

GUIDELINES TO WRITING THESIS/DISSERTATION

**INSTITUTE OF GRADUATE STUDIES
UNIVERSITI PENDIDIKAN SULTAN IDRIS**

1. NAME

These guidelines are called Guidelines to Writing Thesis/Dissertation.

2. PURPOSE

The purpose of this guideline is to:

- a) assist postgraduate students to write a dissertation/thesis in accordance with the standard formatting.
- b) briefly describe the concept that should be in the writing thesis/dissertation.
- c) provide guidance to supervisors and the Institute of Graduate Studies (IGS), thus providing the same viewpoint regarding the writing of a thesis/dissertation.
- d) provide a standard template to be used by the students in the writing of a thesis/dissertation.
- e) a guide for writing the thesis but subjected to their respective fields of study.

3. DEFINITION

In this guideline, the following are the details of the definition unless the context describes the meaning otherwise:

- a) **Thesis:** Academic research reports submitted by students for the fulfilment of the Doctorate program.
- b) **Dissertation:** Academic research reports submitted by students to meet program requirements for Masters by Research and Masters by Research and coursework.
- c) **Project Paper:** Academic research reports submitted by students to meet program requirements for Masters by Coursework.
- d) **Candidate/Students:** A person who has registered for the Graduate Program at Sultan Idris Education University (UPSI).
- e) **Supervisor:** Academicians or industry experts proposed by the Faculty and approved by the Graduate Studies Committee to oversee the study by the students.
- f) **Early Thesis/Dissertation:** Academic research reports submitted by student for Viva Voce Examination.
- g) **Final Thesis/Dissertation:** The copy of thesis/dissertation completed after passing the Doctorate/master's by research/master's by research and course work viva.

4. ADDITIONAL INFORMATION

Submission of Dissertation / Thesis

Candidates are required to submit a complete thesis/dissertation after the checking and correcting in accordance with the guidelines established by IGS.

a) Degree Conferment Condition

Students are required to fulfil this condition to enable them to receive their respective degrees. University will not award a degree to a candidate that has failed do so.

b) Plagiarism

- i. Sultan Idris Education University provides the use of similarity index software.
- ii. For the purpose of sending the early thesis/dissertation for Viva Voce oral examination, candidates are required to send a copy of the plagiarism/similarity index result (29% and below) which had been approved by the supervisor to the Institute of Graduate Studies.
- iii. Failure to do so will result in cancellation of Viva Voce oral examination from being carried out.

c) University's Property

All the thesis/dissertation will be permanently entitled to Sultan Idris Education University in which the copyright of the original copy will be owned by the University, and not by the author of the thesis/dissertation. Any publication which involves the thesis/dissertation or any part of it requires permission from the University beforehand.

5. THESIS/ DISSERTATION CONTENT IN GENERAL FOR EVERY CHAPTER

Generally, a dissertation / thesis contains five (5) chapters/sections, which are:

- i. Chapter 1 Introduction
- ii. Chapter 2 Literature Review
- iii. Chapter 3 Methodology
- iv. Chapter 4 Findings
- v. Chapter 5 Discussion, Recommendations, Implications and Conclusions

***Number of chapters/sections subjected to the topic and field of study.**

5.1 CHAPTER 1 : Introduction

Preface / Introduction

This section is an introduction to the issues related to the study / research in general. Its descriptions should give an initial overview of the scope of the study which is to be carried out by the candidate.

Background Research

These sections describe in general about the study that will be carried out. Details and elaborations of this section become the trigger point of the research's ideas.

Problem Statement

This section describes the issues / problems to be studied in the research. Candidates need to explain why those studies should be carried out based on the arguments and evidence related.

Purpose of the Study (if necessary)

Describes in general of what is the purpose of conducting the study.

Objective of the Study

The objective of the study should be specific, measurable, accessible, realistic and suitable with the duration of the study. Objective writing needs to be in the form of verbs, related to the field and their respective research level.

Research Question

This section enlists the questions that need to be answered in the study. Research questions are usually created based on the objective of the study and must be related to the problem statement mentioned.

Research Hypothesis (if necessary)

This part of the study states early expectations about the possible results of the study. One of the important characteristics of hypotheses is the ability to show the correlation between the variables in the study that are specific, clear and measurable.

Conceptual Framework of Research and/or Theoretical Framework of Research (if necessary)

Explains the aspects related to theories and / or concepts that underlie study based on the resources that are reliable from scholars / experts / researchers in the field. If necessary, this framework could also be presented in the form of diagrams.

Operational Definition

The operational definition / term definition explains the key concepts based on the context of the study.

Study Limitations (if necessary)

This section describes the limitations of the study conducted.

Importance of Research

This section will clearly describe in details of the study's impact and explain the benefits of the study's findings and results to multiple organizations, communities, countries, related agencies and also the development of knowledge in that particular field of study.

Summary

This part formulates concepts, principles, and ideas included in the chapters.

5.2 CHAPTER 2 : LITERATURE REVIEW

The literature review represents the critical and analytical writing about academic writings that had been published by scholars and researchers on the topics studied. The purpose is to enlighten the readers on the theories, concepts, and arguments that had been used in formulating the research procedures. It also discusses the strengths and weaknesses of the researches conducted on the related topic and scope of this study. The literature review should be centred on the research questions formed. This part does not only list the research items obtained for the study or the compilation of previous studies alone. Instead, the candidate must demonstrate the synthesis of the results in the form of a summary of the researches that has been previously known and unknown, identifying controversies involving the field of study, and thus form the research questions that need further researching. The results of this literature review can be used to help form a rationale for your study, to identify the variables, and ultimately help in choosing appropriate research methodologies. It can also be linked to the findings of the study in the discussion section. Proposed writing on these sections consists of three (3) categories:

Introduction

- Identify common topics, issues, or areas of focus, then provide the appropriate context for the literature review.
- Shows the overall trend; or contradictions in the theories, methodologies, evidence, and conclusions; or gaps in research or the field; or a problem / new perspective that interest researchers.
- Justify the reasons for the need of literature review; explain the criteria used for the analysis, compare and arrange materials from the literature, and state why certain literature are excluded, if needed (scope).

Main (Body)

- Collecting materials for literature (research, reviews, theoretical articles, case studies and so on) based on categories / similar themes such as qualitative versus quantitative approach; author's summary; purpose or objectives; chronological order and etc.
- Summarizing research or articles in accordance with the relevance of references in the literature.
- Suggesting main ideas at the beginning paragraph and in other parts that are strategic to facilitate the readers in understanding the comparisons and analysis presented.

Summary

- Formulate major contribution of the related researches and the materials referred for the study to be conducted. Candidates should focus on research questions mentioned in the introduction.
- Evaluate the latest trend of the field of study that has been researching on. Candidate needs to propose on the development of the main methodology referred, show the gap that exists in the study, theories and findings that are inconsistent and field or issue related to the research that is about to be studied.
- Make a conclusion by showing a relationship between the main topics in literature with the field to be studied.
- If necessary, this structure can be presented in a diagram.

5.3 CHAPTER 3: METHODOLOGY

This part is different between one dissertation / thesis with other dissertation / thesis depending on the field of study being researched about and it may not be available in theoretical based dissertation / thesis. This section contains information and justification towards materials, theoretical approach, experimental design and method (including statistical analysis) used to achieve the research's objectives. Materials and methods used in research need to be explained thoroughly and accurately. Reference for methods and procedure applied must be stated. Shown below is an example of methodology section written on social science research. The example below can be modified to suit the research areas being studied, such as Information Systems, Engineering, Science, Sports, and Science and etc.

Introduction

Introduction in methodology chapter should discuss what was discussed in the chapter, briefly. For example, Parts One narrates on survey design while Part Two explains on the sample population and many others. It is also for the best if the methods used are also included according to the sequence of objectives of the study as stated in the first chapter.

Research Approach

In research approach, a dissertation/thesis should contain this following information:

- Research approach, for example, qualitative or quantitative research, Mixed-Method, Design and Developmental Research (DDR), Design-based Research (DBR) and Action Research.
- Approach / Types, which could either be an experiment, case studies, surveys, action research, the basic theory (grounded theory), ethnography, text analysis and etc.
- Data collection method in which it could be one single method, mix-method or even multiple methods.
- Data collection could be current or long-term based.

Population and sample/participant/subject/case

- Whoever that becomes / chosen as sample population that wants to be generalized by the study.
-
- Choosing samples from a population.
- How to choose a sample - random or selective, selection through field research.
- How participants or the case been chosen and why use those participants or case in this study.
- Why that method was used.
- How many subjects / participants / cases involved in the study.

Instruments

- Method of development/adoption and modification instruments.
- The process of validity and reliability of the instrument passed through:
 1. Validity of page and content
 2. Reliability
 3. Process of translation
- The instrument is a measurement tool to get / collect data.
- Data is information needed by the researcher to answer the research questions.
- Instrumentation is a combination between the instruments and procedures used in gathering data.
- An instrument that was created by self must go through a certain consideration in terms of its validity, reliability, objectivity (refer to subjective assessment), and usability.
- An instrument that is adapted or that uses existing instruments need to go through:
 1. Acculturation process, for example, an instrument that was taken from overseas, must be adjusted to local socio-culture.
 2. Translation process needs to go through face validity (confirmation by linguist and content expert) and back-to-back translation.
- Procedure for collecting data. How data are collected, for example, questionnaire distribution, in-field data collection, interview process, and observations.

Pioneer Study (if applicable)

- Pioneer study's purpose – why or reasons to choose that particular sample; validity and reliability.
- When, where and who was involved in the implementation of the pioneer study.
- The results of the pioneer study - the validity, reliability and other related information (if any).
- Items that were to be dropped, added or to be modified (if any).
- Was the normality test analysis was conducted and what were the results.

Data Collection Procedures

- Explanation of procedures and steps of research data collection.

Methods / Techniques of Analysing Data

- Explanation of procedures and steps of analysing data according to the research objective / answering the question of study / testing the hypothesis of the study.
- Does Exploratory Data Analysis (EDA) (for example normality) being implemented and what is the result.
- The appropriate statistical software (if any). Summary - Summarize what was written / discussed in this chapter.

5.4 CHAPTER 4 : FINDINGS

Introduction

The introduction in finding chapter should briefly discuss what is in the chapter.

Main (Body)

This chapter presents and interprets the research data. The overall findings of the study and analysis can be presented in tables, figures, and statements to enable important discoveries to be highlighted. Each table should consist the introduction of the table, table and description of the table. The findings can also be written with more than one chapter. This section should be arranged according to the hierarchy of research questions to show that all questions are answered.

Summary

Summarize what was written / discussed in this chapter.

