

UNIVERSITI TEKNIKAL MALAYSIA MELAKA
FAKULTI KEJURUTERAAN MEKANIKAL
BMCU 1022 EXPERIMENTAL METHODS

TUTORIAL 4

NAME :

MATRIX NO :

CHAPTER 7 : TECHNICAL REPORT

1. Write a technical report for Task 1 in Tutorial 2 and 3 based on Tips on Report Writing attached together with this Tutorial.
2. Write a discussion with Harvard standard referencing for Task 2 in Tutorial 2 and 3. At least three different types of sources are expected.
3. Write a discussion, recommendation and conclusion for Task 2 in Tutorial 2 and 3.

Tips on Report Writing: All you needed to know on successful report writing

Report writing can come in different shapes, depending on your topic and supervisor's requirements. It can also contain all or just part of report writing components.

1. How to Write a Report. The Letter of Transmittal

General guidelines:

This is a separate document that accompanies **report writing**. It is usually brief. By sending a transmittal letter you let your recipient know that you are sending a report, and will also give him an idea about what is being sent and what are your basic requirements.

Our advice on writing a report:

- This document has to be written in accordance with the letter etiquette. Be sure to include address, a name of your recipient, and all the important information. Also, end a transmittal letters with a one-sentence paragraph that establishes goodwill by thanking or complimenting the recipient.
- Do not include a transmittal letter unless specifically requested to do so.

2. How to Write a Report. The Title Page

General guidelines:

There are four main pieces of information that have to be included into the title page:

- the report title;
- the name of the person, company, or organization for whom the report has been prepared;
- the name of the author and the company or university which originated the report;
- the date the report was completed.

A title page might also include contract number, a security classification, or a copy number depending on the nature of the report you are writing.

*Our advice on **writing a report**:*

- A tutor might have a specific request as to your title page. Ask him.

3. How to Write a Report. Acknowledgments

General guidelines:

Good report writing includes a page of gratitude to those who helped the writer in his process: his supervisor, teachers/professors, librarians, family, etc.

*Our advice on **writing a report**:*

- Make them look sincere. Don't just say, "Thank you..." and give the list of names, but refer to each one separately and thank him/her for something specific.

4. How to Write a Report. The Summary Abstract

General guidelines:

The Abstract communicates the scope of your paper and the topics discussed to your reader, and, in doing so, it facilitates research. When doing a summary of your report writing, go over the main parts of it (Introduction, Body, etc.), and summarize each of them in one sentence.

Our advice on writing a report:

- It's better to write Summary Abstract last. By this time you will know the content of your report, and will be able to outline its most important features.
- To make a good outline, ask yourself, why would another researcher be interested in this research, or what should a reader be sure to know about the research?

5. How to Write a Report. The Table of Contents

General guidelines:

The table of contents is a reflection of report writing structure. Sections and subsections should be numbered and titled in such a way as to help the reader find his way through your report.

- list all headings and subheadings (excluding the title page, table of contents, and other preliminary matter), giving page numbers for the first page of each section;
- reproduce the headings and numbering exactly from the body of the report;
- include the full titles of the appendices.

Our advice on writing a report:

- Make a draft table first. It will help you to organize your materials and thoughts. Remember that it can be altered during the process of writing.
- Dot leaders from the heading to its page number make navigation around the Table of Contents easier for you and your readers

6. How to Write a Report. The List of Figures, Tables, Illustrations

General guidelines:

The figures/tables/illustrations should be numbered in order with the chapter number and the figure/table/illustration number within that chapter. When there are six or more figures, tables and illustrations, they are listed on a separate page with their corresponding page numbers in the text. If only a few exist, then they are included in the table of contents' page.

*Our advice on **writing reports**:*

- In some **report writings** a correct sequence is essential: 1) list of figures, 2) list of tables, 3) list of illustrations. Don't make a page break between them.

