

Paper Writing Specification

How to Structure a Dissertation | Step-by-Step Guide

A dissertation or thesis is a long piece of academic writing based on original research. It is usually submitted as part of a [PhD or master's](#), and sometimes as part of a bachelor's degree.

Your dissertation is probably the longest piece of writing you've ever done, and it can be intimidating to know where to start. This article helps you work out exactly what you should include and where to include it.

Abstract

Keywords

Introductions

Literature review

Methodology

Result and discussion

Conclusion

What is an abstract?

An abstract is a 150- to 250-word paragraph that provides readers with a quick overview of your essay or report and its organization. It should express your thesis (or central idea) and your key points; it should also suggest any implications or applications of the research you discuss in the paper.

According to expert, an abstract is “a concise summary of the entire paper.”

- The function of an abstract is to describe, not to evaluate or defend, the paper.
- The abstract should begin with a brief but precise statement of the problem or issue, followed by a description of the research method and design, the major findings, and the conclusions reached.
- The abstract should contain the most important key words referring to method and content: these facilitate access to the abstract by computer search and enable a reader to decide whether to read the entire dissertation.

Note: Your abstract should read like an overview of your paper, not a proposal for what you intended to study or accomplish. Avoid beginning your sentences with phrases like, “This essay will examine...” or “In this research paper I will attempt to prove...”

<p>Bad abstract:</p> <p>This paper will look at the human genome project and its goals. I will prove that scientists have ethical and moral questions about genetic engineering because of this project.</p>	<p>Good abstract:</p> <p>Begun in 1988, the human genome project intends to map the 23 chromosomes that provide the blueprint for the human species. The project has both scientific and ethical goals. The scientific goals underscore the advantages of the genome project, including identifying and curing diseases and enabling people to select the traits of their offspring, among other opportunities. Ethically, however, the project raises serious questions about the morality of genetic engineering. To handle both the medical opportunities and ethical dilemmas posed by the genome project, scientists need to develop a clear set of principles for genetic engineering and to continue educating the public about the genome project</p>
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(The examples above are taken from Form and Style (10th ed.), by Carole Slade; The Scott, Foresman Handbook for Writers (5th ed.); and the Publication Manual of the American Psychological Association (5th ed.).)

When you are writing your abstract, you should avoid:

- Extensively referring to other works
- Defining any terms
- Adding information that isn't contained in the larger work
- Adding unnecessary filler words and obscure jargon

Keywords:

Keywords are a tool to help indexers and search engines find relevant papers. If database search engines can find your journal manuscript, readers will be able to find it too. This will increase the number of people reading your manuscript, and likely lead to more citations.

However, to be effective, Keywords must be chosen carefully. They should:

B

- **Represent** the content of your manuscript

- Be **specific** to your field or sub-field

An important part of submitting your thesis or dissertation is selecting keywords and subject categories. These elements become part of the information about your thesis or dissertation and will help other researchers to find your work.

Follow these guidelines:

1. **You must have at least one keyword. You can enter up to 6 keywords for your thesis or dissertation.**
2. **Capitalize the first letter of keywords.** If your keyword is a phrase, capitalize only the first letter of the first word, for example: *Business administration*. If your keyword is a proper name, capitalize the first letter of each word, for example: *Mississippi River*.
3. **Use full phrases rather than acronyms or abbreviations.** For example, use *Health Maintenance Organization* rather than *HMO*.
4. **Add a keyword if the concept or concepts covers at least 20% of your dissertation or thesis.** Keywords should categorize your work as a whole, so focus on major concepts. It's OK to disregard minor aspects of your paper.
5. Ask yourself what your dissertation or thesis is about. If you were searching for this topic, what keywords would help you find it?
6. You may need more than one keyword or keyword phrase to adequately cover a concept.
7. **Keywords may be a single word or several words. Keywords may include phrases.**
8. Avoid bringing out every single concept with separate keywords when broader keyword(s) or keyword phrase(s) will do.
9. If you have two or more keyword concepts that are equally important, assign multiple keywords.

What is a Thesis Introduction?

The introduction is the first chapter of your thesis paper. It narrows down a broad subject and directs its focus to a specific point.

Similarly, it also serves as a mind map highlighting the central theme, writing styles, and supporting points. These aspects set the stage for the writing process.

Moreover, a thesis introduction paragraph comes after the table of contents and provides a broader context of the research. Remember, a strong beginning is important to grab the reader's attention.

The following are the major elements that must be included in an introduction.

- **Topic and Context** – What points a reader should know to understand the thesis?
- **Focus and Scope** – What aspects of the topic will be addressed? It can be research gaps, questions, and problems.
- **Relevance and Importance** – How does the research work contribute to the existing work on the topic?
- **Questions and Objectives** – What are the main objectives of the research work, and how they can be achieved?
- **Overview of the Structure** – How each chapter of the thesis will contribute to the overall objectives?