5.5 CHAPTER 5 : DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

This chapter should briefly summarize the research findings. Next, this chapter also discusses the study's findings by relating theories and past research discussed in the literature review. It is best if the study findings and discussion are written according to the sequence of objectives or research questions. These findings need to be discussed critically to symbolize how scholarly that certain study carried out. The findings are concluded insynch with research questions. The study also can suggest a new innovation or new ideas based on the findings. Significance and implications of the research conducted on the field of study must be stated. Suggestions for future research should also be included in this chapter.

PLAGIARISM

6. PLAGIARISM

Plagiarism is the use of an idea, work or data taken from other people which are placed in the main text of the dissertation / thesis without giving credit to the original author and use that information as if it belonged to the candidate himself. Those works include:

- i. Words or ideas from printed materials such as journal articles, magazine articles, books, newspapers, websites, computer programs, and others.
- ii. Diagrams, tables, diagrams, illustrations, charts, maps, photographs or other visual material; and
- iii. information from interviews and etc.

Candidate can be considered plagiarising if:

- i. Directly copy a sentence or paragraph from a reference obtained and write as if the result is the result of the students themselves; and
- ii. Using the original text from a source without using quotation marks (") or indent, although the source is acknowledged.
- iii. Paraphrasing without recognition / acknowledgement.

Plagiarism is a very serious crime in the world of academia and is not accepted by academic scholars. Therefore, if the dissertation / thesis candidate is found to have plagiarism, dissertation/ thesis will be considered as FAILED and the candidate will be terminated from the study program. Candidates are advised to always refer to the original author when using ideas or words from the work of the authors or others to avoid plagiarism.

A method for avoiding plagiarism is to make sure that the credit should be given when using the work of other authors. Candidates need to do this even if the original source had been paraphrased or summarized. When quoting a statement that was tele-casted even orally, it must be identical to the original and must be attributed to the original author.

THESIS/DISSERTATION FORMAT

1. General Format

1.1 Font

- i. Times New Roman *size 12*; **or**
- ii. Arial *size 11*

Note:

- The size selected must be applied uniformly in the entire dissertation / thesis.
- Footnotes and text in the table could use a smaller font size but shall not be less than a size 8.
- Italic writings are not allowed except for scientific names and terminology in different languages.
- Use bold writings for the chapter headings and subheadings without lines.
- The chapter title should be capitalized and bolded.
- For sub-headings, only the first letter of the first word in the sub-chapter should be capitalized.

1.2 Page

- i. Dissertation / thesis should be printed **on side** of the page only, on each sheet of paper.
- ii. All the pages in the page dissertation / thesis should be numbered consecutively, including pages that contain tables, figures, and appendices.
- iii. Page numbers should be placed at the right side on the upper ledge, namely 27.1 cm @ 0.5 inches from the top and 2.54 m @ 1 inch from the right side, using the Times New Roman font size 12 or Arial font size 11.

1.3 Numbering

- i. The page number should stand alone without any use of parentheses '()', hyphen '-', a dash '-' or any decorative images.
- ii. Early pages before Chapter 1 must be numbered in small Roman numbers (such as ii, iii and iv).
- iii. The title page should not be numbered even though it is recognized as the pages numbered i.
- iv. Every page which contains chapter heading also does not need to be numbered although the page number considered into account. For example, page 1 is the first page for Chapter 1: Introduction that does not need to have its page number.
- v. Every appendix that needs to be attached has to be labelled with a letter, for example, Appendix A, or Appendix B and numbered according to the appendix letter. For example, Appendix A might include 10 attachments that are separate. So, it needs to be given a number page like A1, A2, A3 until A10.
- vi. List of references page should be numbered and the numbering is continued from the last page of candidate dissertation / thesis. For example, the last page number of candidate dissertation / thesis is 224, so the page number for the first reference list page is 225.

1.4 Paper

- i. Size: A4
- ii. Weight: 80g

1.5 Page Layout

- i. Text page in dissertation / thesis should be presented in portrait format.
- ii. Landscape shaped page layout can be used to presenting figures and schedules.

1.6 The title of the thesis / dissertation should be:

- a. *short and able to convey the meaning/purpose of the research;*
- b. **cannot exceed 15 words** (the number of words does not include conjunctions such as "and", "this", "in", "as well as" and so on;
- c. *DO NOT use *punctuation marks, word abbreviations and parentheses;*
***Examples of punctuation marks**
 - **Colon (:)**
 - **Apostrophes or quotation marks (")**
- d. *name of places, formulas or scientific names and special terms count as one (1) word.*
- e. *Numbers less than 10 must be spelled out.*

1.5 Dissertation / Thesis Length

Dissertation / thesis length depends on the program of study. However, the following guideline may be followed:

- Master's Degree program by Coursework: Between 10,000 to 20,000 words (subject to the declaration of JPS of Faculty, supervisor and field expertise).
- Master's Degree program by Research and Coursework: Between 20,000 to 40,000 words (subject to the declaration of JPS of Faculty, supervisor and field expertise).
- Master's Degree program by Research: Between 35,000 to 60,000 words (subject to the declaration of JPS of Faculty, supervisor and field expertise).
- Doctor of Education: Not less than 50,000 words and not exceed 60,000 words.
Doctor of Philosophy: Between 80,000 to 100,000 words (subject to the declaration of JPS of Faculty, supervisor and field expertise).

***The number of words required for a specific program may refer to the guidelines set by the Faculty.**

2. Binding Format

2.1 Copies for Evaluation (EARLY THESIS/DISSERTATION)

i. Master

- Three (3) copies of dissertation/thesis for Master students (binding with soft-cover).
- must be handed to at the Faculty with the completed submission form of dissertations / theses.
- After evaluation, the dissertation / thesis is returned back to the candidate.
- Candidates are required to make all the adjustments based on examiners and Viva Committee's reports and receive certification from the supervisor before binding the dissertation / thesis with a hardcover.

ii. Doctorate

- Four (4) copies of dissertation/thesis for Master students (binding with soft-cover).
- must be handed to at the Faculty with the completed submission form of dissertations / theses.
- After evaluation, the dissertation / thesis is returned back to the candidate.
- Candidates are required to make all the adjustments based on examiners and Viva Committee's reports and receive certification from the supervisor before binding the dissertation / thesis with a hardcover.

2.2 Final Thesis/Dissertation Copies for University (HARDBOUND THESIS / DISSERTATION)

- Before preparing a number of thesis/dissertations of hardbound copy as the final dissertation/ thesis copy, the student should ensure that all the University need had been filled and signature from certain parties had been collected. All pages must be in the correct and proper arrangement and proper.
- Refer to the Submission of Final Dissertation/Thesis Form at the Institute of Graduate Studies website.

2.2.1 Spine Thesis/Dissertation

- The statement in the spine of the dissertation/thesis must be printed using the capital letters that are fully gold coloured and requires hot stamping
- Arial or Times New Roman font, size 18 and should contain the following:
 - i. Student's name;
 - ii. Name of Study program;

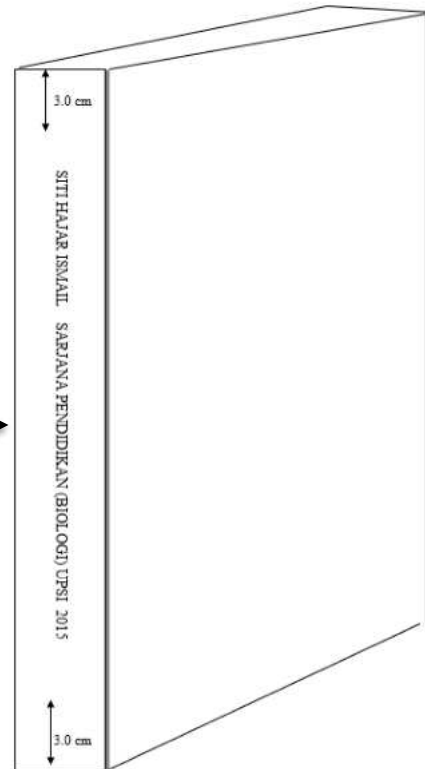
| Bil. | Level of Study | Info |
|------|-----------------------------------|---|
| 1. | Doctor of Philosophy | Until Intake 132: DOCTOR OF PHILOSOPHY (PROGRAMME NAME) Intake 141 and above: DOCTOR OF PHILOSOPHY |
| 2. | Doctor of Education | DOCTOR OF EDUCATION (EDUCATIONAL LEADERSHIP AND POLICY) |
| 3. | Doctor of Psychology | DOCTOR OF PSYCHOLOGY (CLINICAL PSYCHOLOGY) Or DOCTOR OF PSYCHOLOGY (CLINICAL NEUROPSYCHOLOGY) |
| 4. | Master of Research | Until Intake 132: MASTER OF EDUCATION / ARTS / SCIENCE / ECONOMICS / MANAGEMENT / ACCOUNTING / FINANCE / MUSIC / DESIGN / CREATIVE MULTIMEDIA DESIGN (PROGRAMME NAME) Intake 141 and above: MASTER OF EDUCATION / ARTS / SCIENCE / ECONOMICS / MANAGEMENT / ACCOUNTING / FINANCE / MUSIC / DESIGN / CREATIVE MULTIMEDIA DESIGN |
| 5. | Master of Research and Coursework | MASTER OF EDUCATION / ARTS / SCIENCE / ECONOMICS / MANAGEMENT / ACCOUNTING / FINANCE / MUSIC / DESIGN / CREATIVE MULTIMEDIA DESIGN (PROGRAMME NAME) |
| 6. | Master of Coursework | MASTER OF EDUCATION / ARTS / SCIENCE / ECONOMICS / MANAGEMENT / ACCOUNTING / FINANCE / MUSIC / DESIGN / CREATIVE MULTIMEDIA DESIGN (PROGRAMME NAME) |

iii. Initials of the University; and

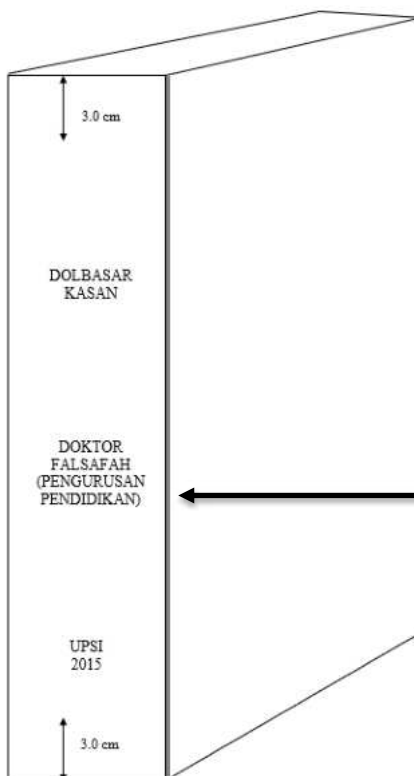
iv. Submission year of the dissertation / thesis.

