THESIS GUIDE FOR POSTGRADUATE

INSTITUTE OF POSTGRADUATE STUDIES

UNIVERSITI MALAYSIA PAHANG
FROM THE VICE-CHANCELLOR

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Professor Dato' Dr. Daing Nasir Ibrahim

Vice- Chancellor

Universiti Malaysia Pahang
PREFACE

The Universiti Malaysia Pahang (UMP) Thesis Guide describes the formatting standards set forth by the Institute of Postgraduate Studies. This guide helps the students in the preparation of their theses. The guide covers facet of thesis writing from the language to be used, to technical specifications that include typeface and font size, number of pages for a Masters and PhD thesis, pagination, line spacing, units, chapter format, and references style. The guide is divided into five chapters which explain in detail the formatting requirements and submission options to be followed by all students in Universiti Malaysia Pahang.
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</thead>
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CHAPTER 1

INTRODUCTION

1.1 Purpose

The purpose of this guide is to prepare students for thesis submission at Universiti Malaysia Pahang (UMP). It provides guidelines on all technical aspects of document formatting for submission of the thesis according to the requirements of Institute of Postgraduate Studies (IPS). Formatting ensures consistency is maintained throughout the entire thesis. For this purpose, this guide follows the Publication Manual of the American Psychological Association, Sixth Edition (APA Manual).

1.2 Language

The language of the thesis should be either English or Malay (Bahasa Melayu). The use of other languages requires approval from the Senate. There are no specific requirements for the use of either British or American English. However, if a certain type of English is used, the entire thesis should conform to its particular spelling system.

1.3 Definition of Terms

- Typeface or Font

  Typeface or font refers to all the styles such as bold, and italics, and standard acceptable fonts such as Times New Roman, Arial, and Courier.

- Text
The term text applies to the main body of the thesis. It does not include cover page, preliminaries, tables, illustrations (figures), references, and appendices.

- Preliminaries

The preliminaries the examiners’ approval document, title page, supervisor’s declaration, student’s declaration, dedication, acknowledgements, abstrak (in Malay), abstract (in English), table of contents, list of tables, list of figures, and list of symbols/abbreviations. If the thesis is written in Malay, the English abstract precedes the Malay abstrak.

- Table

Table presentations, regardless whether they are verbal, numeric, or graphical information, are arranged in a systematic way in rows and columns. This helps the information to be presented in a more structured manner.

- Figure

Any other forms of information that cannot be tabulated are presented as figures. They can either be illustrations, graphs, charts, diagrams, photographs, or maps.

- Equation

Equations are either mathematical or chemical expressions which are part of the text. Regardless of the alignment of the text, an equation must be centrally aligned.

- Appendix

Anything that does not appear in the text and supplementary can be appended. This can be any relevant material that may disrupt the flow of the thesis if it is included in the text.
CHAPTER 2

TECHNICAL AND FORMATTING SPECIFICATIONS

2.1 Paper Specifications

Paper specifications such as size, quality, and colour for the thesis are explained in Table 2.1.

Table 2.1 Paper Specifications

<table>
<thead>
<tr>
<th>Elements</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>A4 size (210 mm × 297 mm) paper should be used for both typing (soft copy) and printing (hard copy).</td>
</tr>
<tr>
<td>Quality</td>
<td>The original copy should be printed on simile paper (minimum quality of 80 grams). Duplicate copies should use quality photocopy or offset papers. Neither isograph nor carbon copies are acceptable.</td>
</tr>
<tr>
<td>Color</td>
<td>Only white paper is acceptable.</td>
</tr>
</tbody>
</table>

2.2 Guidelines for Typing

2.2.1 Typeface or Font

All narratives, tables, and graphs must be typeset and not handwritten. Students are required to use Times New Roman with 12 font size throughout the thesis including headings and page numbers except for special foreign languages. Times New Roman with 11 font size (or smaller, but legible) can be used for table entries. Appropriate software should be used to generate symbols or special characters not found on the computer keyboard. For formula, use an equation editor including subscripts and superscripts.
2.2.2 Heading

The title of a chapter (Heading 1) should use **BOLD CAPITAL LETTERS** and central alignment. All chapters must begin on a new page. The other headings (starting from Heading 2) within the same chapter should begin on a new page if there is no space for a complete heading and at least two lines of the text at the bottom of the page. Title should be given to every chapter and its subsections. Please refer Chapter 3 for more detailed information on formatting of all headings.

2.2.3 Spacing

The following guidelines (see Table 2.2) should be observed for spacing formatting.

<table>
<thead>
<tr>
<th>Line Spacing</th>
<th>Text/Entries</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 mm</td>
<td>Spacing between upper edge of a page and a chapter number</td>
</tr>
<tr>
<td>Press Enter twice (Spacing: 1.5)</td>
<td>Spacing between a chapter number and the title, and between the title and the first line of the text</td>
</tr>
<tr>
<td>1.5</td>
<td>Spacing between the last line of a text with the title of a sub-section</td>
</tr>
<tr>
<td></td>
<td>Spacing between the title of a sub-section and the first line of a text</td>
</tr>
<tr>
<td></td>
<td>Spacing between paragraphs</td>
</tr>
<tr>
<td></td>
<td>Spacing between the last line of a text and a table, or a figure</td>
</tr>
<tr>
<td></td>
<td>Spacing for general body text of manuscript</td>
</tr>
<tr>
<td>Single (1.0)</td>
<td>Spacing for acknowledgements</td>
</tr>
<tr>
<td></td>
<td>Spacing for abstract and its translation</td>
</tr>
<tr>
<td></td>
<td>Spacing for list of tables, figures, symbols, and abbreviations</td>
</tr>
<tr>
<td></td>
<td>Spacing for long title entries for each headings and subheadings</td>
</tr>
<tr>
<td></td>
<td>Spacing for long tables and table entries</td>
</tr>
<tr>
<td></td>
<td>Spacing for long quotations, notes, and multiline caption</td>
</tr>
<tr>
<td></td>
<td>Spacing for footnotes</td>
</tr>
<tr>
<td></td>
<td>Spacing for bibliographic entries/references</td>
</tr>
</tbody>
</table>

2.2.4 Paragraph

All paragraphs should have the first line indented 12.7 mm from the left margin. The last paragraph on a page must have at least two lines of the text otherwise it should begin on the following page. The last word in the last line on a page must not be followed by a hyphen.
2.3 **Original and Duplicate Copies of the Thesis**

Printing should be done only on one side of the paper. As such, the printed pages should be on the right side. The original copy must be printed using a laser printer. Students must ensure that duplicate copies are made using a good quality of photocopying. Final submission to IPS comprises three hard-bound copies, namely one original and two duplicates. For Masters thesis, the colour of the cover is black, whereas for PhD theses, the colour is maroon. This requirement applies to all postgraduate theses, regardless of faculties. Nevertheless, for undergraduate final year project reports, the colour of the cover is at the discretion of the respective faculties.

2.4 **Information on the Cover**

2.4.1 **Front Cover**

The front cover should be written in CAPITAL LETTERS with the title of the thesis (accurately and concisely describing the content of the thesis), the candidate’s name, the name of degree, and the university’s name. Details on the cover should appear in gold coloured CAPITAL LETTERS (not bold face), using Times New Roman 18 pt in the following order:

i. Title of the Thesis (50 mm from the upper edge of the cover);

ii. Full Name of the Student (as in identity card for Malaysian and passport for non-Malaysian);

iii. Name of the Degree (e.g., DOCTOR OF PHILOSOPHY); and

iv. Name of the University (UNIVERSITI MALAYSIA PAHANG, 50 mm from the bottom edge of the cover).

(See Appendix A)

2.4.2 **Spine of the Thesis**

The details should appear in gold coloured CAPITAL LETTERS using Times New Roman 18 pt in the following order:

i. Name of Student;

ii. Name of the Degree (according to the offer letter, in abbreviated form);
iii. Year of Degree Awarded; and 
iv. Name of University (UMP – in abbreviated form).

(See Appendix B)

2.5 Margin Specifications

Students should maintain the margin specifications as shown in Table 2.3. All textual and graphical materials for the entire thesis must be placed within these margins.

Table 2.3 Margin Specifications

<table>
<thead>
<tr>
<th>Element</th>
<th>Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top edge</td>
<td>25 mm</td>
</tr>
<tr>
<td>Right side</td>
<td>25 mm</td>
</tr>
<tr>
<td>Left side</td>
<td>35 mm</td>
</tr>
<tr>
<td>Bottom edge</td>
<td>25 mm</td>
</tr>
</tbody>
</table>

2.6 Pagination

Page numbers should be set 10 mm from the bottom edge and centrally aligned. The same font used in the entire thesis should be used for the page numbers.

2.7 Numbering System

All chapters and their subsections have titles and therefore should be numbered using Arabic numerals (starting from Chapter 1). The sub-sections should be arranged in a structured manner (see Chapter 3 for more detailed information on headings formatting). Preliminaries (beginning with the title page) should be numbered consecutively in lowercase Roman numerals, such as i, ii, and iii. The page number for the text in the thesis use consecutive Arabic numerals, such as 1, 2, and 3. Although the first page of the preliminaries is counted, the page number (i.e., i) does not appear (in the soft copy) and is not printed. Likewise, the first page of each chapter in the text of the entire thesis is also counted, but the respective page numbers do not appear (in the soft copy) and are not printed. Page numbers using letter suffixes (e.g., 10a, 10b) are not allowed.
CHAPTER 3

THESIS ARRANGEMENT AND LAYOUT

3.1 Arrangement of Thesis

The layout and content of the thesis should be in the following order as shown in Table 3.1 below.

Table 3.1 Arrangement of Thesis

<table>
<thead>
<tr>
<th>Division</th>
<th>Element</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminaries</td>
<td>DECLARATION</td>
<td>Declaration page is neither numbered nor counted.</td>
</tr>
<tr>
<td>Preliminaries</td>
<td>TITLE PAGE</td>
<td></td>
</tr>
<tr>
<td>Preliminaries</td>
<td>DEDICATION (OPTIONAL)</td>
<td></td>
</tr>
<tr>
<td>Preliminaries</td>
<td>ACKNOWLEDGEMENTS</td>
<td>Title page is not numbered but it is counted.</td>
</tr>
<tr>
<td>Preliminaries</td>
<td>ABSTRAK</td>
<td></td>
</tr>
<tr>
<td>Preliminaries</td>
<td>ABSTRACT</td>
<td></td>
</tr>
<tr>
<td>Preliminaries</td>
<td>TABLE OF CONTENTS</td>
<td>Pagination system must use Roman numerals, such as i, ii, and iii.</td>
</tr>
<tr>
<td>Preliminaries</td>
<td>LIST OF TABLES</td>
<td></td>
</tr>
<tr>
<td>Preliminaries</td>
<td>LIST OF FIGURES</td>
<td></td>
</tr>
<tr>
<td>Preliminaries</td>
<td>LIST OF SYMBOLS</td>
<td></td>
</tr>
<tr>
<td>Preliminaries</td>
<td>LIST OF ABBREVIATIONS</td>
<td></td>
</tr>
<tr>
<td>Preliminaries</td>
<td>LIST OF APPENDICES</td>
<td></td>
</tr>
<tr>
<td>Text</td>
<td>CHAPTERS DIVISION</td>
<td>The students are required to check the content flow of the body text with their respective Faculty.</td>
</tr>
<tr>
<td>REFERENCES</td>
<td></td>
<td>See Chapter 4 for formatting of References.</td>
</tr>
<tr>
<td>APPENDICES</td>
<td></td>
<td>Appendices are organized in order as mentioned in the body text.</td>
</tr>
</tbody>
</table>

3.2 Preliminaries

3.2.1 Declaration

There are three sets of declaration, namely, (1) Declaration of Thesis and Copyright (accompanied by Thesis Declaration Letter, if required), (2) Supervisor’s Declaration, and (3) Student’s Declaration. Each declaration must be on a new page. It should be typed 25 mm from the upper edge of the page.
The thesis status declaration form must be completed and bound with the thesis. This form comes immediately after the front cover. The template for declaration form can be downloaded from IPS website. There are three options: CONFIDENTIAL, RESTRICTED, and OPEN ACCESS. If CONFIDENTIAL or RESTRICTED is selected, an authorization letter from must be attached. The authorization letter should clearly indicate the following information: (1) the duration for classification, and (2) the reasons for classification.