How Long Should a Thesis Introduction be?

The introduction of your thesis paper makes up roughly 10% of your total word count. Therefore, a PhD thesis paper introduction would be 8000 - 10000 words. However, a Master's thesis would be 1500 - 2000 words long.

Although the thesis introduction length can be increased if the writer includes images, diagrams, and descriptions.

How to Write a Thesis Introduction?

Here is a step by step guide for you to follow while writing a thesis introduction.

STEPS TO WRITE A THESIS INTRODUCTION

- 01 Hook the Reader's Interest
- 02 Identify the Research Gap
- 03 State the Background Information
- 04 Back Your Topic with Relevant Literature
- 05 Mention the Hypothesis
- 06 Provide Significance of Your Research
- 07 Outline the Research Questions
- 08 State Research Objectives
- 09 Create an Outline
- 10 Discuss the Research Methodology
- 11 Finalize your Introduction

A detailed description of the steps to write an introduction is given below.

1. Hook the Reader's Interest

A writer should begin writing the introduction with a hook statement to draw the reader's interest. It can be a question, quotation, or interesting transitions into your arguments.

Also, make a list of interesting, current events or controversies related to your topic. It will help in creating a strong introduction and thesis statement.

2. Identify the Research Gap

Review and evaluate the existing literature critically. It will help the researcher in finding and addressing the research gap.

3. State the Background Information

A good introduction of the thesis always states the historical background of the chosen topic. It is usually cited in the first paragraph and shows the current position of the subject.

4. Back Your Topic with Relevant Literature

The introduction is a mix of previous research and literature review. Thus, the topic should be backed with relevant resources.

It is also used to explain the context and significance of previous studies. Moreover, it further acknowledges credible sources of information to solidify your claim.

5. Mention the Hypothesis

Formulate a hypothesis of your research work. It will discuss what you aim to achieve along with the possibilities.

6. Provide Significance of Your Research

The gap will help to evaluate the situation and explain the significance of the current research. Thus, add the purpose of your paper explaining why the research is done. It will also demonstrate the possible contributions of the research work in the future.

7. Outline the Research Questions

The next step is to outline your research questions. These should be relevant to the purpose of your study. Moreover, it will also help you discuss the problems that you seek to address.

8. State Research Objectives

State the research aims and objectives to define the primary purpose of the work. It should give a direction to the research by providing an overview of what it aims to achieve.

9. Create an Outline

Create a well-structured outline to organize and compile the ideas. Also, include a table of contents at the beginning of your thesis. It serves as a mind map to discuss the layout of your thesis proposal.

10. Discuss the Research Methodology

The next step is to define the terms and methodology you are going to apply in your research. It is a good technique to make your study authentic, credible, and useful.

11. Finalize your Introduction

Ask yourself the following questions after finishing writing the introduction.

- Does your introduction discuss the problem your thesis is addressing?
- Does this section address the contribution the research work is making?
- Does it provide a detailed overview of your thesis?
- Does it end by briefly discussing the content of each chapter?
- Does it make a case for the research?
- Does it outline research questions, problems, and hypotheses clearly?

What is a literature review?

A literature review is a type of academic writing that provides an overview of existing knowledge in a particular field of research.

A good literature review summarises, analyses, evaluates and synthesises the relevant literature within a particular field of research. It illuminates how knowledge has evolved within the field, highlighting what has already been done, what is generally accepted, what is emerging and what is the current state of thinking on the topic. Additionally, literature reviews identify the gaps in the current knowledge - that is, uninvestigated or under-researched areas.

What does it mean to review the literature ?

To **review** the literature means to be able to identify:

- what has been established, discredited and accepted in your field of research
- areas of controversy or conflict among different schools of thought
- problems or issues that remain unsolved

- emerging trends and new approaches
- how your research extends, builds upon, and/or departs from previous research.

A review of literature presents much more than a summary of relevant sources. The act of reviewing involves **evaluating** individual sources as well as **synthesizing** these sources in order to develop your own research project.

Purpose of literature of review

A literature review functions as a tool to:

- provide a background to your work by summarising the previously published work on your topic
- classify the research into different categories and demonstrate how the research in a particular area has changed over time by indicating historical background if applicable (early research findings in an area) as well as explaining recent developments in an area
- clarify areas of controversy and agreement between experts in the area as well as identify dominant views
- evaluate the previous research and identify gaps (i.e. unexplored or under-researched areas)
- help justify your research by indicating how it is different from other works in the same area.

What Is a Research Methodology?

