Technical Reports

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[Video](https://linnbenton.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=e2962736-f2af-484e-a56b-b01b015ea62c&start=0)

[Slide Deck](https://docs.google.com/presentation/d/19mIXcTP8oSBb5IqyCD6SaXkJpRWsiHCGhjudWMteCGc/edit?usp=sharing)

# Goals

This presentation will cover:

* What a technical report is
* What kinds of technical reports you may encounter
* How to write an effective technical report

# What are technical reports?

Technical reports “provide a careful study of a situation or problem, and often recommend what should be done to improve that situation or problem” (Will Fleming in Technical WRiting at LBCC). These reports begin with a problem that either you or another person needs to solve. You will research the problem both with print and online sources and usually also primary sources, such as interviews, surveys, and observations you conduct. These reports need to be thorough yet easy for the reader to find the information most relevant to that person. Because of this, the formatting and order are crucial and need to be what the reader expects.

What are some kinds of technical reports?

There are many kinds, including standard operating procedures, background reports, business plans, proposals, and recommendation reports. For this class, we will focus on the recommendation reports.

Recommendation reports may evaluate a problem and give recommendations on solving it, compare two or three options and recommend the best one, or explore whether a course of action is feasible and provide recommendations based on whether the action is possible or best. Along the same lines, proposals can also fit into this category, although many people put proposals into their own unique category.

# How do I write an effective technical report?

Technical reports, especially longer ones, usually can be broken down into three main sections:

* Front matter
* Report
* End matter

## Front Matter

Before anything else, a reader usually expects a letter of transmittal (a type of cover letter). This letter is usually one of the last things you will write; however, it will be the first the audience reads.

* Is addressed to the main audience who will read the report (your target audience). For this class, this person may be the one whom you interviewed or someone else who is in a position to act on your recommendation. (The letter should not be addressed to your instructor.)
* Provides any acknowledgements of those who helped with the report.
* Refers to specific areas of the report that may be of special interest to the audience. Look over your report and note any headings that are especially important.
* Discusses limitations and/or problems. Be honest here. Are there other alternatives? Would this recommendation negatively impact a group of people? Did you encounter any problems while researching or writing this report? Note anything that the reader should know.
* Provides anything extra (off-the-record information, observations made that did not belong in the report but may be important for the reader).
* Calls the reader to action. What is the recommendation? This needs to be clear to the reader from the beginning.

### Title Page

* Document Title
	+ Include subject and purpose of the report
	+ If the title is long, use an inverted triangle shape. If you have a subtitle, use a colon between the title and subtitle.
* Name of Recipient(s) (This is your target audience.)
* Author(s) and affiliation (Your name, job title, and if necessary, company or organization.)
* Date of Submission (This is the class due date for the finalized report.)

### Table of Contents

* Each major section including the abstract
* Page numbers
* Important: Headings and subheadings should be exact matches of what is in the report itself!
* This is just one of many ways to write the table of contents. Whatever you decide on, keep it consistent and easy to read.

### List of Tables and Figures

This is much like the table of contents, but in this case, you are listing the images, tables, figures, graphs, and so on used throughout the report.

### Abstract or Executive Summary

The abstract or executive summary are your report in brief, providing the audience with the “big picture” before they dive into the report itself.

* The abstract is usually 6-8 sentences and meant for readers in general.
* The executive summary is longer and is basically the report in miniature. Executive summaries are meant for decision makers.

Note: Some instructors and supervisors do not want an abstract or executive summary. Make sure you ask what their preference is for the report you are writing.

## Now let’s look at the report itself.

Technical reports are usually written in first person. For technical reports, you are reporting on what you have found and what you think is the best course of action. They are single spaced and use block paragraphs. In the report, use headings for different sections and subsections. This allows your readers to find the information they need most and help them to find it quickly. Remember to have exact matches to your table of contents. (If you change them in revisions, change them on the table of contents.) Think about the design. You want your readers to easily find the information they need and do not want them to get overwhelmed or confused by extra material and images. Lastly, make sure you use technical writing style: simple wording and easy-to-read sentences and paragraphs.

### Introduction

Unlike an essay or shorter document, reports usually have an entire page dedicated to the introduction with the following information in their own paragraphs. (Tip: Use these as your headings.)

* Definition and background of the problem: What is the problem you are trying to solve? Is there any background information the audience might need?
* Description of the problem: Give more specific information about the problem and why it needs solving.
* Purpose and methods of this inquiry: How did you research the problem and the recommended action? What kinds of sources did you use in the report?
* Scope of this inquiry: What does the report cover and what does it not cover?
* Conclusions of this inquiry: Briefly, what are your conclusions and recommendations?

### Data Section

This is the longest part of the report where you will show that you have done your research. Provide the information the audience needs and your research journey to your conclusions. This section is heavy on citation, so cite whatever sources you use and get information from. In general, it is a good idea to have at least one citation per paragraph.

### Conclusions and Recommendations

These will be two separate paragraphs. Provide a summary, showing a review of your major findings and give your overall judgment about what those findings mean. Then provide recommendations about what course of action to take and provide a call to action. This is the goal of your report, so keep it positive and focus on solving the problem.

### Bibliography

As in any researched document, whether an essay or report, you need to provide your readers with a bibliography. This gives the full information about the sources you used, which will help readers find the sources if they want or need to. Be consistent and correct when using whatever citation style you use. (Citation styles are covered in another section.)

## End Matter

Included here are any documents or information that is extra or does not fit into the report. For example, if you conduct a survey and interview, you would not provide the entire survey and interview in the report itself. You might discuss your findings and some of the information gathered, but you would ultimately refer them to the appendices. Other appendices might include a glossary or large visuals.

# Conclusion

This video covers a basic format for writing reports. You may want to clarify with your instructor or the person asking for the report, what and how they are expecting the report. Often, the person will have specific sections or formatting that they would like for the report.