- There is a little difference in the description of the layout spine depending on dissertation /thesis thickness. Please refer the following information:

Spine (Thesis/Dissertation)
(for thesis/dissertation that is less than 25 mm thick)



Spine (Thesis/Dissertation)
(for thesis/dissertation that is thicker than 25 mm)

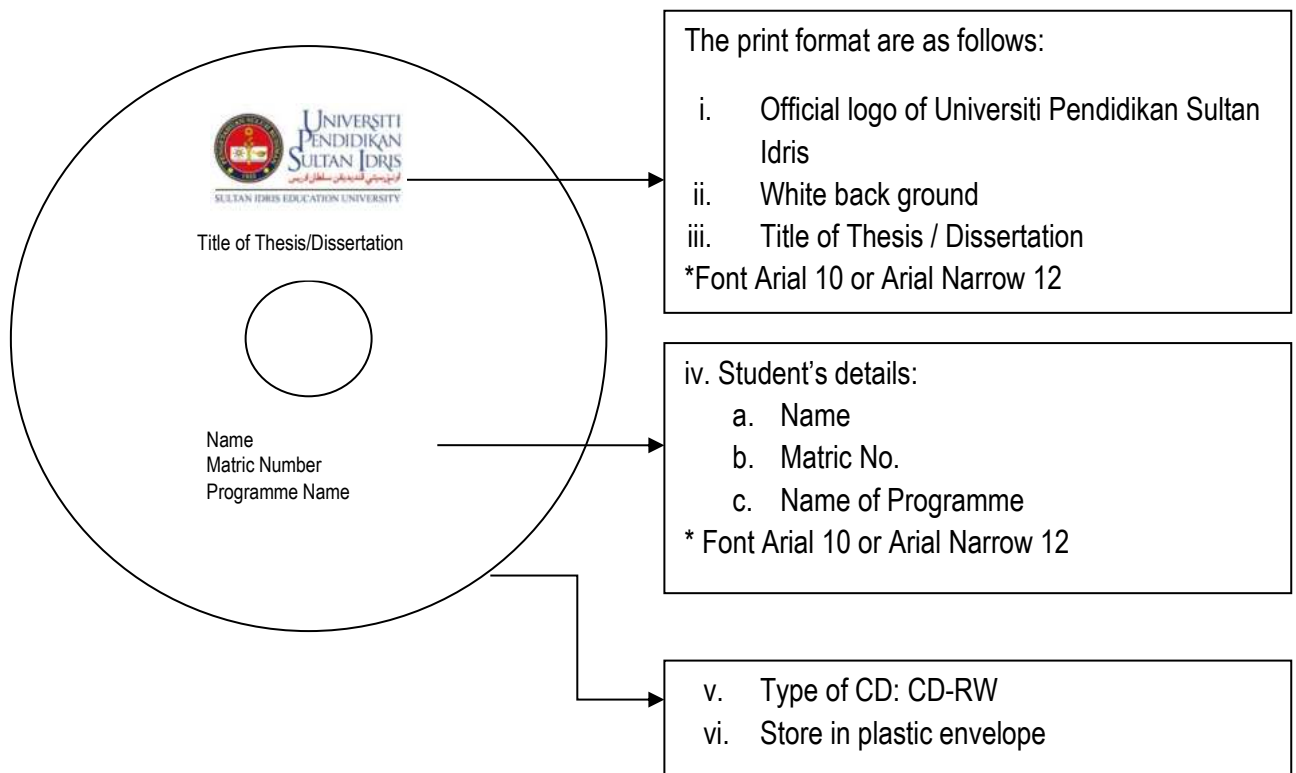


2.2.2 Trimming

To ensure uniformity in size for copies of the thesis/dissertation at the University, trimming of dissertation / thesis must not involve more than 2.5mm per side of A4 paper while binding is performed.

2.2.3 Softcopy

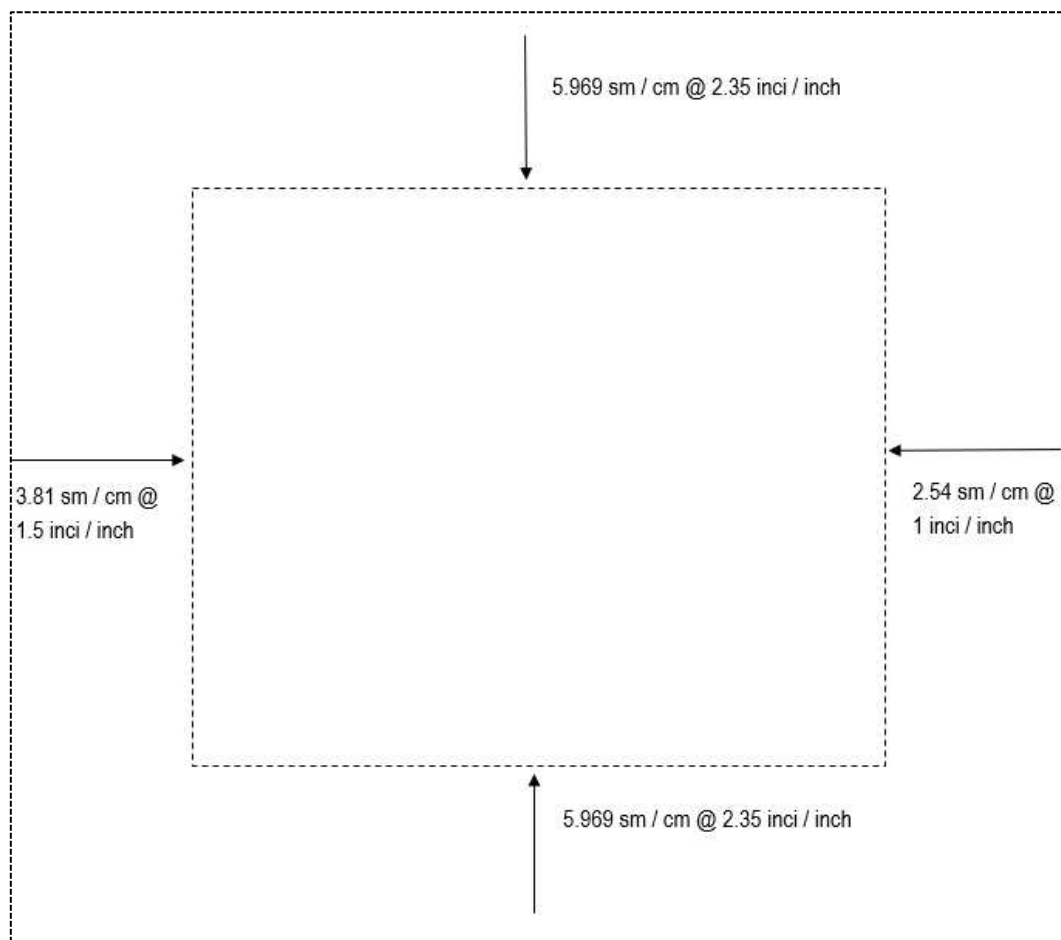
Students must also provide softcopy (CD) in PDF format to be sent along with the copies of the dissertation / thesis. The softcopy should be labelled with the following information:



Margin Format for Front Page and Title Page

3. *Margin – page layout*

- a) *Top frame* : 5.969 cm @ 2.35 inch
- b) *Right frame* : 2.54 cm @ 1 inch
- c) *Left frame* : 3.81 cm @ 1.5 inch
- d) *Bottom Frame* : 5.969 cm @ 2.35 inch



Note:

- Certain frame specifications are intended to facilitate the process of bookbinding and editing of dissertation / thesis later.
- All information in the dissertation / thesis, including the title of the text, footnotes, diagrams and pages, must be within the scope of the text that has been set.

4. Front Page

4.1 Information

- a. Title (The order in inverted pyramid format)
- b. Student Name
- c. University Name
- d. Year of Submission

Example:

| | |
|--|--|
| <p>HUBUNGAN KECEKAPAN KOMPUTER KENDIRI MENGUNAKAN MODUL <i>SPREADSHEET</i> BELANJAWAN TERHADAP MINAT DAN PENCAPAIAN AKADEMIK PELAJAR PERAKAUNAN KOLEJ MATRIKULASI</p> <p>NAMA PELAJAR</p> <p>UNIVERSITI PENDIDIKAN SULTAN IDRIS 2023</p> | <p>AN INTEGRATED DEVELOPMENT ENVIRONMENT ON PROBLEM-SOLVING FOR C PROGRAMMING FUNDAMENTALS</p> <p>STUDENT NAME</p> <p>SULTAN IDRIS EDUCATION UNIVERSITY 2022</p> |
|--|--|

4.2 Font

- a. Times New Roman *size 18*; **or**
- b. *Arial size 18*; **and**
- c. Colour print : **GOLD** (hot stamping) – Final Thesis/Dissertation only
- d. Uppercase

4.3 Page Numbers: **Tiada / null**

4.4 Hard Cover Colour

- a. Doctorate: Black
- b. Master: Maroon

5. Title Page

5.1 Information

- a. Title
- b. Student Name
- c. Info:

| Bil. | Level of Study | Info |
|------|-----------------------------------|---|
| 1. | Doctor of Philosophy | THESIS PRESENTED TO QUALIFY FOR A DOCTOR OF PHILOSOPHY |
| 2. | Doctor of Education | THESIS PRESENTED TO QUALIFY FOR A DOCTOR OF EDUCATION |
| 3. | Doctor of Psychology | THESIS PRESENTED TO QUALIFY FOR A DOCTOR OF PSYCHOLOGY |
| 4. | Master of Research | DISSERTATION PRESENTED TO QUALIFY FOR A MASTER'S IN – refer program name (RESEARCH MODE) |
| 5. | Master of Research and Coursework | DISSERTATION PRESENTED TO QUALIFY FOR A MASTER'S IN – refer program name (RESEARCH AND COURSEWORK MODE) |
| 6. | Master of Coursework | DISSERTATION PRESENTED TO QUALIFY FOR A MASTER'S IN – refer program name (COURSEWORK MODE) |

- d. Faculty
- e. Year of Submission

Example:

HUBUNGAN KECERAPAN KOMPUTER KENDIRI MENGGUNAKAN MODUL SPREADSHEET BELANJAWAN TERHADAP MINAT DAN PENCAPAIAN AKADEMIK PELAJAR PERAKALINAN KOLEJ MATRIKULASI

NAMA PELAJAR

DISERTASI DIKEMUKAKAN BAGI MEMENUHI SYARAT UNTUK MEMPEROLEH IJAZAH SARJANA PENDIDIKAN (MOD PENYELIDIKAN)

