps

In reviewing the literature on social media and body image, you note that:

- Most research has focused on young women.
- There is an increasing interest in the visual aspects of social media.
- But there is still a lack of robust research on highly visual platforms like Instagram and Snapchat—this is a gap that you could address in your own research.



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Step 4 – Outline your literature review's structure

There are various approaches to organizing the body of a literature review. Depending on the length of your literature review, you can combine several of these strategies (for example, your overall structure might be thematic, but each theme is discussed chronologically).

Chronological

The simplest approach is to trace the development of the topic over time. However, if you choose this strategy, be careful to avoid simply listing and summarizing sources in order.

Try to analyze patterns, turning points, and key debates that have shaped the direction of the field. Give your interpretation of how and why certain developments occurred.



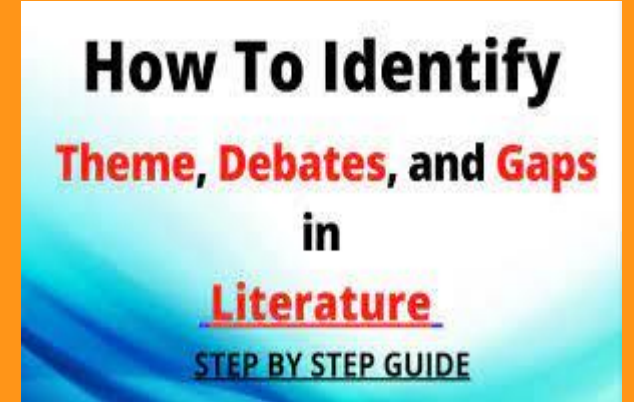
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Step 4 – Outline your literature review's structure

Thematic

If you have found some recurring central themes, you can organize your literature review into subsections that address different aspects of the topic.

For example, if you are reviewing literature about inequalities in migrant health outcomes, key themes might include healthcare policy, language barriers, cultural attitudes, legal status, and economic access.



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Step 4 – Outline your literature review's structure

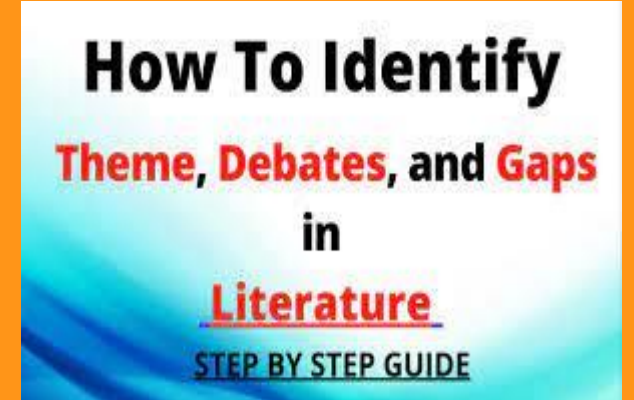
Methodological

If you draw your sources from different disciplines or fields that use a variety of research methods, you might want to compare the results and conclusions that emerge from different approaches. For example:

- Look at what results have emerged in qualitative versus quantitative research
- Discuss how the topic has been approached by empirical versus theoretical scholarship
- Divide the literature into sociological, historical, and cultural source

Theoretical

A literature review is often the foundation for a theoretical framework. You can use it to discuss various theories, models, and definitions of key concepts.



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Step 5 – Write your literature review

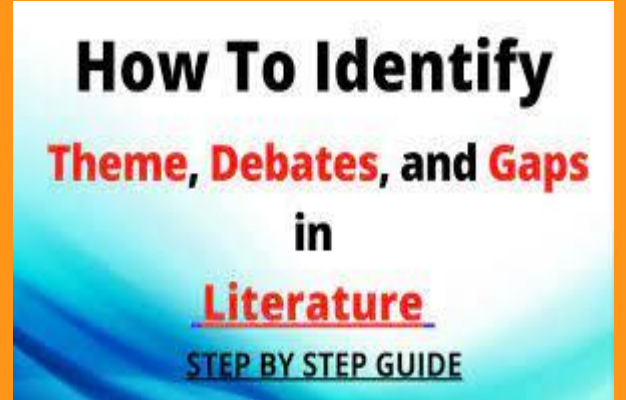
Like any other academic text, your literature review should have an introduction, a main body, and a conclusion. What you include in each depends on the objective of your literature review.

