

Research Writing

What Is A Research Paper?

Research papers are the way researchers share their findings with fellow professionals in their field, but the audience may extend to a more general audience such as college students or the general public. Research papers typically follow a set structure, which makes it easier for readers to identify main ideas and locate details. The sections below describe the typical format for an APA research paper.

Format of a Research Paper

Title Page

To create a student title page, follow these steps:

- Put the title centered and in bold about a third of the way down the page.
- Beneath the title, also centered but in regular font, type your name.
- Under your name, put the department of the class.
- Beneath that, put the course number and name.
- Then, put your professor's name.
- Finally, write the date of submission.

Abstract

The abstract is a short summary of the entire research paper. It gets its own page, but is no longer than one paragraph (typically around 200 words). An abstract will contain 1-2 sentences on each of the following topics:

- Purpose of the experiment (hypothesis)
- Method
- Key results
- Main points of discussion

It is often helpful to save writing the abstract for last. After you have written the rest of the paper, summarize the most important points of each section in about two sentences.

Introduction

The introduction, which also contains the literature review, provides an overview of the topic at hand and justifies your study. It will have the following contents:

- **Introduction to the topic** (1 paragraph). Begin by describing the topic and point to the significance of studying the topic. This can be done using statistics or current events within the field.
- **Literature Review** (2+ paragraphs). This is an overview of what is currently known about the topic. This is where you give important definitions and reference existing research studies. Don't be afraid to evaluate existing studies by comparing them to other research and highlighting any gaps or discrepancies in the research. It is very important to cite your sources as you write this section. The literature review ends by highlighting the gap in knowledge which you hope to contribute to.
- **Overview of current study** (1 paragraph). This section will include a brief statement of the study's purpose (typically 1-2 sentences), the hypothesis, and a brief summary of the methods.

Method

The method section describes participants, materials, experimental protocols, measurements, variables, and/or data analysis procedures. The purpose of the method section is to allow future researchers to replicate the experiment, so this section should be as detailed as possible. This section is usually broken down into the following sections, each with their own subheading:

- **Design.** Was this an experimental, observational, qualitative, or mixed-methods study? Why did you choose this method and how does it best answer your research question or accomplish your purpose?
- **Participants.** Describe the number of participants and how they were selected. State any important characteristics or demographic information.
- **Materials.** This subsection may also be called Stimuli, Equipment, or Apparatus. If you used a survey, questionnaire, or structured set of interview questions, describe that instrument. If you used physical equipment or computer programs, list them here.
- **Procedure.** Describe your experiment or intervention. Provide the steps for carrying out the experiment. As you write, be sure to provide details. What instructions did participants receive? Were participants divided into groups? Was there a control group? What were the variables and their levels?
- **Data Analysis.** How was the data analyzed? What kind of statistical tests were run? What computer software was used, if any?

Results

The results section provides the statistical analysis of the data. This section simply states the numbers, it does not interpret any of the data yet. A results section will have the following contents:

- **Raw data**, organized into charts and graphs. Sometimes charts and graphs are placed in the results section itself, and sometimes they go in an Appendix at the end of the paper, so be sure to ask your professor what their expectations are. If you used an open-ended interview method, your data may take the form of direct quotations from the participants (though be sure to anonymise any information).
- **Important results** in written form. Don't just throw all the numbers at your readers, or they will get overwhelmed. Instead, highlight any important numbers in your written paragraphs and leave the details to the charts and graphs. If you have many variables, write a summary paragraph, and then discuss each variable in detail under a separate subheading.

Discussion

This is the most important part of your research paper and often the most extensive, as it explains results to other researchers and shows your professor that you understand the concepts and results. Discuss the results in relation to the hypothesis; similar to how each paragraph of an argumentative essay should connect back to the thesis, each result discussed should connect to the hypothesis. A discussion section will typically include the following:

- **Emphasize key findings** (1 sentence-1 paragraph). As clearly as possible, answer the research question you asked in the introduction.
- **Interpret results** (2+ paragraphs). What is suggested by your results? Do the results agree or disagree with your hypothesis? If they disagree, what are some possible explanations? What are the broader implications of your study?
- **Connect to existing literature** (1-2 paragraphs). How do the results relate to the literature you discussed in your introduction? Are your results consistent with existing literature? If your results challenge existing literature, why might that be?
- **Discuss limitations**. (1-2 paragraphs). Explain how the method of your experiment could be improved. Did anything go wrong during the experiment? Were there any limitations

in the design that might have reduced the strength of your results? What would you do differently if you could do the experiment over again?