7. How to Write a Report. The Executive Summary

General guidelines:

This part of **report writing** is usually no more than one page in length, and includes:

- the purpose of the report
- background to the report
- sources of information
- main findings
- conclusions and recommendations.

Our advice on writing a report:

- While abstracts are brief summaries that address a technical audience, executive summaries represent report writing in such a way that it could stand on its own and would make sense to a non-technical audience.

8. How to Write a Report. The Introduction

General guidelines:

The Introduction should be a brief but thorough discussion of the context of the problem. A typical introduction is about 1 ½ to 2 pages long. It includes:

- purpose or objective of writing the report;
- background information (for example a brief history of the organization, context of topic or problem);
- literature review (what researches have already been made in this field)
- scope, that is, the size or extent of study, amount of data collected, time frames, focus of data collection or discussion (for example, a department or whole organization);
- methodology, that is, the kind of data used (for example, who was interviewed, what type of material was referred to);
- assumptions and limitations, (for example, given the above material, any assumptions that were made and any limitations placed on the material included in the report);
- plan that briefly overviews the argument, framework or logical structure of **report writing**.

Our advice on writing a report:

- Don't begin your Introduction with a sentence that is either too broad, or too narrow. Be specific.
- If you include illustrations into your introduction, you will help the readers get a better understanding of the context.
- Before writing about the purpose, make sure you understand it clearly. If you don't, your reader won't, either.
- When giving literature review, try to make comparisons. Introduce two different opinions on one topic, and out of them make your own point of view/conclusion.

9. How to Write a Report. The Body

General guidelines:

The Body of the **report writing** is the main part that includes all the facts and materials essential for the understanding of the problem. It usually has three sections:

- Theories, models, and hypotheses. This section is optional. By giving it, you introduce the theoretical basis for your project;
- Materials and methods. This is a part where you describe (and illustrate) the materials used, and give a step-by-step report on how you were completing your task;
- Results. This section summarizes your efforts and gives information about what you discovered, invented, or confirmed through your research.

Our advice on writing a report:

- If you made a mistake during any of your steps, write about it, too. It will show the depth of your research, for you had to correct it.
- Results have to be presented in a straightforward way.
- Tables and illustrations are the best way to demonstrate your materials and results. By providing them, you secure your reader's understanding of a problem.
- To make the parts of your Body paragraph fit together, give a short summary of every sub-section, and provide a smooth transition from one part to another.

10. How to Write a Report. The Conclusion

General guidelines:

This is the last part of your **report writing**. Sum up the main points and refer to any underlying theme. If any questions or issues remain unresolved, mention them in the conclusion. Write in a brief, concise manner, for your readers are already familiar with everything you talk about.

Our advice on writing a report:

- Don't introduce any new information.
- Before writing a conclusion, make a draft of it. Go over your **report writing**, and underline all the important information that has to be repeated. Your conclusion has to stress the importance of the research.
- Make a smooth transition from the Body to the Conclusion.

11. How to Write a Report. Recommendations

General guidelines:

Give directions/propositions on how a problem you've investigated can be solved. List them clearly, and rely on the materials that you used.

Our advice on writing a report:

- A numbered list is always a good idea. It gives quick access to your recommendations, and doesn't send your readers wandering around the section.

12. How to Write a Report. References

General guidelines:

List all the sources of information that you used during your **report writing**. Use an alphabetical order.

Our advice on writing a report:

- To keep track of numerous sources, begin writing them down in the very beginning of your **report writing**. There is nothing worse than going back and desperately looking for information.

13. How to Write a Report. Appendices

General guidelines:

Include data tables, background calculations, specification lists for equipment used, details of experimental configuration, and other information needed for completeness, but which would bog down the discussion in the body of the report. Your Appendices must each have a footer with numbered pages for that appendix.

Our advice on writing a report:

- Include in an appendix any supporting evidence, such as tables, which is not possible to incorporate in the main body of the report.