Introduction

The introduction should clearly establish the focus and purpose of the literature review.

Tip

If you are writing the literature review as part of your dissertation or thesis, reiterate your central problem or research question and give a brief summary of the scholarly context. You can emphasize the timeliness of the topic (“many recent studies have focused on the problem of x”) or highlight a gap in the literature (“while there has been much research on x, few researchers have taken y into consideration”).h include:



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Step 5 – Write your literature review

Body

Depending on the length of your literature review, you might want to divide the body into subsections. You can use a subheading for each theme, time period, or methodological approach.

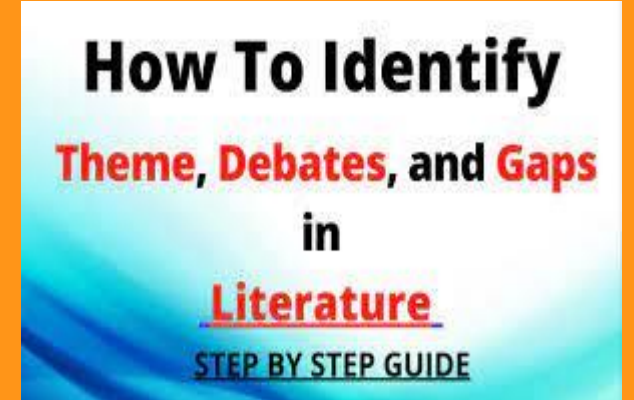
As you write, you can follow these tips:

Summarize and synthesize: give an overview of the main points of each source and combine them into a coherent whole

Analyze and interpret: don't just paraphrase other researchers—add your own interpretations where possible, discussing the significance of findings in relation to the literature as a whole

Critically evaluate: mention the strengths and weaknesses of your sources

Write in well-structured paragraphs: use transition words and topic sentences to draw connections, comparisons and contrasts



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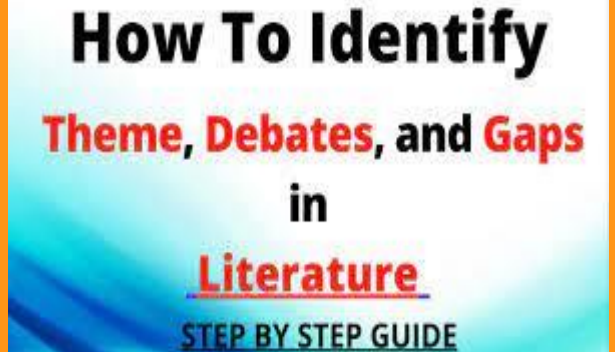
Step 5 – Write your literature review

Conclusion

In the conclusion, you should summarize the key findings you have taken from the literature and emphasize their significance.

Tip

Be sure to show how your research addresses gaps and contributes new knowledge, or discuss how you have drawn on existing theories and methods to build a framework for your research. When you've finished writing and revising your literature review, don't forget to proofread thoroughly before submitting. Not a language expert?



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Focusing the Research Question

Primary, Secondary,

Research Approach	Study Plan
Primary	Collect and analyze new data
Secondary	Analyze existing data
Tertiary	Review and synthesize the literature



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Study Approach	Key Questions to Ask
• Collection and analysis of new data	• What are possible source populations? • Will it be possible to recruit enough participants?
• Analysis of existing data	• What are possible sources of usable data files? • What questions can be explored with the available data?
• Review of the literature	• Does the researcher have access to adequate library resources? • Can the researcher reasonably expect to acquire <i>all</i> of the needed articles?



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Study Goals & Specific Objectives

The literature review and consideration of a study approach should lead to the selection of one very specific study topic that can be stated in terms of a single overarching study goal or study question.

A *study goal* often includes the specific exposure, disease, and population that will be the focus of the study



Thank you