FAKULTI PENGURUSAN DAN EKONOMI
UNIVERSITI PENDIDIKAN SULTAN IDRIS
2023

THE EFFECT OF RISK MANAGEMENT AWARENESS ON FINANCIAL PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN OMAN

STUDENT NAME

THESIS PRESENTED TO QUALIFY FOR A DOCTOR OF PHILOSOPHY

FACULTY OF MANAGEMENT AND ECONOMIC
SULTAN IDRIS EDUCATION UNIVERSITY
2023

5.2 Font

- i. Colour print : **BLACK**
- ii. Uppercase

5.3 Page Numbers: null

5.4 Paper

- i. Size: A4
- ii. Weight: 80g
- iii. Colour print : **BLACK**

6. Declaration Page

6.1 Page Numbers: ii (top right)

6.2 Download at IGS Website

- i. Link: ips.upsi.edu.my
- ii. Location: E-FORM → SUPERVISION → Declaration of Original Work

UPSI/IPS-SBDO 32
Print: 00 mva: 1/1

ii


INSTITUT PENGAJIAN SISWAZAH
PERAKUAN KEASLIAN PENULISAN

Perakuan ini telah dibuat pada(hari bulan)..... (bulan) 20.....

i. Perakuan petajar :

Saya, _____ (SILA NYATAKAN NAMA PELAJAR, NO. MATRIK DAN FAKULTI) dengan ini mengaku bahawa disertasi/tesis yang bertajuk _____

adalah hasil kerja saya sendiri. Saya tidak memplagiat dan apa-apa penggunaan mana-mana hasil kerja yang mengandungi hak cipta telah dilakukan secara urusan yang wajar dan bagi maksud yang dibenarkan dan apa-apa petikan, ekstrak, rujukan atau pengeluaran semula daripada atau kepada mana-mana hasil kerja yang mengandungi hak cipta telah dinyatakan dengan sejasanya dan secukupnya

Tandatangan pelajar

ii. Perakuan Penyelia:

Saya, _____ (NAMA PENYELIA) dengan ini mengesahkan bahawa hasil kerja pelajar yang bertajuk _____


(TARJUK) dihasilkan oleh pelajar seperti nama di atas, dan telah diserahkan kepada Institut Pengajian Siswazah bagi memenuhi sebahagian/sepenuhnya syarat untuk memperoleh Ijazah _____ (SILA NYATAKAN NAMA IJAZAH).

Tarikh

Tandatangan Penyelia

UPSI/IPS-SBDO 32
Print: 00 mva: 1/1

ii


INSTITUTE OF GRADUATE STUDIES
DECLARATION OF ORIGINAL WORK

This declaration is made on the day of 20.....

i. Student's Declaration:

I, _____ (PLEASE INDICATE STUDENT'S NAME, MATRIC NO. AND FACULTY) hereby declare that the work entitled _____ is my original work. I have not copied from any other students' work or from any other sources except where due reference or acknowledgement is made explicitly in the text, nor has any part been written for me by another person.

Signature of the student

ii. Supervisor's Declaration:

I, _____ (SUPERVISOR'S NAME) hereby certifies that the work entitled _____

_____ (TITLE) was prepared by the above named student, and was submitted to the Institute of Graduate Studies as a * partial/full fulfillment for the conferment of _____ (PLEASE INDICATE THE DEGREE), and the aforementioned work, to the best of my knowledge, is the said student's work.

Date

Signature of the Supervisor


7. Declaration of Thesis/Dissertation/ Project Paper Form

7.1 Page Numbers: iii (top right)

7.2 Download at IGS Website

- i. Link: ips.upsi.edu.my
- ii. Location: E-FORM → SUPERVISION → Declaration Thesis/Dissertation/Paper Project Form

UPSI/IPS-3/BQ
Rev. 01 msk.1
iii


UNIVERSITI PENDIDIKAN SULTAN IDRIS
SULTAN IDRIS EDUCATION UNIVERSITY
INSTITUT PENGAJIAN SISWAZAH /
INSTITUTE OF GRADUATE STUDIES

BORANG PENGESAHAN PENYERAHAN TESIS/DISERTASI/LAPORAN KERTAS PROJEK
DECLARATION OF THESIS/DISSERTATION/PROJECT PAPER FORM

Tajuk / Title: _____

No. Matrik /Matric's No.: _____

Saya / I : _____
(Nama pelajar / Student's Name)

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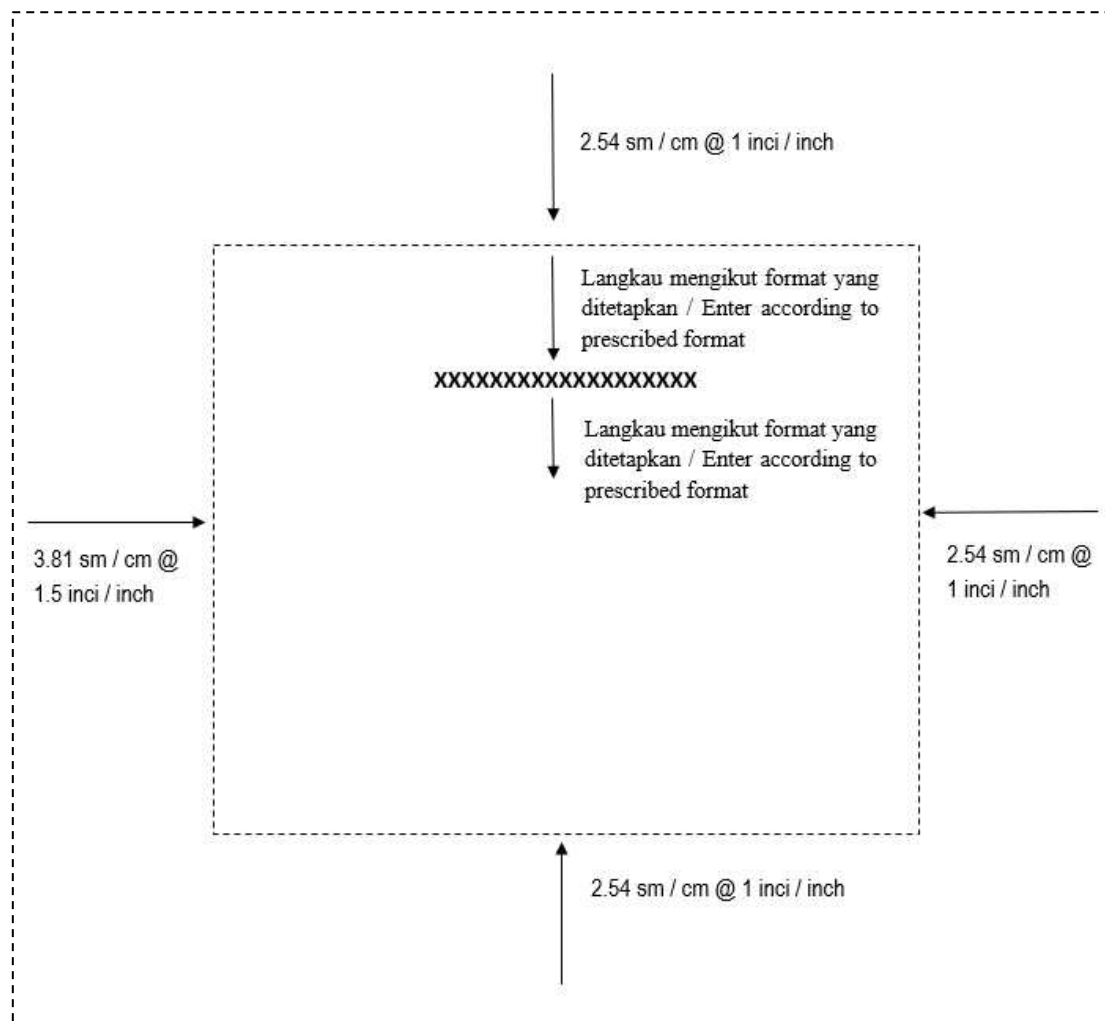
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Margin Format for Appreciation until References – page layout

8. Margin – page layout

- a) Top frame : 2.54 cm @ 1 inch
- b) Right Frame : 2.54 cm @ 1 inch
- c) Left Frame : 3.81 cm @ 1.5 inch
- d) Bottom Frame : 2.54 cm @ 1 inch



Nota:

- Certain frame specifications are intended to facilitate the process of bookbinding and editing of dissertation / thesis later.
- All information in the dissertation / thesis, including the title of the text, footnotes, diagrams and pages, must be within the scope of the text that has been set.

9. Appreciation

9.1 Page Numbers: iv (**top right**)


9.2 Acknowledge the individuals or organizations that have provided assistance directly or indirectly in the preparation of the thesis/dissertation.

9.3 This page is limited to one (1) page only.

9.4 An appreciation is written by using **single spacing**.

9.5 Sample:

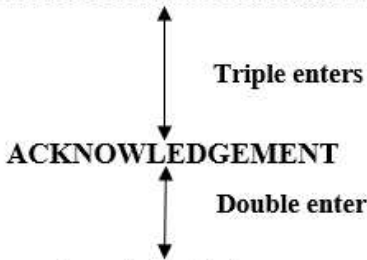
iv



PENGHARGAAN

Alhamdulillah, dengan izinNya disertasi ini berjaya disiapkan. Dalam usaha mengumpul bahan-bahan kajian, membangunkan perisian dan dokumentasi, penyelidikan telah mendapat bantuan secara langsung dan tidak daripada individu-individu berikut; Profesor Dr. Mohamad Ibrahim-Penyelia disertasi yang banyak memberikan panduan dan nasihat, guru-guru dan pelajar Sekolah Kebangsaan Tanjong Malim dan Sekolah Kebangsaan Datu' Kamarudin, Behrang Stesen yang terlibat di dalam kajian ini, para pensyarah Fakulti Seni, Komputeran dan Industri Kreatif yang telah memberikan ilmu dan tunjuk ajar, rakan-rakan sepengajian yang banyak memberi bantuan dan semangat dan tidak lupa juga kepada Ayah dan Bonda yang sentiasa memberikan sokongan dan kasih sayang yang tidak terhingga kepada diri ini.

iv



ACKNOWLEDGEMENT

Firstly, my deepest thank to my supervisor, Associate Professor Dr. Mohammad Ibrahim, my co-supervisor Associate Professor Ts. Dr Abu Bakar bin Ibrahim, and all lecturersin UPSI for their continuous effort, guidance, and motivation for me in accomplishing this study. I would like to express my gratitude to the Education Sponsorship Division, the Ministry of Education (MOE), and The Government of Malaysia for the financial support through scholarships and assistance toward this study. I would also like to thank numerous people involved in this study; the expert lecturers in Programming Fundamentals teaching and learning, and software development. My appreciation is also to UPSI Post Graduate Institute, and my friends in UPSI Postgraduate Association for their motivation, criticism, and various support. Last but not least, I would like to thank my family, especially my husband, parents, children, colleagues, and friends for their unconditional support and contribution to this study.