A typical duration for CONFIDENTIAL or RESTRICTED classification is three years. However, classification of a thesis as CONFIDENTIAL or RESTRICTED can be up to a maximum period of five years. If submission of the status declaration form is not made or the information in the form is incomplete, it will be assumed that the thesis is classified as unrestricted, or in other words, OPEN ACCESS, and therefore the library will be authorized to make copies of the thesis for distribution as published academic exchange materials. Nevertheless, the student’s name will remain as the author of the thesis because the thesis is submitted to UMP. The information pertaining to the specialization and the degree to be awarded must exactly be the same information as mentioned in the offer letter issued by IPS. The status declaration form is neither numbered nor counted in the numbering of pages in the thesis. Student’s declaration form should be completed and signed. Prior to thesis submission for examination, supervisor’s declaration form must be obtained to acknowledge the standard and quality of the thesis.

(See Appendix C)

3.2.2 Title Page

The title page should use single spacing and CAPITAL LETTERS. It provides information in the following order:

i. Title of the Thesis (exactly the same as it appears on the front cover, 50 mm from the upper edge of the page);

ii. Full Name of the Student (as in identity card for Malaysian and passport for non-Malaysian);

iii. Purpose of Thesis Submission (See Appendix D);

iv. Name of Faculty/Institute/Centre (Title Case);
v. Name of University (UNIVERSITI MALAYSIA PAHANG in CAPITAL LETTERS); and

vi. Month and Year of Degree Awarded (50 mm from the bottom edge of the page)

(See Appendix E)

3.2.3 Dedication (Optional)

If the dedication page is included in the preliminaries, the dedication must be briefly written in not more than one paragraph and should not contain any graphical illustrations. It should be placed in the middle of the page.

(See Appendix F)

3.2.4 Acknowledgements

It is normal to acknowledge any individual or organisation that has provided any sort of special assistance in the preparation of the thesis. The word ACKNOWLEDGEMENTS should be typed 25 mm from the upper edge of the page. Lengthy and wordy acknowledgements should be avoided. This should be written in single line spacing within one page. If this involves copyrighted materials, prior permission to quote these materials must be obtained. It is appropriate to express gratitude for financial or other forms of support received.

(See Appendix G)

3.2.5 Abstrak and Abstract

Thesis submitted to IPS must have an abstract. The abstract and its translated version should be on separate pages after the page of Acknowledgements. The word ABSTRAK and ABSTRACT must be typed 25 mm from the upper edge of the page, bold, and centrally aligned. Even though a thesis has been written in English, the ABSTRAK in Malay or Bahasa Melayu should appear first, followed by the ABSTRACT in English version. The abstract should be written in a single paragraph, in one page only, with single line spacing. Generally, the English ABSTRACT should provide a comprehensive, precise, objective, concise, and intelligible description of the study and should not be a critique. Likewise, the Malay ABSTRAK should also be of equivalent standard. Scientific terms, if
used, must be translated accurately and consistently. Table 3.2 lists some guidelines for writing an abstract.

Table 3.2 Guidelines for Writing an Abstract

<table>
<thead>
<tr>
<th>Information to Include</th>
<th>Information Not to Include</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem statement and objectives of the study</td>
<td>Additional content, corrections or any information that do not appear in the text of the thesis.</td>
</tr>
<tr>
<td>Concise description of research design, methodology, and materials. Abbreviations or acronyms, if any, must be preceded by the full terminologies at the first use</td>
<td>Tables, figures, references, and abbreviations or acronyms</td>
</tr>
<tr>
<td>Brief summary of major findings including their significance</td>
<td>Details of experiment, organisms, standard procedures, techniques, and instruments</td>
</tr>
<tr>
<td>Conclusion</td>
<td></td>
</tr>
</tbody>
</table>

(See Appendices H and I)

3.2.6 Table of Contents

Table of Contents should start on a new page with the word TABLE OF CONTENTS typed 25 mm from the upper edge of the page and centrally aligned. It consists of an ordered list of headings for the chapters, topics, subtopics, list of references, and appendices (if any). The respective page numbers indicate the start of each part in the text of the thesis. Titles, headings, and subheadings should appear exactly the same as in the text. See Section 3.3.1 and Appendix J for more details.

3.2.7 List of Tables

This appears on a fresh page with the heading LIST OF TABLES typed 25 mm from the upper edge of the page and centrally aligned. The list must contain all the tables that appear in the text and their respective numbers, which are arranged according to the chapters of the thesis. The page number(s) must also be included.

(See Appendix K)

3.2.8 List of Figures

This page appears on a new page with the heading LIST OF FIGURES typed 25 mm from the upper edge of the page and centrally aligned. The list must contain all the figures that appear in the text and their respective numbers, which are arranged according to the chapters of the thesis. The page number(s) must also be included.
(See Appendix L)

3.2.9 List of Abbreviations/Symbols

This page appears on a new page with the heading LIST OF ABBREVIATIONS/SYMBOLS typed 25 mm from the upper edge of the page and centrally aligned. All abbreviations and symbols that appear in the text should be listed on this page according to the order as shown in Table 3.3.

Table 3.3 Order for List of Abbreviations/Symbols

<table>
<thead>
<tr>
<th>Type of Letter</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roman letters</td>
<td>Alphabetical order</td>
</tr>
<tr>
<td>Greek letters</td>
<td>Alphabetical order</td>
</tr>
<tr>
<td>Superscripts</td>
<td>Alphabetical order</td>
</tr>
<tr>
<td>Subscripts</td>
<td>Alphabetical order</td>
</tr>
</tbody>
</table>

(See Appendices M and N)

3.3 The Text

Table 3.4 shows the maximum number of words for a project, dissertation, and thesis. The total number of words does not include footnotes, quotations, appendices, formulae, tables, diagrams, and other information that is not included in the text.

Table 3.4 Maximum Number of Words According to Type of Degree

<table>
<thead>
<tr>
<th>Type of Degree</th>
<th>Maximum Number of Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor of Philosophy</td>
<td>100,000</td>
</tr>
<tr>
<td>Masters</td>
<td></td>
</tr>
<tr>
<td>By Research</td>
<td>60,000</td>
</tr>
<tr>
<td>By Coursework</td>
<td>40,000</td>
</tr>
<tr>
<td>Degree (Final Year Project)</td>
<td>30,000</td>
</tr>
</tbody>
</table>

3.3.1 Major Divisions

There are typically five parts in a thesis: (1) introduction to the research, (2) review of literatures related to the study, (3) detailed description of its methodology, (4) analysis and discussion of the findings, and (5) conclusion and recommendations. These parts form the chapters, which are the text of the thesis (see definition of text in Section 1.3 of this guide). Each chapter is distinctive; its content should typically reflect the five parts of the thesis. This
ensures proper organisation of the thesis. Students are required to seek advice from their respective supervisors regarding the division of the thesis. Basically, students are advised to adopt a five-chapter division as follows:

i. CHAPTER 1 INTRODUCTION

ii. CHAPTER 2 LITERATURE REVIEW

iii. CHAPTER 3 RESEARCH DESIGN AND METHODOLOGY

iv. CHAPTER 4 RESULTS AND DISCUSSION

v. CHAPTER 5 CONCLUSION AND RECOMMENDATIONS

(See Appendix O)

3.4 Headings and Subheadings

As mentioned earlier, a chapter is distinguished from the other chapters based on its contents, which typically reflect the five parts of the thesis. Each chapter has its own title and heading. To ensure smooth flow of ideas, a chapter is usually subdivided into sections. These sections have their own titles and subheadings. All paragraphs within a section should be written coherently. Each paragraph should be limited to one main idea. Long paragraphs should be avoided.

Headings and subheadings have their own respective formatting styles as shown in Table 3.5. Each heading which indicate the beginning of a chapter must always start on a new page. However, this does not always necessarily apply to a subheading, which should start on a new page if and only if there is no complete space for it and there are a minimum of two lines from the bottom of the page in that section.
### Formatting of Headings and Subheadings

<table>
<thead>
<tr>
<th>Element</th>
<th>Formatting Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Title</td>
<td>Central alignment, Boldface, and Uppercase Heading</td>
</tr>
<tr>
<td>Level 1</td>
<td></td>
</tr>
<tr>
<td><strong>CHAPTER 2</strong></td>
<td></td>
</tr>
<tr>
<td><strong>LITERATURE REVIEW</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2.1</strong> Title for Level 2</td>
<td>Your paragraph begins below, indented like a regular paragraph with 1.5 line spacing.</td>
</tr>
<tr>
<td><strong>2.1.1</strong> Title for Level 3</td>
<td>Your paragraph begins below, indented like a regular paragraph with 1.5 line spacing.</td>
</tr>
<tr>
<td><strong>2.1.1.1</strong> Title for Level 4</td>
<td>Your paragraph begins below, indented like a regular paragraph with 1.5 line spacing. The title for Level 4 is not included in Table of Contents.</td>
</tr>
<tr>
<td><strong>2.1.1.1</strong> Title for Level 5</td>
<td>Your paragraph begins below, indented like a regular paragraph with 1.5 line spacing. The title for Level 5 is not included in Table of Contents.</td>
</tr>
</tbody>
</table>

### Tables in the Text

Arabic numerals should be used to number all the tables. Each of the tables should be numbered according to its respective chapters. For example, the first table that appears in Chapter 3 should be numbered as Table 3.1. A brief title must be given to a table. This is known as a caption. Regardless of the layout of the table, whether it is in portrait or landscape format, the caption must always be positioned at the top of the table. For a table in landscape format, the top of the table including its caption should be placed adjacent to the spine. It should be noted that, for binding purposes, this must not interfere with the requirements for
margin specifications (see Section 2.5). If a table is copied from a source, the source must be cited at the bottom of the table (see Appendix Q). Likewise, if a table is adapted from a source or a number of sources, the source(s) must also be cited. The following citation should appear at the bottom of the table:

Adapted from: Author (Year).

Data that are presented in the form of a table must be preceded by an explanation about the data first before the table, and not vice versa. All tables in the same chapter can also be grouped together and placed near the relevant text. Students must ensure that the type of font used for tables (i.e., caption or number and title of the table, as well as the data) should be the same as the one used in the text of the thesis. However, the size of the font for the data presented in the table may be smaller (i.e., 1-2 pt smaller).