Methodology in research is defined as the systematic method to resolve a research problem through data gathering using various techniques, providing an interpretation of data gathered and drawing conclusions about the research data. Essentially, a research methodology is the blueprint of a research or study (Murthy & Bhojanna, 2009, p. 32).

How to write an effective methodology section?

- **Introduce your methods.** Introduce the methodological approach used in investigating your research problem. In one of the previous sections, your methodological approach can either be quantitative, qualitative, or mixed methods.
- **Establish methodological connection.** Explain the relevance of your methodological approach to the overall research design. Keep in mind that the connection between your methods and your research problem should be clear. This means that your methodology must be appropriate to achieve your research paper's objective—to address the

research problem you presented. To wit, if you need help to write your research problem, refer to our article on [what is a research question](#).

- **Introduce your instruments.** Indicate the instruments you are going to use in collecting your data and explain how you are going to use them. These tools and instruments can be your surveys, questionnaires for interviews, observation, etc. If your methods include archival research or analyzing existing data, provide background information for documents, including who the original researcher is, as well as how the data were originally created and gathered.
- **Discuss your analysis.** Explain how you are going to analyze the results of your data gathering process. Depending on the methods you use, you can use statistical analysis or explore theoretical perspectives to support your explanation of observed behaviors.
- **Provide background information.** When using methods that your readers may be unfamiliar with, make sure to provide background information about these methods.
- **Discuss sampling process.** Explain the reason behind your sampling procedure. For example, if you are using statistics in your research, indicate why you chose this method as well as your sampling procedure. If you are going to do interviews, describe how are you going to choose the participants and how the interviews will be conducted.
- **Address research limitations.** Make sure to address possible limitations you may encounter in your research, such as practical limitations that may affect your data gathering process. If there are potential issues you anticipate to encounter in the process, indicate your reason why you still decide to use the methodology despite the risk (SHU Library, n.d.).

What to avoid in writing the methodology section of your research?

- Avoid including irrelevant details.
- Keep your methodology section straightforward and thorough. Details that do not contribute to the readers' understanding of your chosen methods should not be included in your methodology section.
- Irrelevant information includes unnecessary explanations of basic procedures. Basic procedures should only be explained if they are unconventional and unfamiliar to the readers.
- Do not ignore the problems you might encounter during the data gathering process. Instead of turning a blind eye, describe how you handled them (SHU Library, n.d.).

How to Write a Discussion Section

The discussion chapter is where you delve into the meaning, importance and relevance of your [results](#). It should focus on explaining and evaluating what you found, showing how it relates to your [literature review](#) and [research questions](#), and making an argument in support of your overall [conclusion](#). There are many different ways to write this section, but you can focus your discussion around four key elements:

- Interpretations: what do the results mean?
- Implications: why do the results matter?

- Limitations: what can't the results tell us?
- Recommendations: what practical actions or scientific studies should follow?

There is often overlap between the discussion and conclusion, and in some dissertations these two sections are included in a single chapter. Occasionally, the results and discussion will be combined into one chapter. If you're unsure of the best structure for your research, look at [sample dissertations](#) in your field or consult your supervisor.

Summarize your key findings

Start this chapter by reiterating your [research problem](#) and concisely summarizing your major findings. Don't just repeat all the data you have already reported – aim for a clear statement of the overall result that directly answers your main [research question](#). This should be no more than one paragraph.

Examples

- The results indicate that...
- The study demonstrates a correlation between...
- This analysis supports the theory that...
- The data suggests that...

Give your interpretations

The meaning of the results might seem obvious to you, but it's important to spell out their significance for the reader and show exactly how they answer your research questions.

The form of your interpretations will depend on the type of research, but some typical approaches to interpreting the data include:

- Identifying [correlations](#), patterns and relationships among the data
- Discussing whether the results met your expectations or supported your [hypotheses](#)
- Contextualizing your findings within previous research and theory
- Explaining unexpected results and evaluating their significance
- Considering possible alternative explanations and making an argument for your position

You can organize your discussion around key themes, hypotheses or research questions, following the same structure as your results section. You can also begin by highlighting the most significant or unexpected results.

Discuss the implications

As well as giving your own interpretations, make sure to relate your results back to the scholarly work that you surveyed in the literature review. The discussion should show how your findings fit with existing knowledge, what new insights they contribute, and what consequences they have for theory or practice. Ask yourself these questions:

- Do your results agree with previous research? If so, what do they add to it?
- Are your findings very different from other studies? If so, why might this be?
- Do the results support or challenge existing theories?
- Are there any practical implications?

Your overall aim is to show the reader exactly what your research has contributed and why they should care.

Acknowledge the limitations

Even the best research has some limitations, and acknowledging these is important to demonstrate your credibility. Limitations aren't about listing your errors, but about providing an accurate picture of what can and cannot be concluded from your study.