10. Abstract

10.1 Page Numbers:

10.1.1 Malays Abstract: v (top right)

10.1.2 English Abstract: vi (top right)

10.2 Abstracts should contain the following items:

10.2.1 Purpose / Objective of the Study

10.2.2 Methodology

10.2.3 Findings

10.2.4 Conclusion

10.2.5 Implication / Contribution of Study

10.3 *Uses one or two sentences for each of the matters specified above.*

10.4 *The abstract should be no longer than 300 words, written in one paragraph and written in both Malay and English.*

10.5 *For the thesis/dissertation in Malay, the title, and abstract translation must be translated into English and vice versa.*

10.6 It must be written in single spacing.

10.7 Notes:

10.7.1 *For quantitative studies, findings that have specific values (such as validity coefficient values, reliability values, frequency values, or any value obtained) need to be stated according to the study.*

10.7.2 *Abstract must not contain references. Example: Ahmad et al. (2023).*

10.7.3 *Abstract must not contain footnotes and keywords.*

10.7.4 *Sample of abstracts can be reviewed at the Institute of Graduate Studies website.*

Sample of Malays and English Abstract

v

Langkau 3 kali

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ABSTRAK

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Langkau 2 kali

Kajian ini bertujuan membina dan menuai kesan modul PBM BIO-SCORE berdasarkan pendekatan pengajaran berasaskan masalah (PBM). Pembinaan modul adalah berdasarkan adaptasi model Sidek & Jamaludin dan telah melalui proses pengesahan menggunakan pekali persetujuan Cohen's Kappa. Kajian juga menilai kesan modul terhadap pencapaian, pemikiran kritis dan hubungan pencapaian dengan tahap pemikiran kritis pelajar. Pendekatan kuantitatif dengan reka bentuk kuasi eksperimen telah digunakan dalam kajian ini. Pemilihan subjek kajian dijalankan secara persampelan bertujuan melibatkan 60 orang pelajar tingkatan empat aliran sains yang mengambil mata pelajaran Biologi di sebuah sekolah di Daerah Kuala Selangor. Subjek kajian terdiri daripada 30 orang pelajar kumpulan rawatan dan 30 orang pelajar kumpulan kawalan. Tiga jenis instrumen kajian digunakan iaitu modul PBM BIO-SCORE, ujian pencapaian bertajuk "Ekosistem Terancam" dan ujian pemikiran kritis Watson Glaser. Data dianalisis dengan menggunakan analisis deskriptif dan inferensi. Analisis deskriptif menjelaskan tahap pemikiran kritis pelajar, manakala statistik inferensi pula melibatkan ujian-t dan ujian korelasi Pearson yang menerangkan perbezaan serta hubungan antara pemboleh ubah kajian. Hasil kajian menunjukkan bahawa terdapat peningkatan pencapaian pada kedua-dua kumpulan rawatan dan kawalan, dengan kumpulan rawatan memperoleh peningkatan pencapaian yang lebih tinggi secara signifikan berbanding kumpulan kawalan. Dapatan kajian juga menunjukkan terdapat peningkatan tahap pemikiran kritis pada kedua-dua kumpulan rawatan dan kawalan dengan kumpulan rawatan memperoleh peningkatan pencapaian yang lebih tinggi daripada kumpulan kawalan secara signifikan. Analisis korelasi Pearson pula menunjukkan tiada hubungan yang signifikan antara tahap pemikiran kritis dengan pencapaian pelajar. Kesimpulan daripada kajian menunjukkan penggunaan modul pembelajaran berasaskan masalah (PBM BIO-SCORE) telah meningkatkan pencapaian dan pemikiran kritis pelajar. Implikasi kajian menunjukkan penggunaan modul pembelajaran berasaskan masalah (PBM) dapat meningkatkan keberkesanan pengajaran dan pembelajaran Biologi.

vi

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**DEVELOPMENT OF PROBLEM BASED LEARNING MODULE AND IT
EFFECT TOWARDS STUDENTS' ACHIEVEMENT AND CRITICAL
THINKING SKILLS**

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ABSTRACT

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This study was aimed to develop and evaluate the impact of PBM BIO-SCORE module which employed problem-based learning approach (PBL). Development of the module was based on adaptation of Sidek & Jamaludin's model and underwent validation process using Cohen's Kappa agreement coefficient. The study also analyses the effect of the module towards students' achievement and critical thinking skills. The relationship between achievement and students' critical thinking skills was also studied. Quantitative approaches with quasi-experimental design were used for this study. A number of 60 form four Biology students from a school in Kuala Selangor district were chosen using purposive sampling methods as studied subjects. The subjects were divided into 30 students for the treatment and control groups equally. Three research instruments were employed which are PBM BIO-SCORE module, a set of achievement tests called "Endangered Ecosystems" and a Watson Glaser critical thinking test. Data were analysed using descriptive and inferential analysis. Descriptive analysis describes the level of critical thinking of the students while inferential statistics which involved a t-test and a Pearson correlation analysis to explain the differences and relationships between the studied variables. The findings showed that there was improvement in achievement for both treatment and control groups, where the treatment group has gained significantly higher achievement. The result also showed that there was increment in critical thinking level for both treatment and control groups with significantly higher increment in treatment group. Pearson correlation analysis showed that there was no significant relationship between students' performance and critical thinking skills. As a conclusion, problem-based learning module (PBM BIO-SCORE) has improved students' achievement and critical thinking skills. The study implicates that the use of problem-based learning module (PBL) can enhance the effectiveness of teaching and learning in Biology.

11. Contents Page

11.1 Page Numbers: vii (top right)

| <div style="text-align: center;"> </div> | | <div style="text-align: center;"> </div> | |
|--|------------|--|------|
| | Muka Surat | | Page |
| PENGAKUAN | ii | REGCONITION | ii |
| PENGESAHAN PENYERAHAN | iii | DECLARATION | iii |
| PENGHARGAAN | iv | ACKNOWLEDGEMENT | iv |
| ABSTRAK | v | ABSTRAK | v |
| ABSTRACT | vi | ABSTRACT | vi |
| KANDUNGAN | vii | CONTENTS | vii |
| SENARAI JADUAL | viii | LIST OF TABLES | viii |
| SENARAI RAJAH | ix | LIST OF FIGURES | ix |
| SENARAI SINGKATAN | x | LIST OF ABBREVIATIONS | x |
| SENARAI LAMPIRAN | xi | LIST OF APPENDIX | xi |
| BAB 1 PENGENALAN | | CHAPTER 1 INTRODUCTION | |
| 1.1 Pendahuluan | 1 | 1.1 Introduction | 1 |
| 1.2 Latar belakang kajian | 3 | 1.2 Research Background | 3 |
| 1.3 Pernyataan Masalah | 5 | 1.3 Problem Statement | 5 |
| 1.4 Objektif Kajian | 14 | 1.4 Research Objectives | 14 |
| ↓ | | ↓ | |
| 1.9 Kerangka Teori Kajian | 20 | 1.9 Theoretical Framework | 20 |
| 1.9.1 Teori Pembelajaran | 21 | 1.9.1 Planning Theory | 21 |
| 1.9.1.1 Teori Kostruktivisme | 22 | 1.9.1.1 Theory of Constructivism | 22 |

11.2 The contents page contains a list of references for all the information in the dissertation / thesis granted under preliminary dissertation / thesis, chapters, and pages. Each prefix dissertation / thesis, chapter and page number shown in the page content must coincide with the beginning of the dissertation / thesis, chapter, and page number in the dissertation / thesis.

11.3 Contents must be written in double spacing.

12. Tables List Page

12.1 Page Numbers: Continuation from the Contents Page (top right)

| <div>Langkau 3 kali</div> <div>SENARAI JADUAL</div> <div>Langkau 2 kali</div> | | |
|---|--|------------|
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12.2 This page contains a list of all tables in the thesis. Information on the tables that needs to be stated are the numbers, table captions, and the number of pages where those tables are placed. The list must be written according to the order of the chapters.

12.3 List of Tables must be written in double spacing.

13. Figures List Page

13.1 Page Numbers: Continuation from the Tables List Page (top right)

| SENARAI RAJAH | | Langkau 3 kali |
|----------------------|--|----------------|
| | | Langkau 2 kali |
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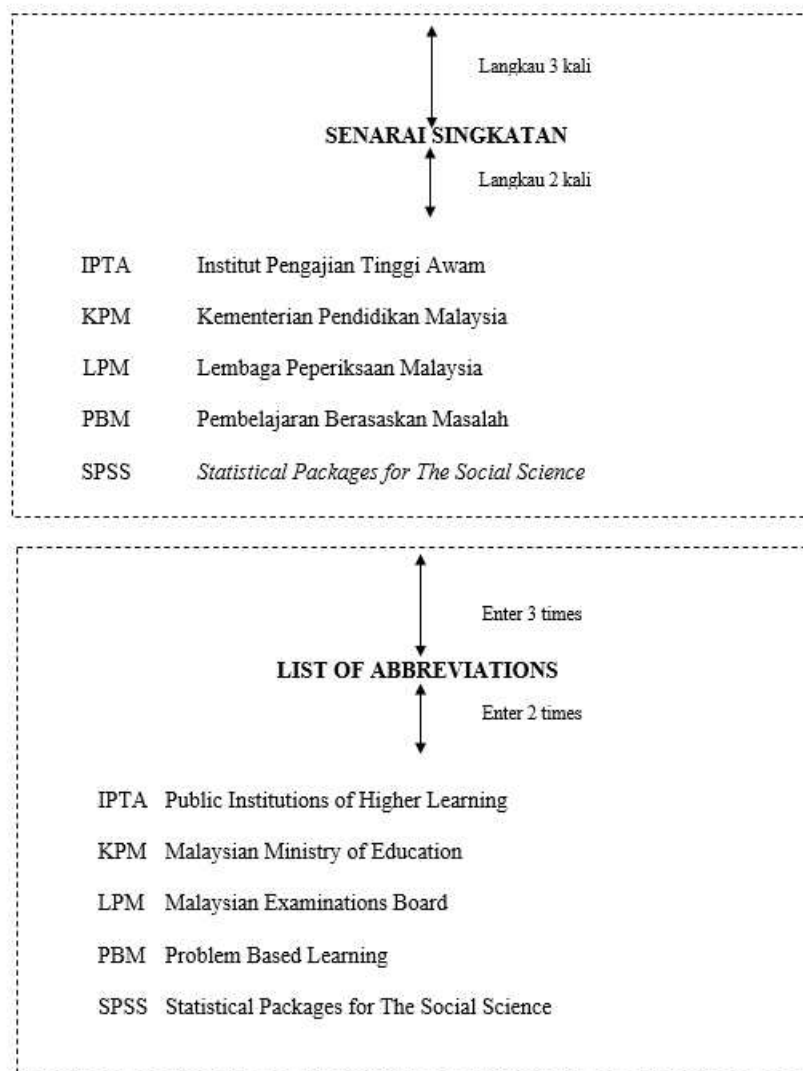
| LIST OF FIGURES | | Enter 3 times |
|------------------------|---|---------------|
| | | Enter 2 times |
| No. Figures | | Page |
| 1.1 | The Conceptual Framework | 12 |
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| 3.1 | Flow Chart of The Construction of PBM BIO-SCORE Based On Adaptation from Sidek and Jamaludin Model (2005) | 59 |

13.2 All illustrations included in the text, such as maps, charts, drawings, graphs, printed images, diagrams, and photographs are referred to as 'figures'. List of figures contains all the number of figures, the title of the figures and the pages where these figures are included in the dissertation / thesis. List of figures must be written according to the order of the chapters.