3.4.1.1 Required Format for Tables

A table must only have three types of horizontal lines; no vertical lines are allowed. These three types of horizontal lines are as follows:

i. The table opening line, which is placed between the table title and the column heading;

ii. The column heading closing line, which separates the heading from the data presented in the table; and

iii. The table closing line, which ends the table.

A table must have a minimum of two columns. Each column must have a heading that describes the data in that column. Any information after the closing is known as table note (for further explanation, see APA Publication Manual Sixth Edition, Section 5.16). This applies to any basic table that appears on one single page.

3.4.1.2 Continued Table

Sometimes, data in a table may need to be presented in more than one page. In this case, the column headings in that table must be retained on each page. The full caption (i.e., number and title) of the table should appear on top of the first page with the word continued at the bottom of the table. On the subsequent page(s), the word continued should appear on
top of the table which is preceded by the table number without its title in the caption.

(See Appendix Q)

3.4.2 Figures in the Text

Illustrative visual materials such as maps, charts, graphs, drawings, diagrams, and photographs are referred to as figures. All figures must be clear and of high quality. Figures must be numbered using Arabic numerals. If a figure is presented across the page in landscape orientation, the top of the figure must be along the bound edge of the thesis.

3.4.2.1 Typeface

Since figures are considered illustrations or diagrams and may be imported from an external source, any text that is part of the figure can be in any typeface, provided that it is neat and readable. The figure number and title must be in the same typeface as the rest of the thesis because this material is considered to be part of the typeset body of the document. The caption is provided below the figure, left aligned. All figures must be centrally aligned within the left and right margins. The figures must be numbered with respect to the chapter, for example, Figure 4.2 refers to the second figure that appears in Chapter 4.

3.4.2.2 Continued Figures

A figure containing several related parts that are too large to be included on a single page may be continued onto another page or other pages. The first page shall contain the figure number and complete title while the subsequent pages shall present the remainder of the figure.

(See Appendix R)

3.4.3 Placement of Tables and Figures

Tables and figures must be referred to in the text by their respective numbers instead of expressions. When more than one table/figure is referred to on a page of text, each table/figure should follow the order it is mentioned until all have been placed. In terms of degree of importance, tables/figures are secondary to the text. In other words, all text pages must be filled with text. It is recommended that the tables/figures are assigned on pages
separated from the text to avoid problems in shifting during last minute revisions. However, if students wish to incorporate tables/figures within the text, the following criteria must be met:

i. Table/figure must be separated from the text by an extra space (1.5 line spacing);

ii. Table/figure cannot be continued onto the following page.

There should always be a balance of not less than half a page of the text and not more than half a page of table/figure below or above the text. If multiple tables/figures are included on a page, there can be an approximately 1.5 line spacing between each table/figure.

**Placement in an appendix.** When all tables/figures are placed within an appendix, this should be stated in a note in the body of the text and is not repeated thereafter. This note should appear on the page of the text that refers to the first table or figure in the document. The note can be presented as part of a sentence, parenthetical information or a footnote. When only some of the tables/figures are placed within an appendix, their locations must be clearly indicated as references in the text, unless the numbering scheme makes the location obvious.

### 3.4.4 Equations in the Text

Equation numbers should use Arabic numerals enclosed in parentheses on the right hand margin. The equations, whether mathematical or/and chemical, must be numbered with respect to the chapter, for example, Eq. 4.2 refers to the second equation that appears in Chapter 4. Equations are placed at the centre of a page. If detailed derivation is needed, it should be provided in an appendix. When a complete version of an equation requires more than a single line, the expression should be divided immediately before a convenient plus or minus sign but not one that falls within the bounds of a set of fences. The best place to break a lengthy equation is on the right, ahead of an equal sign.

### 3.4.5 Citations within the Text

Citations within the text is a means of formally recognizing, the sources from which the information or idea are obtained. Their purpose is to acknowledge the works of other authors, to demonstrate the body of knowledge in which the works are based on, and to guide readers locate the sources for further information, which are listed in a list of sources at
the end of the text. This list is known as References. Citations in the text (also known as in-text citations or parenthetical citations) must be made according to this guide, which consist of information in parentheses within the text. Therefore, full details of in-text citations should be included in the References list, with the exception of personal interviews or correspondences.

3.4.6 Quotations

Quotations within a sentence should not exceed 40 words and must be placed within quotation marks “…”. All direct quotations exceeding 40 words must be typed separately in block style with a new paragraph of 1.5 line spacing below and indented without the use of quotation marks. If the quotation is in a different language, it must be italicized. Apart from information about the author or authors (using surname) and the year of publication, the number of page or pages must be cited.

3.5 List of References

A thesis must include a list of materials used in the preparation of the document. Students should not cite articles that were published from the studies that he/she had conducted during candidature period and list them as references. The list of references should start on a fresh page with the heading REFERENCES 25 mm from the upper edge of the page and centrally aligned. This section should contain all the sources referred to within the text. Sources not referred to in the text should not be listed in the references, and vice versa. The purposes of listing the references are:

i. To serve as an acknowledgment of sources;

ii. To give readers sufficient information to locate the material;

iii. To save the reader the trouble of attempting to locate materials that are not available in the case of personal interviews or correspondences.

The format used to list all the references which have been cited in the text should follow the APA style. References should not be listed at the end of every chapter; they should only be listed at the end of the final chapter. All references should be listed in alphabetical order. The details of the APA style are described further in Chapter 4.
3.6 Headers and Footers

The use of headers and footers is not allowed.

3.7 Appendices

An appendix is a useful part to make available material that is relevant to the text but not suitable for inclusion in it. Thesis does not necessarily have to include appendices. Appendices may comprise the following: glossary, data from the study, tables, charts, detailed engineering drawing, computer program listings, sample of questionnaires, maps, photographs, and any other such materials. All of the materials are either too lengthy to be included in the text or not immediately relevant to the discussion in the text.

Appendix can be named (e.g., APPENDIX A, APPENDIX B and APPENDIX C) depending on the type and quantity of information to be included. Specific titles for appendices can also be given. Appendices should be paginated consecutively with the main text. The heading, for example, APPENDIX A, should be typed 25 mm from the upper edge of the page and centrally aligned. If appendices are included, they should be listed according to their titles in the Table of Contents. If there are five or less appendices, their details should be listed in the Table of Contents. If there are more than five appendices, the Table of Contents should include a list of appendices with the page numbers.

3.8 List of Publications

All publications (either in journals or proceedings) that result from the study carried out by a candidate while under supervision and during the candidature period and for which the candidate is the first author or co-author should be listed clearly and accurately. The publications listed in the appendix are those relevant to the candidate’s research topic and that have been either published or accepted to be published in journals or proceedings during the candidature period.
CHAPTER 4

STYLES OF WRITING REFERENCES

4.1 Introduction

The Publication Manual of the American Psychological Association (6th ed., 2010) is used as the guideline in citing and crediting sources. Students are advised to refer to the publication manual for any further explanation of the APA Style.

All the references cited in the text must be provided in the reference list at the end of the thesis. The list of sources cited should be compiled based on the AUTHOR-YEAR system and listed according to alphabetical and chronological order. If more than one reference by the same author were cited, these references should be listed chronologically.

References should be typed single spaced within entry and 1.5 line spacing between entries with a hanging indentation. If a reference were not in the language of the text (except for English) then it should be translated into the language of the text. A reference list includes only references that document the article and provide recoverable data. Personal communications, such as letters, memoranda, and informal electronic communication, religious texts such as the Qur’an and the Bible, and entire websites, should not be included in the reference list

4.2 Styles of Writing References

4.2.1 Alphabetizing Names

i. References should be listed in alphabetical and chronological order:


Ismail, F. (2004). …


ii. The publication of an individual author is listed before another publication in which the same author is the first writer and both publications are in the same year. Use ampersand (&) for multiple authors.


iii. In the case of publications in which one author is the first author and the second and third author are different, the works are listed according the alphabetical order of the names of the second author and third, and so on. Use ampersand (&) for multiple authors.


iv. Single author entries by the same author are arranged chronologically by year of publication.


v. References by the same author (or by the same two or more authors in the same order) with the same publication year are arranged alphabetically by the title. If the references with same authors published in the same year are identified as articles in a series (e.g., Part 1 and Part 2), arrange the references in the series order, not alphabetically by title. Lowercase letters, (e.g., a, b, and c), are placed immediately after the year within the parentheses.


vi. References by different first authors with the same surname are listed alphabetically by first initial.

Rahman, A. (2006). ...


Zakri, A. (2003). ...


   In general, entries are arranged alphabetically by the surname of the first author; using the following rules for special cases:

vii. Alphabetize letter by letter. However, remember that “nothing precedes something”: John, T. F., precedes Johnny, M. S., even though n precedes i in the alphabet.

viii. Alphabetize the prefixes M’, Mc, and Mac literally, not as if they were all spelled Mac. Disregard the apostrophe: MacMillan precedes McMichael, and MacKenna precedes M’Cabe.

ix. Alphabetize surnames that contain articles and prepositions (de, la, du, or von) according to the rules of the origin language. If you know that a prefix is commonly part of the surname (e.g., De Jong), treat the prefix as part of the last name and alphabetize by the prefix (e.g., DeBerg precedes De Jong). If the prefix is not customarily used (e.g., Mises rather than von Mises), disregard it in the alphabetization and place the prefix following the initials (e.g., Mises, L. H. E. von).

x. Alphabetize entries with numerals as if the numerals were spelled out.

4.2.2 Order of Works with Group Authors or with No Authors

   Full official names should be used the first time they are mentioned in the text and may be abbreviated in the subsequent in-text citation. If no specific author is designated to a reference, it should be cited as Anonymous and it is alphabetized as if Anonymous were a true name.
4.3 Periodicals

General form:


If the journal is paginated by issue, include the issue number in parentheses immediately after the volume number. Some journals offer supplemental material that is available only online. To reference this supplemental material, or any other nonroutine information that is important for identification and retrieval, include a description of the content in brackets following the title: [Letter to the editor]. If there is no DOI assigned and the reference is retrieved online, give the URL of the journal homepage. No retrieval date is needed.

i. Journal Article with DOI


Use the following in-text citation: (Hammond et al., 2011). Spell out all authors’ names in the reference list for a reference with up to seven authors.

ii. Journal Article without DOI

Digital copy


Printed copy

iii. **Journal Article without DOI, Title Translated into English, Print Version**


If the original version of a non-English article is used as the source, cite the original version. Give the original title and, in brackets, the English translation. If the English translation of a non-English article is used as the source, cite the English translation. Give the English title without brackets.

iv. **Journal Article with DOI, Advance Online Publication**


If there is no DOI assigned and you retrieve the article electronically, give the URL of the journal home page. Update your references close to the publication date of your work, and refer to final versions of your sources, if possible.

v. **In-press Article Posted in a Preprint Archive**


The exact URL is used because the article is informally published and not yet indexed in a journal website. Journal publishers that do not offer advance online publication may allow authors to post a version of their article online ahead of print in an outside repository, also called a preprint archive. Update your references close to the publication date of your work and refer to the final version of a work, if possible.

vi. **Magazine Article**

vii. Online Magazine Article


viii. Newsletter Article, No Author


The exact URL is helpful here because specific newsletter articles are difficult to locate from the government agency home page. Alphabetize works with no author by the first significant word in the title (in this case, "Six"). In text, use a short title (or the full title if it is short) enclosed in quotation marks for the parenthetical citation: ("Six Sites Meet," 2006).

ix. Newspaper Article


Precede page numbers for newspaper articles with p. or pp. If an article appears on discontinuous pages, give all page numbers, and separate the numbers with a comma (e.g., pp. B1, B3, B5-B7).

x. Online Newspaper Article


Give the URL of the home page when the online version of the article is available by search to avoid nonworking URLs.

xi. Special Issue or Section in a Journal


xii. Monograph as Part of Journal Issue


For a monograph with an issue (or whole) number, include the issue number in parentheses followed by the serial number, for example, 58(1, Serial No. 231). For a monograph bound separately as a supplement to a journal, give the issue number and supplement or part number in parentheses after the volume number, for example, 80(3, Pt. 2).

xiii. Editorial without Signature


xiv. Online-only Supplemental Material in a Periodical


The description of supplemental material or other nonroutine information (e.g., a letter to the editor, podcast, or map) is included in brackets to help the reader identify and retrieve the material. If no author is indicated, move the title and bracketed description to the author position. In text, use the following parenthetical citation (Blazy et al., 2014).

xv. Abstract as Original Source


Although it is preferable to cite the full text of an article, abstracts can be used as sources and included in the reference list.

