Project Report: How to Write a Good Project Report

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This is not a template for how to format a project report. This document only contains pointers and suggestions for how to structure a report. We focus on what materials should be included.

A technical report or paper, including a thesis or dissertation, usually contains the following components: abstract, introduction, research, summary, and references. Except for the abstract and references, the other components can be split into multiple parts or sections/chapters depending on the length of your report.

Below is a description for what should go into each component.

Component 1: Abstract

The abstract only contains high-level and essential statements about your research or project. This could be very brief, for example less than 100 words, or longer for a thesis or dissertation, 500-700 words. Your sentence should be clear and concise, especially when you are summarizing what you have done or the main research contributions you have made.

Component 2: Introduction

The introduction could have one or multiple sections/chapters.

It contains brief statements about the contents of your paper and how they relate to broader scientific or general research areas. This section/chapter should also include key arguments, problems you plan to solve, and/or the purpose of your project/paper/research.

After the initial statements, the introduction should include two sub-components: literature reviews and general concepts. These can be separated into different sections/chapters.

Literature reviews provide information about the history and current research related to your report/project.

A discussion of general concepts provides readers with a level of technical knowledge in preparation for understanding more nuanced areas of your research. This section must be general enough for the average reader in your target audience. If you plan on discussing deeper topics, more background information may be necessary.

Component 3: Research

This is the central section of your report and contains the majority of your content. Depending on the length of your report, if it is a capstone project, thesis, or dissertation, you should include:

(1) Design and planning,

(2) Core Research,

(3) Analysis/verification of results, and

(4) Applications.

For a research paper, you may not need all of the above components. You may only need (2) and (3). Sometimes, you may need to include additional sections/chapters for (4).

Design/Planning: Describe what problems you are trying to solve, what technical tools you are going to use, and how much time you have planned to solve the problem, where applicable. This component is usually your research proposal, which is not necessary for a research paper submission but is good for a research report. If you are writing about a new software design, for example, you can summarize your design here including flow-charts and use-cases.

Core Research: This section contains your main research results and could be divided into several sections/chapters. Include formula derivations and algorithm design and implementations. In addition, this portion can include simple examples or small applications.

Analysis: To evaluate how good your research is, this section/chapter should include examples and comparisons to previous methods, which may not be limited to efficacy. The marketing and user response associated with other methods may also be examined.

Applications: Depending on the size of your project, this section/chapter may be included with the analysis section or kept as a separate chapter of the report. This section can include lab data or real data testing.

Component 4: Conclusion/Summary

The end of the report includes a summary of what you did. This section contains similar materials to what you presented in the abstract and should also include suggestions for future research. If you are writing a survey, you may need to include more thorough comments on this topic, in which case this section could be long.

Component 5: References

The component lists the existing works you have read and cited in order to complete your research. Additional reading materials can also be listed here.