13.3 List of Figures must be written in single spacing.

14. Abbreviations / Symbols List Page

14.1 Page Numbers: Continuation from the Figures List Page (top right)



14.2 This page lists the symbols, abbreviations, nomenclature and terminology that are found in the text. The order of writing are as follows:

Roman Letter - alphabetical order
Greek Letter - alphabetical order
Superscript - alphabetical order
Subscript - alphabetical order

14.3 To get more details on the spelling and abbreviations, students are encouraged to refer to 'Gaya Dewan Bahasa dan Pustaka'.

14.4 List of Abbreviations must be written in single spacing.

15. Appendixes Page

15.1 Page Numbers: Continuation from the Abbreviations / Symbols List Page (top right)

| | | |
|---|--|----------------|
| | | Langkau 3 kali |
| | SENARAI LAMPIRAN | Langkau 2 kali |
| A | Halaman Judul | |
| B | Perakuan Keaslian | |
| C | Borang Pengesahan Status Disertasi/Tesis | |
| D | Contoh Halaman Penghargaan | |
| E | Contoh Halaman Abstrak | |
| F | Contoh Halaman <i>Abstract</i> | |
| G | Contoh Halaman Kandungan | |
| H | Contoh Halaman Senarai Jadual | |
| I | Contoh Halaman Senarai Rajah | |
| J | Contoh Halaman Senarai Singkatan | |

| | | |
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| | | Enter 3 times |
| | LIST OF APPENDIXES | Enter 2 times |
| A | Title Page | |
| B | Declaration of Authenticity | |
| C | Dissertation Status Verification Form | |
| D | Example of Appendixes | |
| E | Example of <i>Abstract</i> | |
| F | Example of Abstract | |
| G | Example of Content Pages | |
| H | Example of Table List | |
| I | Example of List of Figures | |
| J | Example of List of Abbreviations | |

15.2 This page lists all the attachments used by the students in completing the research.

15.3 List of Appendixes must be written in single spacing.

16. Chapter Page

16.1 Page Numbers

16.1.1 Every page which contains **chapter heading does not need to be numbered** although the page number considered into account.

For example, page 1 is the first page for Chapter 1: Introduction that does not need to have its page number.

16.1.2 Page numbering should use numbers that are 2,3,4,5, and so on at **top right**

16.2 Chapter Numbering and Sub-section

16.2.1 Each chapter and sub-section must be labelled and numbered. Chapter numbering must always use digits, such as Chapter 1, Chapter 2, Chapter 3 and so on.

16.2.2 Each subsection must be aligned and arranged neatly but should not exceed four levels (three decimal places) just like the following example:

- i. Second level (sub-section Title)
- ii. The third level (sub-section, sub-section Title)
- iii. The fourth level (sub-section, sub-section, sub-section Title)

Note: refer to the format as in point 16.3.6

16.2.3 If the length of chapter's heading or any level exceeds a line, double spacing will be used just like the spacing used between the lines in the text.

16.3 Text

16.3.1 Text should be typed using left-right align (justify). The first line of the first paragraph should not be aligned to the right.

16.3.2 For the second and subsequent paragraph, the first line of each paragraph should be aligned about 1.27 cm @ 0.5 inches from the frame on the left.

16.3.3 However, a new paragraph cannot be started on the last line of a page.

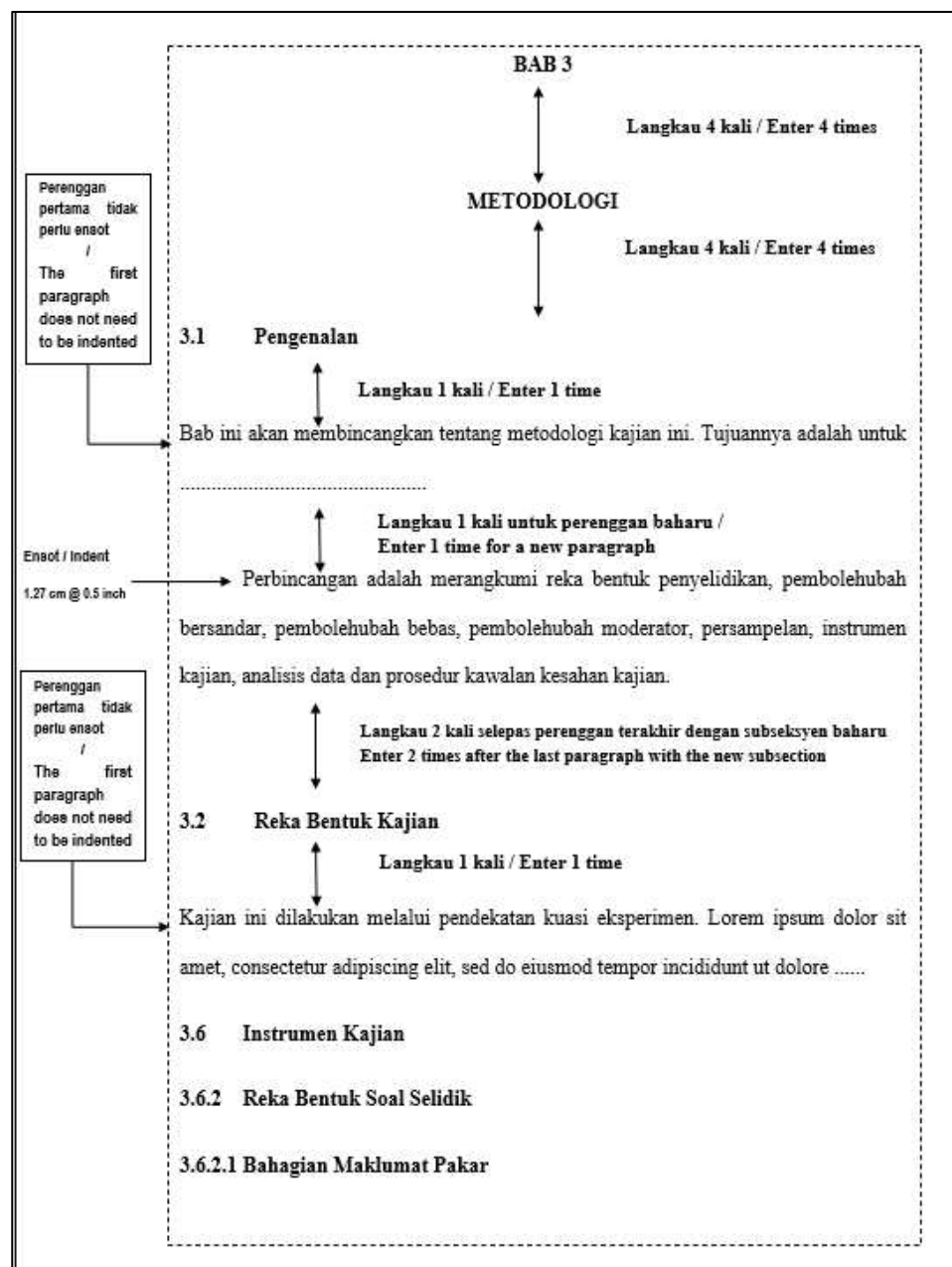
16.3.4 Each line of text in the dissertation / thesis must use double spacing. This spacing must be applied uniformly in the entire dissertation / thesis.

16.3.5 Nevertheless, single spacing must be used for following circumstances:

- i. Footnote (if necessary);
- ii. Quotes containing three lines or more (must be justified and form a block of text);
- iii. References (unless requires double spacing between one entry with the others);
- iv. Titles of the tables and figures that contain more than one line;
- v. Appendices, such as questionnaires or letters; and
- vi. Topics or sub-topics.

16.3.6 Guide to using other spacing must cover the following items:

- The spacing distance between the top margin and chapter number is 2.54cm or equivalent to double spacing, down from the first line.
- The title of the chapter should be typed in the middle between the left and right borders. Each chapter must be started on a new page.
- Four spacing are used between the chapter number and title, and between the title and the first line of text.
- Single spacing used between sub-section of titles and the first line of text of that particular sub-section.
- Double spacing is also used for the last line of text and tables, or diagrams, or illustrations.
- At least one-character spacing should be used between commas ',' or a full stop '.' and the first letter of the next sentence in the same paragraph.



16.3.7 The text of the dissertation / thesis must be divided into chapters with titles given and each of the titles must reflect the content of the chapter. Each chapter must begin on a new page. The chapters can be expanded into smaller parts with given sub-chapters. The titles and subheadings should be numbered.

16.3.8 The number of chapters in the dissertation / thesis is not limited. Generally, a dissertation / thesis will be structured as follows:

- i. Introduction
- ii. Literature review
- iii. Methodology
- iv. Findings
- v. Summary, Discussion, Recommendation, Implication and Conclusion

16.3.9 Reference in the text:

All the information and ideas quoted from a source must be acknowledged in the text.