4.4 Books, Reference Books, and Book Chapters

This category includes books and reference books such as encyclopedias, dictionaries, and discipline-specific reference books (e.g., Diagnostic and Statistical Manual of Mental
Disorders; see example at www.apastyle.org). It also includes books that are published in
electronic form only, reference works and public domain books available online, and out-of-
print books that may be available only in online repositories. When DOIs are assigned, use
them as described in the examples.

For an entire book, use the following reference formats:


For a chapter in a book or entry in a reference book, use the following formats:


If there are no page numbers, the chapter or entry title is sufficient. For an entry in a
reference work with no byline, use the following formats:


When the author and publisher are the same, the word Author is used as the name of
the publisher. Alphabetize books with no author or editor by the first significant word in the
title. In the text citation, use a few words of the title, or the whole title if it is short, in place of
an author’s name. Place information about editions, volume numbers, and page numbers
(such as revised edition, volume number, or chapter page range) in parentheses following the
title, with the period after the parentheses: (Rev. ed.) or (Vol. xx, pp. xxx-xxx). As with periodicals, for any nonroutine information that is important for identification and retrieval, a description of content is placed in brackets following the title: [Brochure]. For major reference works with a large editorial board, you may list the name of the lead editor, followed by et al. For books or chapters available only online, the electronic retrieval statement takes the place of publisher location and name.

i. Entire book, Print Version


ii. Electronic Version of Print Book


iii. Electronic-only Book


iv. Electronic Version of Republished Book


In text, use the following citation: (Freud, 1900/1953).

v. Limited-circulation Book or Monograph, from Electronic Database


Database information may be given for items of limited circulation.

vi. Several Volumes in a Multivolume Work

In text, use the following parenthetical citation: (Koch, 1959-1963).

vii. Electronic Version of Book Chapter in a Volume in A Series


If the content has been assigned a DOI, write the DOI in the reference. No URL or database name is needed. In regularly published series with subtitles that change regularly, the series title is in uppercase and the subtitle is in lowercase, as in a book title.

viii. Book Chapter, Print Version


ix. Book Chapter, English Translation, Reprinted from another Source


If the English translation of a non-English work is used as the source, cite the English translation. Give the English title without brackets, followed by the translator's name in parentheses. In text, use the following parenthetical citation: (Piaget, 1970/1988).

x. Reference Book


xi. Non-English Reference Book, Title Translated into English

If a non-English reference work is used as the source, give the title in the original language and, in brackets, the English translation.

xii. Entry in an Online Reference Work


xiii. Entry in an Online Reference Work, No Author or Editor


If the online version refers to a print edition, include the edition number after the title.

4.5 Technical and Research Reports

Technical and research reports, like journal articles, usually cover original research but may or may not be peer reviewed. They are part of a body of literature sometimes referred to as gray literature, which "can serve a valuable supplementary role to formal publication, including additional resources, details, research methods and experimental techniques" ("Gray literature," 2006). Format references to technical and research reports as you would a book.


If the issuing organization assigns a number (e.g., report number, contract number, and monograph number) to the report, give that number in parentheses immediately after the title. If you obtain a report from the U.S. Government Printing Office, list the publisher location and name as Washington, DC: Government Printing Office. For reports retrieved online, identify the publisher as part of the retrieval statement unless the publisher has been identified as the author: Retrieved from Agency name website: http://www.xxxxxxx

i. Corporate Author, Government Report

ii. Corporate Author, Task Force Report Filed Online


iii. Authored Report, from Nongovernmental Organization


iv. Report from Institutional Archive


v. Issue Brief


Use this form for issue briefs, working papers, and other corporate documents, with the appropriate document number for retrieval in parentheses.

### 4.6 Meetings and Symposia

Proceedings of meetings and symposia can be published in book or periodical form. To cite published proceedings from a book, use the same format as for a book or book chapter (see Example 4.6.3).

To cite proceedings that are published regularly, use the same format as for a periodical (see Example 4.6.2). For contributions to symposia or for paper or poster presentations that have not been formally published, use the following templates.

Symposium:
Contributor, A. A., Contributor, B. B., Contributor, C. C., & Contributor, D. D. (Year, Month). Title of contribution. In E. E. Chairperson (Chair), Title of symposium. Symposium conducted at the meeting of Organization Name, Location.

Paper presentation or poster session:

Presenter, A. A. (Year, Month). Title of paper or poster. Paper or poster session presented at the meeting of Organization Name, Location.

For symposium contributions and paper or poster presentations that have not been formally published, give the month and year of the symposium or meeting in the reference.

i. Symposium contribution

Muellbauer, J. (2007, September). Housing, credit, and consumer expenditure. In S. C. Ludvigson (Chair), Housing and consumer behavior. Symposium conducted at the meeting of the Federal Reserve Bank of Kansas City, Jackson Hole, WY.

ii. Conference paper abstract retrieved online


iii. Proceedings Published Regularly Online


iv. Proceedings Published in Book Form


4.7 Doctoral Dissertations and Master's Theses

Doctoral dissertations and master's theses can be retrieved from subscription databases, institutional archives, and personal websites. If the work is retrieved from ProQuest Dissertations and Theses database (whose index and abstracting sources include
Dissertation Abstracts International [DAI] and Master's Theses International, both published by University Microforms International, and American Doctoral Dissertations, published by Association of Research Libraries) or another published source, include this information in the reference.

For a doctoral dissertation or master's thesis available from a database service, use the following reference template:


For an unpublished dissertation or thesis, use the following template:


Italicize the title of a doctoral dissertation or master's thesis. Identify the work as a doctoral dissertation or master's thesis in parentheses after the title. If the paper is available through a database, give the accession or order number in parentheses at the end of the reference.

i. Master's Thesis, from a Commercial Database


ii. Doctoral dissertation, from an institutional database


iii. Doctoral Dissertation, from the Web


iv. Doctoral Dissertation, Abstracted in DAI

v. Doctoral Thesis, from a University outside the United States


4.8 Reviews and Peer Commentary

Reviews of books, motion pictures, and other information or entertainment products are published in a variety of venues, including periodicals, websites, and blogs. Some publications will print author responses to a reviewer's criticism or multiple reviews of the same product.


If the review is untitled, use the material in brackets as the title and retain the brackets to indicate that the material is a description of form and content, not a title. Identify the type of medium being reviewed in brackets (book, motion picture, or television program). If the reviewed item is a book, include the author names after the title of the book, separated by a comma. If the reviewed item is a film, DVD, or other media, include the year of release after the title of the work, separated by a comma.

i. Review of a Book


ii. Review of a Video


iii. Review of a Video Game, No Author

iv. Peer Commentary on an Article


4.9 Audiovisual Media

Audiovisual media include motion pictures, audio or television broadcasts (including podcasts) and static objects such as maps, artwork, or photos.

For a motion picture, use the following format:


For a music recording, use the following format:

Writer, A. (Copyright year). Title of song [Recorded by B. B. Artist if different from writer]. On Title of album [Medium of recording: CD, record, cassette, etc.] Location: Label. (Date of recording if different from song copyright date)

List the primary contributors in the author position and use parentheses to identify their contribution. For an episode from a television or radio series, use the same format as for a chapter in a book, but list the script writer and director in the author position and the producer in the editor position.

i. Video


ii. Podcast

iii. Single Episode from a Television Series


iv. Music Recording


In text citations, include side and band or track numbers: "Shadow and the Frame" (Lang, 2008, track 10).

v. Map Retrieved Online


4.10 Data Sets, Software, Measurement Instruments, and Apparatus

This category includes raw data and tools that aid persons in performing a task such as data analysis or measurement. Reference entries are not necessary for standard software and programming languages, such as Microsoft Word or Excel, Java, Adobe Photoshop, and even SAS and SPSS. In text, give the proper name of the software, along with the version number. Do provide reference entries for specialized software or computer programs with limited distribution.

Rightsholder, A. A. (Year). Title of program (Version number) [Description of form]. Location: Name of producer.

or


Do not italicize the names of software, programs, or languages. Do italicize the title of a data set. If an individual has proprietary rights to the software, name him or her as the author. Otherwise, treat such references as unauthored works. Put in parentheses immediately
after the title, identify the version number, if any. Put in brackets immediately after the title or version number, identify the source as a computer program, language, software, and so forth. Do not use a period between the title and the bracketed material. Give the location and name of the organization that produced the work, if applicable, in the publisher position. If the program can be downloaded or ordered from the web, give this information in the publisher position. For an apparatus patent, use the legal reference format (see 4.15).

i. Data Set


ii. Measurement Instrument


iii. Software


iv. Apparatus


4.11 Unpublished and Informally Published Works

Unpublished work includes work that is in progress, has been submitted for publication, or has been completed but not submitted for publication. This category also includes work that has not been formally published but is available on a personal or institutional website, an electronic archive such as ERIC, or a preprint archive.

Author, A. A. (Year). Title of manuscript. Unpublished manuscript [or "Manuscript submitted for publication," or "Manuscript in preparation"].

If the work is available on an electronic archive, give this information at the end. Update your references frequently prior to publication of your work; refer to the final published version of sources when possible.
i. Unpublished Manuscript with a University Cited


ii. Manuscript in Progress or Submitted For Publication


Do not give the name of the journal or publisher to which the manuscript has been submitted. Treat a manuscript *accepted* for publication but not yet published as an in-press reference (see Example 4.3.6). Use the same format for a draft or work in progress, but substitute the words ‘Manuscript in preparation’ for the final sentence. Use the year of the draft you read (not in preparation) in the text citation.

iii. Unpublished Raw Data from Study, Untitled Work


iv. Informally Published or Self-Archived Work


This work is later published in a journal and would now be referenced as follows:


v. Informally Published or Self-Archived Work, from ERIC


4.12 Archival Documents and Collections

Archival sources include letters, unpublished manuscripts, limited-circulation brochures and pamphlets, in-house institutional and corporate documents, clippings, and other
documents, as well as such nontext materials as photographs and apparatus, that are in the personal possession of an author, form part of an institutional collection, or are stored in an archive such as the Archives of the History of American Psychology at the University of Akron or the APA Archives.

Author, A. A. (Year, Month Day). Title of material. [Description of material]. Name of Collection (Call number, Box number, File name or number, etc.). Name of Repository, Location.