- **Discuss implications for future research or practice** (1-3 paragraphs). Suggest how your results may impact current practice or policies. For example, your results might suggest refinements to a doctor's day-to-day practice or suggest larger policy changes.

What difficulties might need to be addressed when implementing your suggestions?

Conclusion

The conclusion sometimes gets its own section, and sometimes appears as the final paragraph of the discussion. Ask your professor which way you should use. Regardless of whether it gets its own section, a conclusion does the following:

- Summarize definitive conclusions from the results in one to two sentences.
- Identify followup questions, and suggest ways to study those questions.

References

References should be in alphabetical order by the first word of each entry (this is usually the author). Use hanging indents. To add hanging indents in Google Docs, do the following:

1. Select all your references
2. Go to Format → Align and Indent → Indentation Options
3. Select Special Indent "Hanging" and enter 0.5 into the box beside it.

Double-space the whole reference list, and do not add extra spaces between references.

Avoid just copying and pasting directly from a journal article, as their publishers may use a different format. If you use a citation generator to organize your citations, be sure to double-check every entry carefully, as citation generators are often incorrect. For details about how to format specific reference entries, visit [Purdue OWL](#) or the [APA Style Guide](#).

Appendices

Appendices are where you place extra materials that are important to your research but would be distracting if they were in the main body of the text. For example, you might include the survey you used in the study, detailed calculations, or any handouts given to participants. If your professor indicated that you should include graphs and charts at the end of your paper, they go at the end of the Appendix "Tables and Figures."

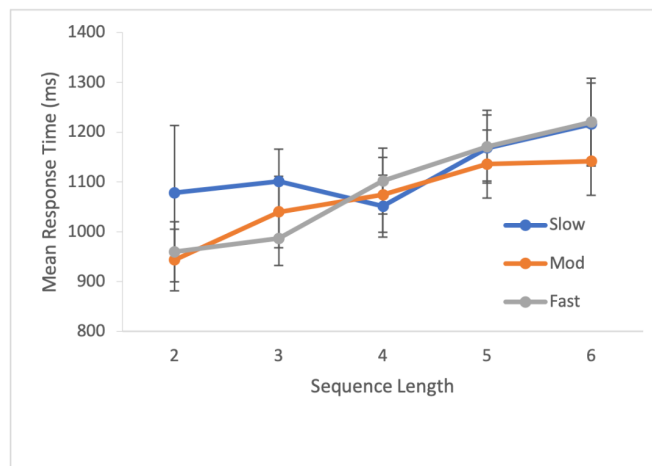
Appendices are labeled in bold with letters ("Appendix A," "Appendix B," etc.). Under the label, provide a title that briefly describes what the appendix contains (for example, "Survey Given to

Participants”). For more details and examples on how to set up your appendices, visit the [APA Style Guide](#).

Tables and Figures are labeled in bold with numbers (“Table 1,” “Table 2,” etc.). Under the label, in italics, provide a brief description of the table. See below for a sample figure.

Figure 1

Mean response times (in ms) and corresponding standard errors as a function of set length and tempo



Stylistic Tips

- This guide contains general advice. Be sure to look at example research papers from your field for specifics like what structure to use, what subheadings to include, and how to present specific data.
- APA style valued concision and clarity. Be as specific as possible, but try to avoid redundancy.
- Typically, researchers avoid using first-person language (“I” or “we”) and opt for third-person language (“the researchers”). However, this guidance is changing in many fields, so be sure to ask your professor whether you should use first-person or third-person language.
- In APA style, it is more common to summarize and paraphrase a citation than to use direct quotes.

- If you are writing a project proposal, the Method section should be written in future tense (“We will do this...”) as opposed to past tense (“This was done...”). Once you complete the experiment, go back and change any future tense language to past tense for your report.
- Be sure to use moderate language. Avoid statements such as “this proves” and opt for language such as “it is likely” and “it may be the case.”