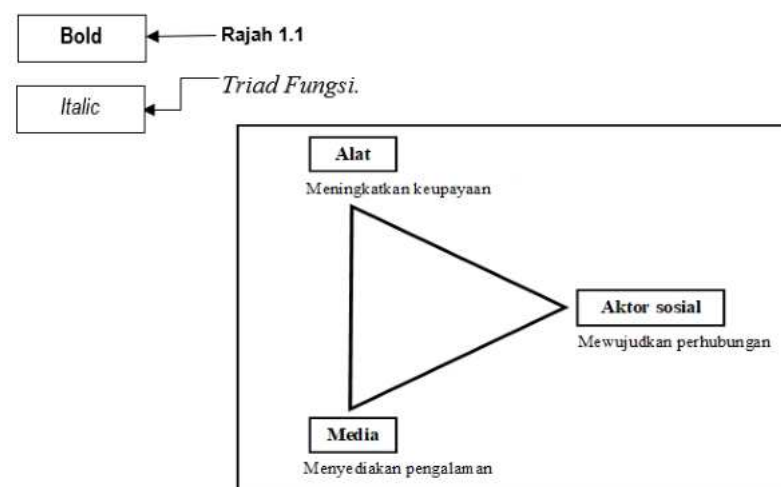
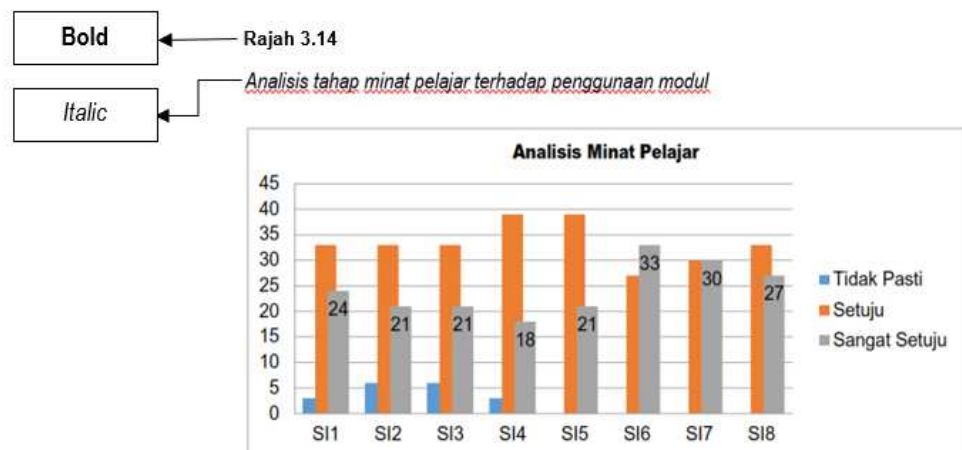
16.3.10 Tables in text:

- i. All tables are given a number and must refer to the chapter like Table 3.10 for the second table in chapter 3.
- ii. Each caption is written on the left and with single spacing.
- iii. The table's title is to be written on top of the table. If the table was taken from a specific source, the source must be stated at the end of the table.
- iv. However, in writing, **tables can only be placed referenced in the text.**
- v. The table's title written with italic format.
- vi. If the table exceeds 1 page, **the table head (header row) needs to be repeated on a new page.**
- vii. Please refer to the latest APA style guide and should be consistent in the overall writing of thesis/ dissertation.
- viii. **Example** of the table is as follows:

| Bold | ← | Jadual 3.10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| <i>Italic</i> | ← | <i>Tempoh Pelaksanaan Kajian di Kolej</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Bulan / Tahun</th><th>Minggu</th><th>Perkara</th></tr> </thead> <tbody> <tr> <td colspan="3">Persediaan Awal:</td></tr> <tr> <td colspan="3">a) Memohon kebenaran dan berbincang dengan Timbalan Pengarah Kolej dan Ketua Jabatan Sastera Ikhtisas.</td></tr> <tr> <td colspan="3">b) Mengenalpasti pensyarah-pensyarah yang terlibat dalam kajian.</td></tr> <tr> <td colspan="3">c) Mengenalpasti kelas-kelas yang terlibat dalam kajian</td></tr> <tr> <td colspan="3">d) Memberi taklimat kepada pensyarah serta pengagihan bahan pengajaran dan pelajar yang terlibat dalam kajian</td></tr> <tr> <td colspan="3">e) Mewujudkan kelas dalam <i>Google Classroom</i> bagi persediaan kelas hibrik.</td></tr> <tr> <td>5 Feb 2021</td><td>1</td><td></td></tr> <tr> <td>8 Feb 2021</td><td>2</td><td>Ujian Pra</td></tr> <tr> <td></td><td>3</td><td></td></tr> <tr> <td>15 Feb 2021 – 20 Mac 2021</td><td>4</td><td>Pelaksanaan Kelas Praktikal dengan menggunakan Modul <i>Spreadsheet</i> Belanjawan (kelas rawatan) dan pendekatan tradisional (kelas kawalan)</td></tr> <tr> <td></td><td>5</td><td></td></tr> <tr> <td></td><td>6</td><td></td></tr> <tr> <td></td><td>7</td><td></td></tr> <tr> <td>24 Mac 2021</td><td>8</td><td>Ujian Pasca</td></tr> <tr> <td></td><td></td><td>Soal selidik kelas rawatan</td></tr> </tbody> </table> | | | Bulan / Tahun | Minggu | Perkara | Persediaan Awal: | | | a) Memohon kebenaran dan berbincang dengan Timbalan Pengarah Kolej dan Ketua Jabatan Sastera Ikhtisas. | | | b) Mengenalpasti pensyarah-pensyarah yang terlibat dalam kajian. | | | c) Mengenalpasti kelas-kelas yang terlibat dalam kajian | | | d) Memberi taklimat kepada pensyarah serta pengagihan bahan pengajaran dan pelajar yang terlibat dalam kajian | | | e) Mewujudkan kelas dalam <i>Google Classroom</i> bagi persediaan kelas hibrik. | | | 5 Feb 2021 | 1 | | 8 Feb 2021 | 2 | Ujian Pra | | 3 | | 15 Feb 2021 – 20 Mac 2021 | 4 | Pelaksanaan Kelas Praktikal dengan menggunakan Modul <i>Spreadsheet</i> Belanjawan (kelas rawatan) dan pendekatan tradisional (kelas kawalan) | | 5 | | | 6 | | | 7 | | 24 Mac 2021 | 8 | Ujian Pasca | | | Soal selidik kelas rawatan |
| Bulan / Tahun | Minggu | Perkara | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Persediaan Awal: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| b) Mengenalpasti pensyarah-pensyarah yang terlibat dalam kajian. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| c) Mengenalpasti kelas-kelas yang terlibat dalam kajian | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| d) Memberi taklimat kepada pensyarah serta pengagihan bahan pengajaran dan pelajar yang terlibat dalam kajian | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| e) Mewujudkan kelas dalam <i>Google Classroom</i> bagi persediaan kelas hibrik. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 Feb 2021 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 15 Feb 2021 – 20 Mac 2021 | 4 | Pelaksanaan Kelas Praktikal dengan menggunakan Modul <i>Spreadsheet</i> Belanjawan (kelas rawatan) dan pendekatan tradisional (kelas kawalan) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 24 Mac 2021 | 8 | Ujian Pasca | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Soal selidik kelas rawatan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

16.3.11 Figures in text:

- i. All figures are given numbers using figure direction.
- ii. Numbers of those figures should refer to the chapter such as Figure 5.5 for the second figure in chapter 5.
- iii. Each headline of figures is written on the top left of the figure followed by the figure.
- iv. The headings are written without the full stop at the end and written on the left.
- v. The figure's title written with italic format.
- vi. If a figure is taken from a particular source, the source must be stated at the lower end of the figure.
- vii. However, in writing, tables **can only be placed after referenced in the text**.
- viii. If the figure title exceeds one (1) line, the title written in single spacing.
- ix. Please refer to the latest APA style guide and should be consistent in the overall writing of thesis/ dissertation.
- x. **Example** of the figure is as follows:



Diadaptasi dari B.J. Fogg, 1998

16.3.12 Equations / Formula Writing in Text

- i. Equations / formulas should be numbered using the figure direction.
- ii. Number of equations / formulas written at the end of the equation and referred to that particular chapter.
- iii. For example, in chapter 2 for the equation / formula 1 and 2 and so on are as follows:

$$y = mx + c \quad (2.1)$$

$$z = 10x^2 + y^2 \quad (2.2)$$

16.4 List of references

16.4.1 UPSI dissertation / thesis uses only the reference list and **not the bibliography**.

16.4.2 This list must be attached at the end of the dissertation / thesis, before the Appendices. Candidates cannot mix up a style of reference writing and it should be consistent. Please refer to the latest APA style guide and should be consistent in the overall writing of dissertation/thesis.

16.5 Unit of Measurement

The use of standard measurement system, Standard International (SI) and its acronyms are encouraged. Some common examples are shown below:

2 liter (2L)

10 milliliter (10 mL)

15 kilogram (15 kg)

7 gram (7 gm)

9 kilometer (9 km)

5 hektar (5 ha)

25 ton (25 t)

135 parts per million (135 ppm)

50 Australian Dollars (AUD 50)

2.7 ton metrik/hektar (2.7 t/ha)

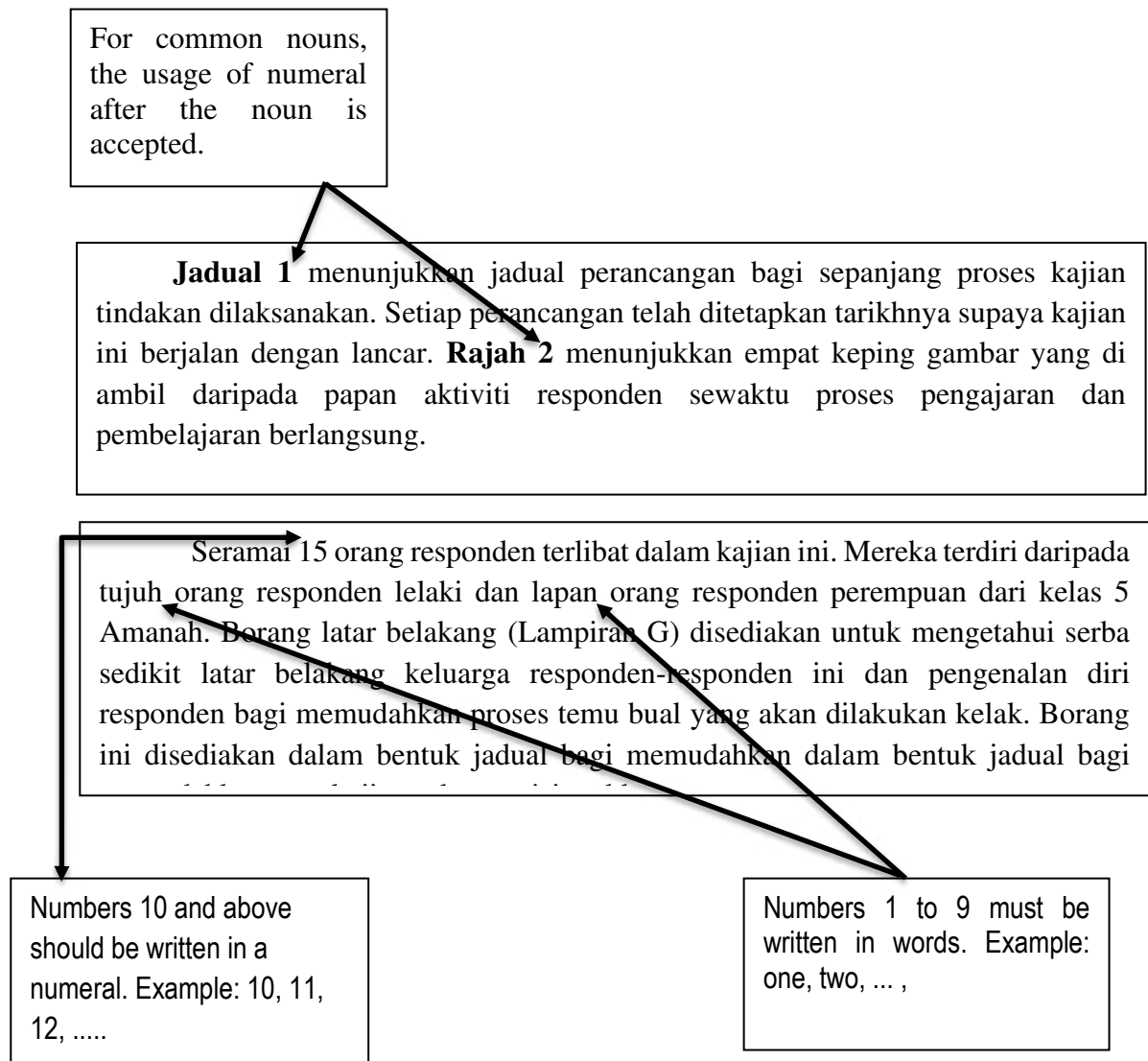
Note:

- i. Take note of empty space between figures and units.
- ii. Numeral writing in the front of unit measurements cannot be spelled (written by 2L, and not two L), except when written in the beginning of a sentence or figure one (1).