Limitations might be due to your overall research design, specific [methodological choices](#), or unanticipated obstacles that emerged during the research process. You should only mention limitations that are directly relevant to your [research objectives](#), and evaluate how much impact they had on achieving the aims of the research.

For example, if your sample size was small or limited to a specific group of people, note that this limits its generalizability. If you encountered problems when gathering or analyzing data, explain how these influenced the results. If there are potential [confounding variables](#) that you were unable to control, acknowledge the effect these may have had.

After noting the limitations, you can reiterate why the results are nonetheless [valid](#) for the purpose of answering your research questions.

Examples

- The generalizability of the results is limited by...
- The [reliability](#) of this data is impacted by...
- Due to the lack of data on X, the results cannot confirm...
- The methodological choices were constrained by...
- It is beyond the scope of this study to...

State your recommendations

Based on the discussion of your results, you can make recommendations for practical implementation or further research. Sometimes the recommendations are saved for the [conclusion](#).

Suggestions for further research can lead directly from the limitations. Don't just state that more studies should be done – give concrete ideas for how future work can build on areas that your own research was unable to address.

- Further research is needed to establish...
- Future studies should take into account...

What to leave out of the discussion

There are a few common mistakes to avoid when writing the discussion section of your dissertation.

- Don't introduce new results – you should only discuss the data that you have already reported in the [results chapter](#).
- Don't make inflated claims – avoid overinterpretation and speculation that isn't supported by your data.
- Don't undermine your research – the discussion of limitations should aim to strengthen your credibility, not emphasize weaknesses or failures.

How to write a conclusion for your research paper

When writing your conclusion, you can consider the steps below to help you get started:

1. Restate your research topic.
2. Restate the thesis.
3. Summarize the main points.
4. State the significance or results.
5. Conclude your thoughts.

1. Restate your research topic

Your first step when writing your conclusion should be to restate your research topic. Typically, one sentence can be enough to restate the topic clearly, and you will want to explain why your topic is important. This part of your conclusion should be clear and concise and state only the most important information. Here is an example:

"The increase in water pollution since 2010 has contributed to the decrease in aquatic wildlife as well as the increase in unsafe drinking water."

2. Restate the thesis

Next, restate the thesis of your research paper. You can do this by revising your original thesis that you presented in the introduction of your paper. The thesis statement in your conclusion should be worded differently than what you wrote in your introduction. This element can also be effectively written in one sentence. Here is an example:

"Clean water is imperative to maintaining ecological balance and protecting the public's health."

3. Summarize the main points of your research

Next, you can sum up the main points of your research paper. It's helpful to read through your paper a second time to pick out only the most relevant facts and

arguments. You shouldn't need to include any more information than the main arguments or facts that you presented in your paper. The purpose of summarizing the key points is to remind the reader of the importance of the research topic. Here's an example to help illustrate how to do this:

"With the increase in sugar farming, more and more pollutants are entering our freshwater supplies. This increase in pollution has contributed to massive decreases in marine life, fish die-off, increased respiratory illness in neighborhood populations and has contributed to the shortage of clean drinking water."

4. Connect the significance or results of the main points

After discussing the main points of your argument, you can present the significance of these points. For instance, after stating the main points you made in your argument, you might discuss how the impacts of your topic affect a specific outcome. Likewise, you might present the results of studies or other findings that can help add emphasis to how you present the significance of your information. Here is an example:

"Ecologists and marine biologists are continuing to measure the water quality, and researchers are continuing to find ways to combat the pollution run-off from commercial farms. In the future, the EPA hopes this research will lead to a decrease in the pollutant concentration in our freshwater systems."

5. Conclude your thoughts

As you finish up your conclusion, you might create a call to action or pose an idea that gets your readers thinking further about your argument. You might also use this sentence to address any questions that were left unanswered in the body paragraphs of your paper. Here is an example:

"If we cannot combat the ill effects that commercial farming has on our clean water, our freshwater ecosystems and drinking water supplies will surely diminish. More research and innovation are needed to maintain our clean water while still supporting the agricultural needs of our economy."

Tips for writing your conclusion

Here are some helpful tips to keep in mind when you write your research paper conclusion:

- Keep your thesis, main points and summarizing facts clear and concise.

- Avoid beginning your conclusion with statements like "in conclusion" or "in summary", as these basic statements can come across as redundant.
- If you get overwhelmed, try sticking to a basic summarizing format for your conclusion.
- Synthesize your information by providing questions and answers, results, suggestions or a resolution to your arguments.
- Include only the most relevant points and arguments you presented in your paper.
- Avoid repeating information that you have already discussed.