This general format may be modified for collections requiring more or less specific information to locate materials, for different types of collections, or for additional descriptive information (e.g., a translation of a letter). Authors may choose to list correspondence from their own personal collections, but correspondence from other private collections should be listed only with the permission of the collector. As with any reference, the purpose is to direct the reader to the source, despite the fact that only a single copy of the document may be available and the reader may have some difficulty actually seeing a copy. Include as much information as needed to help locate the item with reasonable ease within the repository. For items from collections with detailed finding aids, the name of the collection may be sufficient.

For items from collections without finding aids, more information (e.g., call number, box number, file name or number) may be necessary to help locate the item. If several letters are cited from the same collection, list the collection as a reference and provide specific identifying information (author, recipient, and date) for each letter in the in-text citations. Use square brackets to indicate information that does not appear on the document. Use question marks to indicate uncertainty regarding names and dates and use ca. (circa, not italicized) to indicate estimated dates (see Example 4.12.5). For interviews and oral histories, list the interviewee as the author. Include the interviewer's name in the description. If a publication of limited circulation is available in libraries, the reference may be formatted as usual for published material, without the archival source.

i. Letter from a Repository


ii. Letter from Private Collection

iii. Collection of Letters from an Archive


In-text citations of specific letters:

(Allport, G. W., 1930-1967, Allport to E. G. Boring, March 1, 1939)

(Allport, G. W., 1930-1967, E. G. Boring to Allport, December 26, 1937)

Note that Examples 4.12.1 and 4.12.3 refer to archival materials that can be recovered and thus include full reference list details that allow the reader to find them. Private letters and correspondence that are not easily retrievable are considered personal communications and are cited only in text (see section 4.14.9).

iv. Unpublished Papers, Lectures from an Archive or Personal Collection


v. Archival/Historical Source for Which the Author and/or Date is Known or is reasonably certain but Not Stated on the Document


vi. Archival Source with Corporate Author


vii. Interview Recorded and Available in an Archive

viii. **Transcription of a Recorded Interview, No Recording Available**


ix. **Newspaper Article, Historical, in an Archive or Personal Collection**


x. **Historical Publication of Limited Circulation**


xi. **Photographs**

[Photographs of Robert M. Yerkes], (ca. 1917-1954). Robert Mearns Yerkes Papers (Box 137, Folder 2292). Manuscripts and Archives, Yale University Library, New Haven, CT.

### 4.13 Internet Message Boards, Electronic Mailing Lists, and Other Online Communities

The Internet offers several options for people around the world to sponsor and join discussions devoted to particular subjects. These options include blogs, newsgroups, online forums and discussion groups, and electronic mailing lists. The last are often referred to as *listsev*. However, LISTSERV is a trademarked name for a particular software program; *electronic mailing list* is the appropriate generic term.


If the author's full name is available, list the last name first followed by initials. If only a screen name is available, use the screen name. Provide the exact date of the posting. Follow the date with the subject line of the message (also referred to as the "thread") and do not
italicize it. Provide a description of the message in brackets after the title. Include the information "Retrieved from" followed by the URL where the message can be retrieved. Include the name of the list to which the message was posted, if this information is not part of the URL. Provide the address for the archived version of the message.

i. Message posted to a newsgroup, online forum, or discussion group


ii. Message posted to an electronic mailing list


iii. Blog Post


A blog comment would be referenced as follows:


In the second example a screen name is used for the author name. The author has adopted a nickname, or screen name, to use when posting comments to this web log.

iv. Video blog post


4.14 Reference Citations in Text

Document your study throughout the text by citing by author and date the works you used in your research. This style of citation briefly identifies the source for readers and
enables them to locate the source of information in the alphabetical reference list at the end of the article (see Appendix S).

### 4.14.1 One Work by One Author

Author-date method of citation is used; that is, the surname of the author (do not include suffixes such as Jr.) and the year of publication are inserted in the text at the appropriate point:

Walker (2000) compared reaction times

In a recent study of reaction times (Walker, 2000)

If the name of the author appears as part of narrative, as in the first example, cite only the year of publication in parentheses. Otherwise, place both the name and the year, separated by comma, in parentheses (as in second example). Even if the reference includes month and year, include only the year in the text citation. In the rare case in which both the year and the author are given as part of the textual discussion, do not add parenthetical information:

In 2000, Walker compared reaction times

Within a paragraph, you need not include the year in subsequent references to a study as long as the study cannot be confused with other studies cited in the article:

In a recent study of reaction times, Walker (2000) described the method …… Walker also found

### 4.14.2 One Work by Multiple Authors

When a work has two authors, always cite both names every time the reference occurs in text.

When a work has three, four, or five authors, cite all authors the first time the reference occurs. In subsequent citations, include only the surname of the first author followed by et al. (not italicized and with a period after “al”) and the year if it is the first citation of the reference within a paragraph:
Wasserstein, Zapulla, Rosen, Gertsman, and Rock (1994) found [Use as first citation in text.]

Wasserstein et al. (1994) found [Use as subsequent first citation per paragraph thereafter.]

Wasserstein et al. found [Omit year from subsequent citations after first citation within a paragraph.]

*Exception:* If two references with the same year shorten to the same form (e.g., both Bradley, Ramirez, & Soo, 1994, and Bradley, Soo, Ramirez, & Brown, 1994, shorten to Bradley et al., 1994), cite the surnames of the first authors and as many of the subsequent authors as necessary to distinguish the two references, followed by a comma and et al.

Bradley, Ramirez, and Soo (1994) and Bradley, Ramirez, Soo, et al. (1994)

**When a work has six or more authors,** cite only the surname of the first author followed by et al. (not italicized and with a period after “al”) and the year for the first and subsequent citations. In the reference list, however, provide the initials and surnames of the first six authors, insert ellipsis marks (three spaced periods) and then include the last author’s name.

If two references with six or more authors shorten to the same form, cite the surnames of the first author and of as many the subsequent authors necessary to distinguish the two references, followed by a comma and et al. For example, suppose you have entries for the following references:

Kosslyn, Koenig, Barret, Cave, Tang, and Gabrieli (1996)

Kosslyn, Koenig, Gabrieli, Tang, Marsolek, and Daly (1996)

In text you would cite them, respectively, as

Kosslyn, Koenig, Barret, et al. (1996) and Kosslyn, Koenig, Gabrieli, et al. (1996)

Join the names in a multiple-author citation in running text by the word *and.* In parenthetical material, in tables and captions, and in the reference list, join the names by an ampersand (&):
as Nightlinger and Littlewood (1993) demonstrated

as has been shown (Nightlinger & Littlewood, 1993)

4.14.3 Groups as Authors

The names of groups that serve as authors (e.g., corporations, associations, government agencies, and study groups) are usually spelled out each time they appear in a text citation. The names of some group authors (e.g., associations, government agencies) are spelled out in the first citation and abbreviated thereafter. In deciding whether to abbreviate the name of a group author, use the general rule that you need to give enough information in the text citation for the reader to locate the entry in the reference list without difficulty. If the name is long and cumbersome and if the abbreviation is familiar or readily understandable, you may abbreviate the name in the second and subsequent citations. If the name is short or if the abbreviation would not be readily understandable, write out the name each time it occurs.

For example, the following group author is readily identified by its abbreviation:

Entry in reference list:


First text citation:

(World Health Organization [WHO], 1999)

Subsequent text citations:

(WHO, 1999)

The name of the following group author should be written out in full:

Entry in reference list:


All text citations:

(University of Pittsburgh, 1993)
4.14.4 Works with No Author (Including Legal Materials) or with an Anonymous Author

When a work has no author, cite in text the first few words of the reference list entry (usually the title) and the year. Use double quotation marks around the title of an article or chapter, and italicize the title of a periodical, book, brochure, or report:

on free care (“Study Finds,” 1982)

the book College Bound Seniors (1979)

Treat references to legal materials like references to works with no author, that is, in text, cite materials such as court cases, statutes, and legislation by the first few words of the reference and the year (see 4.15 for the format of text citations and references for legal materials).

When a work’s author is designated as “Anonymous,” cite in text the word Anonymous followed by a comma and the date:

(Anonymous, 1998)

In the reference list, an anonymous work is alphabetized by the word Anonymous (see section 4.14.4).

4.14.5 Authors with the Same Surname

If a reference list includes publications by two or more primary authors with the same surname, include the first author’s initials in all text citations, even if the year of publication differs. Initials help the reader to avoid confusion within the text and to locate the entry in the list of references (see section 4.2 for the order of appearance in the reference list):

R. D. Luce (1959) and P. A. Luce (1986) also found

J. M. Goldberg and Neff (1961) and M. E. Goldberg and Wurtz (1972) studied
4.14.6 Two or More Works within the Same Parentheses

Order the citations of two or more works within the same parentheses alphabetically in the same order in which they appear in the reference list (including citations that would otherwise shorten to *et al.*).

Arrange two or more works by the same authors (in the same order) by year of publication. Place in-press citations last. Give the authors’ surnames once and for each subsequent work, give only the date.


Past research (Gogel, 1984, 1990, in press)

Identify works by the same author (or by the same two or more authors in the same order) with the same publication date by the suffixes a, b, c, and so forth after the year and repeat the year. The suffixes are assigned in the reference list, where these kinds of references are ordered alphabetically by title (of the article, chapter, or complete work).


List two or more works by different authors who are cited within the same parentheses in alphabetical order by the first author’s surname. Separate the citations with semicolons.

Several studies (Balda, 1980; Kamil, 1988; Pepperberg & Funk, 1990)

*Exception:* You may separate a major citation from other citations within parentheses by inserting a phrase, such as see also, before the first of the remaining citations, which should be in alphabetical order.

(Minor, 2001; see also Adams, 1990; Storanndt, 1997).

4.14.7 Classical Works

When a work has no date of publication, cite in text the author’s name, followed by a comma and n.d. for “no date”. When a date of publication is inapplicable, such as for some very old works, cite the year of the translation you used, preceded by *trans.*, or the year of the version you used, followed by *version*. When you know the original date of publication, include this in the citation.
(Aristotle, trans. 1931)

James (1890/1983)

Reference entries are not required for major classical works, such as ancient Greek and Roman works and the Bible. Simply identify in the first citation in the text the version you used. Parts of classical works (e.g., books, chapters, verses, lines, cantos) are numbered systematically across all editions, so use these numbers instead of page numbers when referring to specific parts of your source:

1 Cor. 131 (Revised Standard Version)

(Qur’an, 5:3-4)

4.14.8 Specific Parts of a Source

To cite a specific part of a source, indicate the page, chapter, figure, table, or equation at the appropriate point text. Always give page numbers for quotations. Note that the words page, but not chapter, is abbreviated in such text citations:

(Check & Buss, 1981, p. 332)

(Shimamura, 1989, chap. 3)

For guidance on citing electronic sources that do not provide page numbers, see section 4.14.11. For citing parts of classical works, see 4.14.7.

4.14.9 Personal Communication

Personal communications may be letters, memos, some electronic communications (e.g., email or messages from nonarchived discussion groups or electronic bulletin boards), personal interviews, and telephone conversations. Because they do not provide recoverable data, personal communications are not included in the reference list. Cite personal communications in text only. Give the initials as well as the surname of the communicator, and provide as exact a date as possible:

T. K. Lutes (personal communication, April 18, 2001)

(V. G. Nguyen, personal communication, September 28, 1998)
Use your judgment in citing other electronic forms as personal communications. Computer networks (including the Internet) currently provide a casual forum for communicating, and what you cite should have scholarly relevance. Some forms of personal communication are recoverable and these should be referenced as archival materials. See section 4.12 for templates, descriptions, and examples of archival sources in the reference list.

