

Source Synthesis

In academic papers, writers are told that research should be incorporated either through direct quotes or paraphrasing. Academic papers also ask authors to **synthesize their sources** together. Synthesis is much more than summarizing what an article is about—it is about **blending ideas from different sources together** while providing your own analysis.



Types of Synthesis

Explanatory Synthesis

Bring sources together to demonstrate a type of reasoning or perspective. Explanatory synthesis may be used to identify trends in previous research or outline different perspectives across research. Explanatory synthesis generally remains neutral. This kind of synthesis is commonly found in literature reviews.

Argumentative Synthesis

Bring sources together to make an argument. Argumentative synthesis allows the writer to use sources to critique, debate, or emphasize previous findings or perspectives to declare a position. This kind of synthesis is common in argumentative-driven and research papers.

How Do I Synthesize?

Consider the following steps when beginning source synthesis:

1

Organize Sources and Notes

3

Draft Major Paragraphs

2

Outline the Paper

4

Revise and Polish

1 Organize Sources and Notes

Before starting the writing process, it can be helpful for writers to organize the research they have already conducted. Different organizational strategies can help a writer think critically about synthesis, including: **synthesis matrices, summary tables, color coding, and step-by-step visual organizers**. Some examples are shown on page 2:



Source Synthesis (continued)

Synthesis matrix.

This is just a sample to be altered to suit the type of literature review required. Headings are a guide. Using an Excel spreadsheet will provide room for text.

Author/Source Title/Year	Purpose/Rationale/Aims /question posed	Method/sample characteristics/ study type	Results/findings/ conclusions	Key ideas /themes	Strength/weaknesses/ Limitations/gaps – areas for further research	Similarities/differences to other studies	Notes/my conclusions /comments/questions arising

One way to organize notes is by using a **synthesis matrix**.

Synthesis matrices are good for **visually comparing and contrasting** different sources to find overlap. This chart allows the writer to see the **arguments** of **different researchers** and **identify ways their ideas** can **connect together**.

Step 1: Take out what you consider to be one of your central sources. Locate and then copy or paraphrase 1-2 passages/examples that resonate most with your own ideas on the topic. Mention also the source author and page number.	Step 2: Referring now to a different source, locate a passage/example that connects in some specific way to the passage(s) or example(s) you located. Copy/paraphrase the passage here. Mention also the source author and page number.
Step 3: Freewrite what connections you're seeing across these texts. What is the relationship between them? Does the passage from the second source <i>support</i> (concur, exemplify), <i>extend</i> (add to), <i>complicate</i> (agree but offers another perspective), and/or <i>challenge</i> (contest or disagree with) the passage from the first source? How so?	
Step 4: Freewrite what these two examples/passages could allow you to illustrate to readers of your essay. Get very specific and elaborate here as much as you can!	
Step 5: Freewrite your own perspectives on the passages. What might you wish to add or emphasize? What stance do you take as compared to the ideas presented by your sources?	

This is a **step-by-step synthesis worksheet** to help writers begin the source synthesis process.

This worksheet asks writers to **consider what their sources say**, as well as their **own opinion**, bringing both arguments together into a cohesive whole.

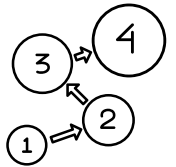


Source Synthesis (continued)

2 Outline the Paper

To outline the paper, the writer should be aware of the **organizational approach** they plan to take. Understanding the different kinds of source organization will ensure that the synthesized material is properly arranged.

- **Chronological:** Trace your topic over time and organize sources as they were published in order. Consider how opinions/attitudes were changed and debates that came up.
- **Thematic:** Trace your topic by theme and organize sources by the different themes/topics they discuss.
- **Methodological:** Consider the methods researchers used in your sources and compare these different approaches (ex: quantitative v.s. qualitative research).
- **Theoretical:** Consider the theories that different researchers use to frame their argument. Organize sources based on the theoretical lens they use (ex: historical v. Marxist critical lenses).



3 Draft Major Paragraphs

During the writing process, the writer should pay attention to how topic sentences best serve the needs of their accompanying paragraph. **Topic sentences** are the first sentence of a paragraph and should **clearly state the paragraph's overarching point** in a single sentence. All sentences that follow support this point through **direct quoted evidence, paraphrasing, and summary**.

Direct Quotes

Direct quotes use the exact wording of a source and are useful to capture the exact perspective of an author.

Paraphrasing

Rephrasing what an author has said while maintaining the original meaning.

Summary

Restatement of information from one or more sources. Provides a general overview of what a source(s) discussed.



Effective source synthesis **blends the three abovementioned methods** into a single paragraph, placing the **highest priority on paraphrasing**. Direct quotes should typically be used sparingly, with a greater focus on bringing together the points of multiple sources in paraphrased and summarized material. All three techniques work well to generate **analysis and argumentation** throughout the paper.

Source Synthesis (continued)

4 Revise and Polish

Like any paper or piece of academic writing, it is important to **review the work for revision and polishing touches**. Below is an example of an unsynthesized and synthesized paragraph, demonstrating the importance of revision and integrating synthesis.

Unsynthesized Paragraph

Patterson (2019) examined reading comprehension test results and writing samples from doctoral students who were within one year of completing their dissertations. She studied two test groups that consisted of 17 females in the first group and 18 males in the second. According to Patterson, higher average test scores in both groups correlated with more advanced levels of academic writing in the samples. However, results indicated that males were performing at lower levels of academic writing than females. Anderson (2020) also studied doctoral students at the same point in their degree programs. He looked at expanded groups of 51 females and 49 males and found that males were demonstrating slightly lower levels of academic writing than the females, though the reading comprehension scores in both groups were similar. Findings suggest that the females had a greater likelihood of completing their dissertations on schedule as compared with males. Rosen et al. (2022) studied two groups of doctoral students, segmented by gender, who were all foreign exchange students. Among the sample of 23 females, all were writing at levels that significantly exceeded those of their male counterparts in the foreign exchange program.

Synthesized Paragraph



Notice how the synthesized paragraph brings multiple research sources together to make an argument.

Recent studies of doctoral students, who were within one year of completing their dissertation, reveal similar findings regarding relationships between reading comprehension test results and writing abilities at the doctoral level. While Patterson (2019) and Anderson (2020) both found that females were demonstrating slightly higher levels of academic writing than males, Rosen et al. (2022) focused solely on populations of foreign exchange students, though similar gender-specific performance results were observed in writing levels. Although Anderson expanded on Patterson's original study with larger samples in both groups, both researchers concurred that females had a greater likelihood of completing their dissertations on schedule as compared with males.

Examples from Liberty Academic Success Center