4.14.10 Citations in Parenthetical Material

In a citation that appears in parenthetical text, use commas (not brackets) to set off the date:

(see Table 2 of Hashtroudi, Chrosniak, & Schwartz, 1991, for complete data)

4.14.11 Direct Quotations of Online Material without Pagination

Credit direct quotations of online material by giving the author, year, and page number in parentheses. Many electronic sources do not provide page numbers. If paragraph numbers are visible, use them in place of page numbers. Use the abbreviation para.

Basu and Jones (2007) went so far as to suggest the need for a new "intellectual framework in which to consider the nature and form of regulation in cyberspace" (para. 4).

If the document does include headings and neither paragraph nor page numbers are visible, cite the heading and the number of the paragraph following it to direct the reader to the location of the quoted material.

In their study, Verbunt, Pernot and Smeets (2008) found that "the level of perceived disability in patients with fibromyalgia seemed best explained by their mental health condition and less by their physical condition" (Discussion section, para. 1).

In some cases in which no page or paragraph numbers are visible, headings may be too unwieldy to cite in full. Instead, use a short title enclosed in quotation marks for the parenthetical citation:

"Empirical studies have found mixed results on the efficacy of labels in educating consumers and changing consumption behavior" (Golan, Kuchler, & Krissof, 2007," Mandatory Labeling Has Targeted," para. 4).
(The heading was "Mandatory Labeling Has Targeted Information Gaps and Social Objectives.")

4.14.12 Patent

In text, give the patent number and the issue date (not application date) of the patent. In the reference list entry, include the inventor(s) to whom the patent is issued and the official source from which the patent information can be retrieved.

Reference list entry:


Text citation:


Explanation: This patent was issued in 1988. I. M. Smith is the inventor who holds the patent right. The patent number is a unique identifying code given to every patent. In this reference example, the patent number represents a utility patent because there is no letter prefix. If this were a nonutility patent, such as a design patent (coded with a D), the patent number in the reference and citation would be D123,445.

4.15 Abbreviations in Reference List

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Book or publication part</th>
</tr>
</thead>
<tbody>
<tr>
<td>ed.</td>
<td>edition</td>
</tr>
<tr>
<td>Rev. ed.</td>
<td>Revised edition</td>
</tr>
<tr>
<td>2nd ed.</td>
<td>second edition</td>
</tr>
<tr>
<td>Ed. (Eds.)</td>
<td>Editor (Editors)</td>
</tr>
<tr>
<td>Trans.</td>
<td>Translator(s)</td>
</tr>
<tr>
<td>n.d.</td>
<td>no date</td>
</tr>
<tr>
<td>p. (p p.)</td>
<td>page (pages)</td>
</tr>
<tr>
<td>Vol.</td>
<td>Volume (as in Vol. 4)</td>
</tr>
<tr>
<td>Vols.</td>
<td>Volumes (as in Vols. 1 – 4)</td>
</tr>
<tr>
<td>No.</td>
<td>Number</td>
</tr>
<tr>
<td>Pt.</td>
<td>Part</td>
</tr>
<tr>
<td>Suppl.</td>
<td>Supplement</td>
</tr>
</tbody>
</table>
CHAPTER 5

UNITS, NUMBERS, QUANTITY, AND FUNCTIONS

5.1 Units

Use internationally recognized units of measure such as System International (SI). Units should be written numerically not in words, for example, 5 m instead of five meters unless if they are the first word of a sentence. Use abbreviated form of units, for example, 5 sec instead of 5 seconds or 5 m instead of 5 meters. The unit of measurement should be clearly separated from the corresponding numerical value by a standard single space, for example, 4 m instead of 4m, 5 sec instead of 5second, 5 kg rather than 5kg. The abbreviation for kilo is k not K and centimeter is cm not c.

Units that are named after a person should be written as follows:

5 Newton should be 5 N

5 Joule should be 5 J

The use of units should be consistent, for example 5 N/m³ or 5 Nm³, or 45 m/sec or 45 m per sec.

Do not place a full stop after a unit except when it is at the end of a sentence. There are no plural forms for abbreviations of units, for example, 5 cm instead of 5 cms.

5.2 Numbers

Numerical (quantitative) information plays a key role in much scientific writing. It is essential that candidates should carefully check every piece of reported data to guarantee the absence of errors including typographical mistakes. This requires devoting particularly close attention to tables and figures. All integers less than ten should be spelt out unless they are attached to units of measure, for example, 5 kg, 15 mL. Use the figures of the number if the integer is more than and equals to 10. If a sentence begins with a number or
symbol, it should be written in words or change the sentence structure or order. Use numerals for a series of figures, for example,

i. In a lecture room, there are 50 chairs, 55 tables, 3 white boards and 15 umbrellas.

ii. The numbers of frequency were selected in this study including 50, 100, 150, 200, 250, and 300 Hz.

The zero should be included in numbers written as decimals, for example, 0.4 m instead of .4 m. Decimal numbers should be clearly distinguished. Date should be written without a comma, for example, 31 August 2007. A range is most frequently signalled with the assistance of a dash, for example, the period of time should be written as 1993-2000, 2003-07.

A comma is used between every three digits of a number. For example, 213,000, 21,000,000, and 252,000,000. Exceptions: page number, binary digits, serial numbers, degree of temperature, acoustic frequency designations, and degree of freedom.

5.3 Quantity or Variable

Specificity can be conferred on a letter symbolising a quantity or variable by attaching one or more qualifying subscripts and/or superscripts to it. Sometimes, it can be crowned with a “hat” in the form of a straight line or other distinctive mark.

For example,

i. $C_p$ (both italicized) is used to represent the heat capacity ($C$) at constant pressure, $p$

ii. $g_n$ ($g$ italicized, n normal) represents for the acceleration due to earth’s gravitational force, $g$, while the “n” here signifies “normal”.

A clear explanation should be supplied when any symbol makes its first appearance in a document. In addition, it is strongly recommended that all symbols presented in the text especially those representing quantities, be meticulously defined in a separate “List of Symbols”. The list must identify applicable units of measurement and should be positioned near the beginning of the work.
For examples,

\[ C_l \text{ liquid phase specific heat, } J \text{ kg}^{-1} \text{ K}^{-1} \]

\[ D \text{ diameter, m etc.} \]

iii. An expression of a measurement as the product of a numerical value and a unit, candidates should adjust the unit to a suitable prefix. Thus resulting the numerical value fall between 0.1 and 1000. In other words, it is better to write 30 \( \mu \text{L} \) rather than the equivalent 0.030 mL.

### 5.4 Subscripts and Superscripts

The subscripts and superscripts should be set in type roughly 3/5 the size of the corresponding host symbol. In the other words, 7 or 8 pt font would be an appropriate choice to indicate associated symbol displayed in 12 pt type. Subscripts and superscripts belong immediately adjacent to the symbols they are intended to modify.

In the case of chemical formulas for charged particles (ions), one of the latter typographic solutions is actually deemed preferable, for example, \( \text{NH}_4^+ \), \( \text{SO}_4^- \). Multiple subscripts that apply simultaneously to a single host symbol would logically appear at the same level vertically. Potential confusion can be prevented by carefully spacing of the collaborating elements or through intervening commas or careful use of parentheses; for example, \( X_{n_{\text{max}}} \) is better replaced by \( X_{n(\text{max})} \). Nowadays, the favour practice for typesetting the chemical expression is to consign all formulas to the normal text baseline, even ones that are intended to function as indices, in other words, the arrangement, \( c(\text{H}_2\text{SO}_4) \) is preferred over \( C_{\text{H}_2\text{SO}_4} \).

Table 5.1 provides a summary of the most important expressions and formulae.
Table 5.1 Basic Rules Applicable To Expressions of Mathematical and Physical Kind

<table>
<thead>
<tr>
<th>Authorized stylistic treatment</th>
<th>Illustrations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Italic (sloped) type</strong></td>
<td></td>
</tr>
<tr>
<td>Mathematical variables</td>
<td>$a, b, c, x, z, A, B, \alpha, \beta, \gamma, \delta$</td>
</tr>
<tr>
<td>Symbols for physical quantities</td>
<td>$m, l, t, T$</td>
</tr>
<tr>
<td>Symbols for general functions</td>
<td>$f(x) = u(x)/v(x), z = \varphi(x, y)$</td>
</tr>
<tr>
<td>Symbols for natural constants</td>
<td>$R$ (ideal gas constant), $N_A$ (Avogadro’s number)</td>
</tr>
<tr>
<td><strong>Roman (Upright) type</strong></td>
<td></td>
</tr>
<tr>
<td>Numbers</td>
<td>1, 2, 3, 2005, π, e</td>
</tr>
<tr>
<td>Fences</td>
<td>( ), { }, [ ]</td>
</tr>
<tr>
<td>Operators</td>
<td>$d, D, \Delta, %, \partial, \text{ppm}, \text{ppb}, \text{ppt}, \text{df}(x)/dx,$</td>
</tr>
<tr>
<td></td>
<td>$\partial g(x,y) / \partial x$</td>
</tr>
<tr>
<td>Operational symbols</td>
<td>$+,-, : =, &lt;, &gt;, \pm, \cap, \approx, \text{AND, OR}$</td>
</tr>
<tr>
<td>Symbols for special functions</td>
<td>$\exp, \log, \ln, \sin, \cos, \tan, \text{Re}, \text{Im}, \cos x$,</td>
</tr>
<tr>
<td></td>
<td>$\text{Re}(z)=a+ib, \exp(-x^2)$</td>
</tr>
<tr>
<td>Unit symbols</td>
<td>$m, \text{kg}, s, A, K, \text{mo}, \text{cd}, W, V, \text{Pa}, \text{ha}, ^\circ \text{C}$</td>
</tr>
<tr>
<td>Unit prefixes</td>
<td>G, M, k, m, n, p, nm, GHz, mbar, μ</td>
</tr>
<tr>
<td>Summation product and integral signs</td>
<td>$\Sigma, \Pi, \int$</td>
</tr>
</tbody>
</table>

**Extra space**

| Within numbers                | 4,150, 17,324, 234.098 |
| Before and after operational symbols | 12 + 5 = 17, $f(x) = x^2 + 3x - 5$ |
| Between numerical values and units | 5 m, 30 °C, 180.21 K, 15 mmol/L |
| Between terms in products of units | 80 $\text{mg} \text{ mm}^{-1} \text{L}^{-1}$, 0.7 mg/(kg a) |
| With proportional symbols     | 15.7 %, 2.5 %, 25 ppm |

Symbols for vectors and matrices are to be displayed in **boldface italic** type.

For examples,

$$B = b_1e_1 + b_2e_2$$

$$B = \begin{pmatrix} 1 & 2 & 3 \\ 2 & 1 & 0 \\ 3 & 0 & 1 \end{pmatrix}$$

$F$ (force), $E$ (electric field strength)

An appropriate quantity symbol topped with a small arrow (e.g., $\vec{a}$, $\vec{F}$, $\vec{E}$) is no longer recommended. Another rule with respect to type states that the tensors should be represented by roman, **boldface** characters (no italic), for example, **A**, **B**, **C**.
5.5 **Miscellaneous Conventions**

i. The shorten form of person’s name should be written with a space after the initials, for example, M. M. Rahman not M.M.Rahman.

ii. Abbreviations have no full stops after each letter, for example, UMP, IPS, and ASME.

iii. Elliptical marks consists of three dots (…) either linear or vertical direction. When an ellipsis comes at the end of the sentence, it appears as four dots (…). One dot marks the end of the sentence.

iv. A single blank space should be inserted between the numerical value and the symbol used to indicate percentage as well as in conjunction with the related expressions ppm (parts per million), ppb (parts per billion), and ppt (parts per trillion), for example, 34 %, 0.2 %, 30 ppm, and 0.06 ppb.

v. The symbol combination “°C” is considered a single discrete entity with the meaning “degree Celsius”. It should be set one space removed from the associated numerical value, for example, 135 °C (not 135°C or 135° C). The rule is also applied to the symbols for angular minutes and angular seconds, for example 15.4ʹ, 20'35.2".

vi. Information related to error limits or tolerances should be conveyed using a notation like (150 ± 10) mm.
REFERENCES


APPENDIX A

SAMPLE OF FRONT PAGE (COVER PAGE)

FINITE ELEMENT BASED DURABILITY ASSESSMENT FOR A NEW FREE PISTON LINEAR ENGINE

ABDUL RAHMAN BIN ABDUL KARIM

NAME OF DEGREE

UNIVERSITI MALAYSIA PAHANG

Edge of the A4 paper
APPENDIX B
SAMPLE OF THE SPINE

Top of the cover page

(See 2.4.2. Abbreviation e.g., Ph.D., M.Sc.)
APPENDIX C

SAMPLE OF DECLARATION

UNIVERSITI MALAYSIA PAHANG

<table>
<thead>
<tr>
<th>DECLARATION OF THESIS AND COPYRIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author’s Full Name : __________________________</td>
</tr>
<tr>
<td>Date of Birth : __________________________</td>
</tr>
<tr>
<td>Title : ____________________________________</td>
</tr>
<tr>
<td>__________________________________________</td>
</tr>
<tr>
<td>__________________________________________</td>
</tr>
<tr>
<td>Academic Session : __________________________</td>
</tr>
<tr>
<td>I declare that this thesis is classified as:</td>
</tr>
<tr>
<td>□ CONFIDENTIAL (Contains confidential information under the Official Secret Act 1997)*</td>
</tr>
<tr>
<td>□ RESTRICTED (Contains restricted information as specified by the organization where research was done)*</td>
</tr>
<tr>
<td>✓ OPEN ACCESS I agree that my thesis to be published as online open access (Full Text)</td>
</tr>
<tr>
<td>I acknowledge that Universiti Malaysia Pahang reserve the right as follows:</td>
</tr>
<tr>
<td>1. The Thesis is the Property of Universiti Malaysia Pahang</td>
</tr>
<tr>
<td>2. The Library of Universiti Malaysia Pahang has the right to make copies for the purpose of research only.</td>
</tr>
<tr>
<td>3. The Library has the right to make copies of the thesis for academic exchange.</td>
</tr>
<tr>
<td>Certified by:</td>
</tr>
<tr>
<td>__________________________ (Student’s Signature) __________________________ (Supervisor’s Signature)</td>
</tr>
<tr>
<td>__________________________ New IC/Passport Number</td>
</tr>
<tr>
<td>__________________________ Date:</td>
</tr>
<tr>
<td>__________________________ Name of Supervisor</td>
</tr>
<tr>
<td>__________________________ Date:</td>
</tr>
</tbody>
</table>

NOTE : * If the thesis is CONFIDENTIAL or RESTRICTED, please attach with the letter page 2 from the organization with the period and reasons for confidentiality or restriction.
SAMPLE OF THESIS DECLARATION LETTER (OPTIONAL)

Librarian,
Perpustakaan Universiti Malaysia Pahang,
Universiti Malaysia Pahang,
Lebuhraya Tun Razak,
26300, Gambang, Kuantan.

Sir,

CLASSIFICATION OF THESIS AS RESTRICTED

Please be informed that the following thesis is classified as RESTRICTED for a period of three (3) years from the date of this letter. The reasons for this classification are as listed below.

Author’s Name : 
Thesis Title : 

Reasons
(i)

(ii)

(iii)

Thank You.

Sincerely yours,

_____________________________
(Supervisor’s Signature)

Date:

Stamp:

Notes : This letter should be written by the supervisor, addressed to Perpustakaan Universiti Malaysia Pahang and a copy attached to the thesis.
SAMPLE OF SUPERVISOR’S DECLARATION

I/We* hereby declare that I/We* have checked this thesis/project* and in my/our* opinion, this thesis/project* is adequate in terms of scope and quality for the award of the degree of *Doctor of Philosophy / Master of Engineering / Master of Science in

________________________________________________________________________

(Supervisor’s Signature)
Full Name : 
Position :  
Date : 

(co-supervisor’s Signature)
Full Name : 
Position :  
Date : 

* Delete if unnecessary
SAMPLE OF STUDENT’S DECLARATION

I hereby declare that the work in this thesis is based on my original work except for quotations and citation which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

________________________________________
(Student’s Signature)

Full Name : 
ID Number : 
Date :  

Uppercase, no bold face
APPENDIX D

SAMPLE OF TITLE PAGE

50 mm

TITLE

X

STUDENT'S NAME

X

Thesis submitted in fulfilment of the requirements
for the award of the degree of
Doctor of Philosophy/Master of Science/Master of Engineering

Y

Faculty of Electrical and Electronics Engineering
UNIVERSITI MALAYSIA PAHANG

Y

OCTOBER 2015

50 mm
APPENDIX E

SAMPLE OF STATEMENT OF AWARD FOR DEGREE

1. Doctor of Philosophy
   Thesis submitted in fulfilment of the requirements for the award of the degree of Doctor of Philosophy.

2. Master of Engineering (by Research)
   Thesis submitted in fulfilment of the requirements for the award of the degree of Master of Science/Master of Engineering.

3. Master of Engineering (by Coursework)
   Thesis submitted in partial fulfilment of the requirements for the award of the degree of Master of Science/Master of Engineering.

4. Bachelor Final Year Project Report
   Report submitted in partial fulfilment of the requirements for the award of the degree of Bachelor of .................................................................
APPENDIX F

SAMPLE OF DEDICATION

Dedicated to my parents
APPENDIX G

SAMPLE OF ACKNOWLEDGEMENTS

ACKNOWLEDGEMENTS

First and foremost, my utmost appreciation goes to my supervisor, Associate Professor Dr. Sarjit Kaur for her detailed and constructive comments in every stage of my work. Throughout the course of my PhD research, she never failed to provide me continuous encouragement and invaluable advice. Her continual assistance and great patience has been the key to the completion of this research.

This research would not have been possible without the support from the administrative and teaching staff of Universiti Malaysia Pahang (UMP). My gratitude also goes to all students, lecturers and industry personnel who participated in this study. I would like to thank all my friends and colleagues, especially Hamidah, Zuraina, Hafizoah, Jumani and Zarina for their support and effort in assisting me in data collection, data analysis and other critical stages in my PhD study.

My deepest gratitude goes to my husband who has always been understanding and supportive during my ups and downs. To my two lovely daughters, for having to put up with the divided attention. More importantly, I dedicate this work to my parents, especially my late father, Haji Mohd Radzuan bin Haji Mohd Halim and my loving mother, Hajjah Arba'yah bt Hassan for without their unconditional love, full support and encouragement, my PhD journey would have never begun and ended successfully. To all my siblings, thank you for believing in me. Finally, all thanks to Allah for listening to and answering my prayers, Alhamdulillah.
APPENDIX H

SAMPLE OF ABSTRAK

ABSTRAK

APPENDIX I

SAMPLE OF ABSTRACT

ABSTRACT

This research examines the impact of utilising multimedia learning tool (MLT) on engineering students’ ability to think creatively and make creative engineering products. This research links multimedia learning to creativity by looking at how to manage cognitive load on the cognitive system for effective information processing and knowledge construction. Theoretical perspectives include Cognitive Load Theory (Sweller et al., 1998), Cognitive Theories of Multimedia Learning (Mayer, 2009) and creativity theories (Runco & Chand, 1995; Wallas, 1926). The influences of moderating variables such as students’ diversity, environmental factors and emotional effects were also explored. This research used a mixed method approach with a pre-test post-test quasiexperimental design as the predominant data gathering method. The Torrance Tests for Creative Thinking (TTCT) and the Creative Product Semantic Scale (CPSS) were used. This study extends previous research by including in its outcomes, the use of established creative performance measurements. Other research instruments used included a student questionnaire, observation and semi-structured interviews. Based on a successful outcome in a pilot study, the main study tested the assumption that using MLT would assist engineering students to perform better in their understanding and creative performance. Results from the interviews and student questionnaire supported the assumption, as did the analysis of the other test scores. Differences in mean scores showed that students who used the MLT performed better creatively than students who did not. However, the main statistical analyses of creative thinking and product creativity did not reach significance. A key innovation in this study was that unlike previous studies in multimedia learning and cognitive load that have been conducted in controlled lab-based conditions, this study was conducted in actual classroom environments. As a result of examining these environments, this study has identified the effects of two new loads on the cognitive process: the environmental and emotional loads. Both loads appear to have increased the extraneous cognitive load and impeded the cognitive process for learning and creative performance. This study also looked at the influence of students’ diversity in terms of learning styles, level of confidence in their knowledge and self-perception of their creative abilities on the main relationship between the use of the MLT and its effects on students’ creativity. The findings indicate that the MLT is most advantageous for students with high preference for visual learning materials, lower confidence in their knowledge and high self-perception of their creative abilities. Based on the findings, a four-phase recursive model of the creative process has been proposed to explain the creative cognitive process. This model takes into account the architecture of human cognition, cognitive load and the moderating influences on creative outcomes.
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APPENDIX M

SAMPLE OF LIST OF SYMBOLS

LIST OF SYMBOLS

\[ a \text{ Radius of particles, cm} \]
\[ A \text{ Cross-sectional area, cm}^2 \]
\[ c \text{ Solute concentration, g/L} \]
\[ D_s \text{ Solute diffusion coefficient, cm}^2/\text{s} \]
\[ k \text{ Mass transfer coefficient, cm/s} \]
\[ R_c \text{ Filter cake resistance, 1/cm} \]
\[ Re \text{ Reynolds number} \]
\[ Sc \text{ Schmidt number} \]
\[ \alpha \text{ Specific cake resistance, cm/g} \]
\[ \Delta p \text{ Pressure drop, kPa} \]
\[ \mu \text{ Fluid viscosity, g/cm.s} \]
\[ \rho \text{ Fluid density, g/cm}^3 \]
\[ \omega \text{ Rotation rate of vacuum drum filter, rpm} \]
APPENDIX N

SAMPLE OF LIST OF ABBREVIATIONS

<table>
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<th>ABBREVIATION</th>
<th>FULL FORM</th>
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<tr>
<td>AA</td>
<td>Aluminium Alloy</td>
</tr>
<tr>
<td>Al</td>
<td>Aluminium</td>
</tr>
<tr>
<td>ASTM</td>
<td>American Society for Testing and Materials</td>
</tr>
<tr>
<td>CAD</td>
<td>Computer-Aided Drafting</td>
</tr>
<tr>
<td>CAE</td>
<td>Computer-Aided Engineering</td>
</tr>
<tr>
<td>DOF</td>
<td>Degree-of-Freedom</td>
</tr>
<tr>
<td>DTP</td>
<td>Discretized Turning Point</td>
</tr>
<tr>
<td>FE</td>
<td>Finite Element</td>
</tr>
<tr>
<td>FFT</td>
<td>Fast Fourier Transform</td>
</tr>
<tr>
<td>FRF</td>
<td>Frequency Response Function</td>
</tr>
<tr>
<td>IC</td>
<td>Internal Combustion</td>
</tr>
<tr>
<td>LG</td>
<td>Linear Generator</td>
</tr>
<tr>
<td>MBD</td>
<td>Multibody Dynamics</td>
</tr>
<tr>
<td>PDF</td>
<td>Probability Density Function</td>
</tr>
<tr>
<td>PSD</td>
<td>Power Spectral Density</td>
</tr>
<tr>
<td>SAE</td>
<td>Society of Automotive Engineers</td>
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</tbody>
</table>
APPENDIX O

SAMPLE OF THESIS OUTLINES AND CONTENT

Abstract
1. Conciseness
2. Includes research issues, methodology, findings, and contribution.

CHAPTER 1 INTRODUCTION
1. The background of the study correctly highlights the current concerns in the area.
2. Identification of the research problem.
3. Discussed the significance of the problem.
4. Formulation of research questions is clearly stated.
5. Formulation of research objectives is clearly stated.
6. It contributes something that is genuinely new, either in theory, empirical, or both.

CHAPTER 2 LITERATURE REVIEW
1. Significant review of the literature.
2. Up to date of the literature.
3. Coherent of the literature.
4. Connections of the major components (theories, concepts, factors, and variable) with current study.
5. Inclusion of the underlying theory.
6. The basis of a known theory.
7. Dependent variables are reflecting the phenomenon of the study.
8. Dependent and Independent variables are measurable.
9. A justification of including the moderating/mediating variables is/are clearly explained.
10. Moderating/mediating variables is/are measurable.
11. The hypothesis statements reflect the relationships shown in the research model/framework.
12. Clearly stated the theoretical basis for hypothesis formulation.

CHAPTER 3 METHODOLOGY
1. The unit of your analysis is appropriately defined (e.g. Individual or Product).
2. The measurements for dependent variables are referring to the same unit of analysis.
3. The population of the sample is clearly justified by providing the source.
4. The sampling technique is appropriately explained.
5. The justifications of scales are sufficiently given.
6. Appropriate statistics used, according to level of measurement, sample size, sampling method, and hypotheses/research questions.
7. The tools proposed to test each hypothesis are appropriate.

CHAPTER 4 RESULTS ANALYSIS AND FINDINGS
1. Analysis presentation of the descriptive data (e.g. samples profile)
2. Goodness of measures/diagnostic tests are correctly executed and discussed.
3. The results of analysis are properly interpreted.
4. All figures and tables are necessary and appropriate.
5. The numerical data is accurately computed.

CHAPTER 5 DISCUSSION AND CONCLUSION
1. Narrative recapitulation of the study findings.
2. Relevance of discussions of the findings within the context of study.
3. Relevant results with previous scholar’s work/theories.
4. Sufficient support of literature used in research.
5. Logics on the conclusions.
7. Relation of discussions to problem statement and research questions.
8. Explanations of contributions.
9. Sufficient discussion on the limitation of study and areas for future research.
10. Appropriateness of support on the study’s conclusion.
SAMPLE OF THESIS OUTLINES AND CONTENT (CASE STUDY)

Abstract
1. Conciseness
2. Includes research issues, methodology, findings, and contribution.

CHAPTER 1 INTRODUCTION
1. The background of the study correctly highlights the current concerns in the area.
2. Identification of the research problem.
3. Issues examined in the case (case issues) are clearly presented.
4. Discussed the significance of the problem or opportunity.
5. Formulation of research questions is clearly stated.
6. Formulation of research objectives is clearly stated.
7. It contributes something that is genuinely new, either in theory, empirical, or both.

CHAPTER 2 LITERATURE REVIEW
2.1 COMPANY BACKGROUND
1. Sufficient company background is given includes historical background, activities, vision, mission, organizational structure, departments, strategies, performance, products and so on.
2. Literally discuss on current issues facing the company.

2.2 INDUSTRY ANALYSIS
1. The historical background and industry evolution is sufficiently highlights.
2. The nature of the industry and the main players are briefly explained.
3. The trends of issues facing the industry, global, regional and local level.
4. Review of literature on the case issues and research problems.
5. Review of the key concepts and defining the terms.

2.3 EMPIRICAL RESEARCH
1. Significant review of the literature.
2. Up to date of the literature.
3. Coherent of the literature.
4. Inclusion of the underlying theory.
5. Probable factors that could have led to the problem.
6. Tools or models that can be used to assess the problem and finding solutions to the problem.

CHAPTER 3 METHODOLOGY
1. The unit of your analysis is appropriately defined (e.g. Individual or Product).
2. The case selection is appropriately explained.
3. The tools proposed for analysis are appropriate.
4. The justifications of analysis methods and data linkages are sufficiently given.

CHAPTER 4 RESULTS ANALYSIS AND FINDINGS
1. Presentation of data collection and analysis.
2. The results of analysis are properly interpreted.
3. All figures, diagrams and tables are necessary and appropriate.

CHAPTER 5 DISCUSSION AND CONCLUSION
1. Narrative recapitulation of the study findings.
2. Sufficient conclusions.
3. Practical recommendation for company future planning bases on findings and analysis.
4. Relevance of discussions of the findings within the context of study.
5. Relevant results with previous scholar’s work/theories.
6. Sufficient support of literature used in research.
7. Logics on the conclusions.
8. Sufficient conclusions.
9. Relation of discussions to problem statement and research questions.
10. Explanations of contributions.
11. Sufficient discussion on the limitation of study and areas for future research.
APPENDIX P

SAMPLE OF FRONT PAGE OF CHAPTER, FIGURE, AND EQUATION

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UPPERCASE, BOLD

CHAPTER 2

3 × SHIFT + ENTER (1.5 line spacing)

LITERATURE REVIEW

TAB: 12.7 mm

2.1 Introduction

42 pts (1.5 line spacing)

1 × ENTER (1.5 line spacing)

This chapter provides a review of past research efforts related to internal combustion engine, free piston engine, finite element analysis, durability assessment models and surface treatment on the fatigue life. A review of other relevant research studies is also provided. Substantial literature has been studied on stress history computation, fatigue life prediction, and durability analysis of components of two-stroke free piston engine. The review is organized chronologically to offer insight to how past research efforts have laid the groundwork for subsequent studies, including the present research effort.

2.2 Internal Combustion Engine

1 × ENTER (1.5 line spacing)

2.2.1 Historical Perspective

The IC engine was first realised in its modern form by Nikolaus Otto in 1867 (Heywood, 1988; Stone, 1999). The technology spread quickly, and by World War I, the internal combustion engine was ubiquitous in both the mobile and stationary applications.

With the advent of mass production, automobiles actuated by the chemical power plant entered the garages of middle class America. Around the world, fortunes were made
and lost by those who made automobiles, fuels, tires, and all the other things necessary for peoples’ new found mobility. In the manufacturing and power generation, these sources of mechanical energy were also common. Such uses include air compressors, power equipment, electrical generators, and, of course, all types of transport vehicles. The remarkable versatility of the IC engine has been due to its inherent simplicity, favorable power-to-weight ratio, and exceptional ruggedness (Heywood, 1988). Figure 2.1 presents an illustration of one of these crankshaft driven machines.

![Figure 2.1 An Illustration of a Conventional Crankshaft Driven IC Engine.](source: Heywood (2008))

2.2.2 Classification of Internal Combustion Engine

There are many ways in which internal combustion engines may be classified (Dawson, 1998; Heywood, 1988). However, if the limit of the scope to geometries involving reciprocating pistons, two broad distinctions are of special importance.

The force balance to the crank engine piston in the \( x \) direction is expressed as in Eq. (2.3).
### Table 2.1 Monotonic and Cyclic Properties of the MANTEN and RQC100 Materials

<table>
<thead>
<tr>
<th>Materials properties</th>
<th>MANTEN</th>
<th>RQC100</th>
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<tr>
<td><strong>Monotonic Properties</strong></td>
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<tr>
<td>Young’s modulus, E, GPa</td>
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<td>Ultimate tensile strength, $S_{tu}$, MPa</td>
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<td><strong>Cyclic and Fatigue Properties</strong></td>
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<td>Fatigue strength coefficient, $\sigma_f'$, MPa</td>
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<td>Fatigue strength exponent, $b$</td>
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<td>Fatigue ductility coefficient, $\epsilon_f'$</td>
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<td>Fatigue ductility exponent, $c$</td>
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<td>Cyclic strength coefficient, $K'$, MPa</td>
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<td>Cyclic strain hardening exponent, $n'$</td>
<td>0.19</td>
<td>0.10</td>
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The SAE keyhole was modelled using the MSC.PATRAN and analyzed utilizing the MSC.NASTRAN, the finite element analysis code.
## APPENDIX Q

### SAMPLE OF TABLE

Table 2.1 Monotonic and Cyclic Properties of the MANTEN and RQC100 Materials

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<td>Young’s modulus, E, GPa</td>
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<td>Ultimate tensile strength, ( S_u ), MPa</td>
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<td><strong>Cyclic and Fatigue Properties</strong></td>
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<td></td>
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<tr>
<td>Fatigue strength coefficient, ( \sigma_f' ), MPa</td>
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<td>1158</td>
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<td>Fatigue strength exponent, ( b )</td>
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<td>-0.075</td>
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<td>Fatigue ductility coefficient, ( \varepsilon_f' )</td>
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<td>Fatigue ductility exponent, ( c )</td>
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<td>-0.75</td>
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<tr>
<td>Fatigue strength, ( S_f @ 10^8 ) cycles, MPa</td>
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<td>10</td>
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<tr>
<td>Cyclic strength coefficient, ( K' ), MPa</td>
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<tr>
<td>Cyclic strain hardening exponent, ( \eta' )</td>
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<td>0.10</td>
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Source: Rahman (2007)
## Table 4.5 Continued

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<td>-0.216</td>
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<td>Transition life, NC1, cycles</td>
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<td>$2\times10^8$</td>
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<td>Slope, b2</td>
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<td>Standard error, SE</td>
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### Table 4.12 Predicted Fatigue Life Using the Biaxiality Correction Method

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Table 5.12 Continued

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<td>R-C</td>
<td>31.9</td>
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<tr>
<td>TRANSP</td>
<td>19.5( \times 10^2 )</td>
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Figure 6.8 SAE Keyhole Specimen in Millimetre
Source: Rahman (2007)
Figure 5.3  Time-loading Histories of Narrow and Wide Band Signals
Figure 6.8 Continued
# APPENDIX S

## EXAMPLES OF APA STYLE IN TEXT CITATION

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<th>Subsequent citation in text</th>
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<th>Parenthetical format subsequent citations in text</th>
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<td>One work by four authors</td>
<td>Dean, Rocky, Bell, and Ravi (2006)</td>
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Source: American Psychological Association (2010)
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