16.6 Usage of Figures / Digits

- 16.6.1 All figures / digits usage less than ten has to be spelled except for those with a unit of measurement (for example 7 g, 10 ml).
- 16.6.2 The sentence that starts with figure has to be written with the word (for example, "Fifty respondents was interviewed" and not "50 respondents was interviewed").
- 16.6.3 Another alternative is by compiling sentence sequence by using numbers into a numerical series as follows:
- The observed class has 1 table and teacher's chair, 25 benches and a table for the pupil, 4 fans, and 1 whiteboard.
 - Enrolment number of the pupil in grade 4 at Bangi SRK throughout the past three years are 125, 180 and 225.

Writing text Sample



16.7 Usage of Percentage symbol

- 16.7.1 Symbol % or percent word can be used without white space between digits and symbol, for example, 10.5%.
- 16.7.2 If it was written 10.5 percent (percent), that usage should be consistent throughout the thesis writing. Percentage (Pct.) short form can be used when naming column subject to symbolize percentage.

16.8 Quotes in Text

- 16.8.1 Both quotations are made directly and indirectly in the text should be given acknowledgment.
- 16.8.2 Failure to do so may lead to charges of plagiarizing the author's work.
- 16.8.3 Usually, surname / father's name is used in the text to make reference. For example, Allen Luke inscribed as Luke in the text. For Chinese author, for example, Goh Hock Seng was written with the surname or the author name is located in the front. Malay author names can be written, for example, Ramlah Mailok written with the full name, surname or author's first name located in the front.
- 16.8.4 Citations in the text should be in the reference list at the end of the thesis / dissertation.

16.9 Direct Quotation

Direct quotation less than three lines is shown using the quotes symbol. If more, the quotation should be aligned and written with its page number. The example below shows how various forms and quotation directly inserted into the text.

- 16.9.1 Direct quotation using less than one sentence in the text. Example:

According to Veldsman (2002, p. 21), the changing of organizations involve the organization's condition in two different locations, "in time or in space".

- 16.9.2 Quoting directly in the form of complete sentences. Example:

This idea is shared by Veldsman (2002) in which organizational change is defined as "The difference in the state of an organization at two separate locations in time or in space". (p. 21).

16.9.3 If the author's name is not included in the quoted paragraph. Example:

Some authors explain the change of the organization as a difference in “state of an organization at two separate locations in time or in space” (Veldsman, 2002, p. 21).

16.9.4 The longer quotation is aligned on the left side only or both sides without the quotes. Example:

The typical educational reform movements in Malaysia have almost exclusively been initiated by the Minister of Education and then pass on down through the ranks. Teachers in school are seen as implementers of the reform without any contributions upward to shape or decide on reform initiatives. (Halliger, 2011, p. 14).

16.10 Indirect Quotation

16.10.1 If the idea and not the original text of author is included in the text, write only the name and year published. Other information will be inserted in the reference index. Example:

Veldsman (2002) explains on change concept in one's organization. Change in a certain organization involves the difference in two different locations (Veldsman, 2002).

16.10.2 If the general statements are made by referring to few authors, the reference should be sorted by year, starting from the latest and isolated using the semi-colon. Example:

Effective change will not happen in the educational organization without principal involvement to lead the change process competently (Oplatka, 2003; Lakomski, 2001; Clarke, 2000; Hallinger & Leithwood, 1996).

Quoting directly from the author

Example:

Dalam membicarakan panduan asas fiqh wanita, Siti Nor Bahyah (2008) menyatakan bahawa “semakin tinggi ilmu yang dimiliki, bukan untuk bermegah tetapi untuk memandu seseorang itu meningkatkan amal Kebajikan”. (ms.152)

Do not tilt the words

Quoting directly from the author (3 lines and more)

Example:

Below is the statement quoted in the KBSR that shows the importance of mathematical thinking elements and problem solving in the teaching and learning mathematics:

The learning of mathematics at all levels involves more than just the basic acquisition of concepts and skills. It involves, more importantly, an understanding of the underlying mathematical thinking, general strategies of problem solving, communicating mathematically and including positive attitudes towards an appreciation of mathematics as an important and powerful tool in everyday life. (Curriculum & Malaysia, 2006, p.112)

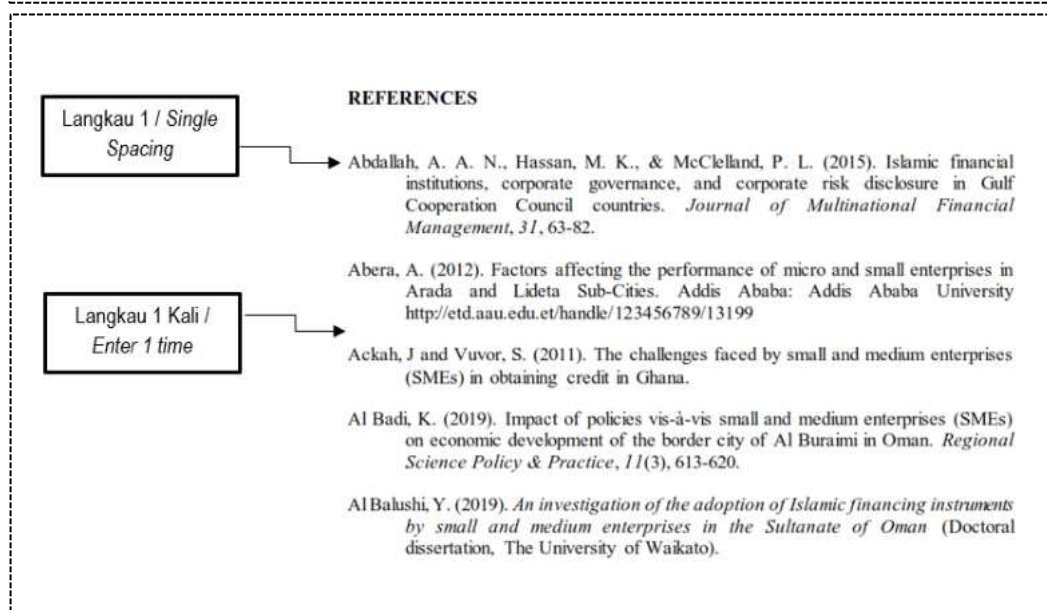
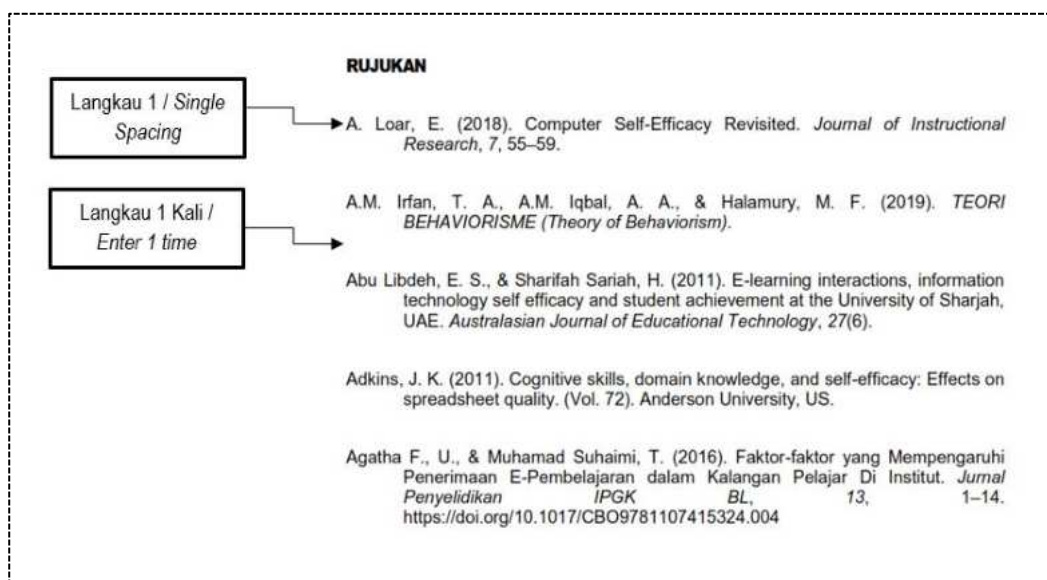
- i. Indent 0.5 inches.
- ii. Double spacing for the entire passage.
- iii. Do not italicise the passages.
- iv. Ignore the "... " in the quotation.

Source citations, year and pages

| | | |
|---|---|---|
| A) Number written in Numeral | | |
| Number 10 and above | <ul style="list-style-type: none"> • 12 cm • 25 years | <ul style="list-style-type: none"> • 13 lists • 105 word |
| Number which mathematical function | <ul style="list-style-type: none"> • Times 5 • Over 5% of the sample | <ul style="list-style-type: none"> • 3 times more • 0.33 from |
| A number which represents time, date, score, and etc. | <ul style="list-style-type: none"> • 1 hour 24 minutes • A score of 4 on a scale of 5 | <ul style="list-style-type: none"> • Pukul 12.30 a.m • Table 4 |
| B) Number written in words | | |
| Any number of the beginning of a sentence, title | <ul style="list-style-type: none"> • Forty percent of the showed an increase | <ul style="list-style-type: none"> • Twelve students showed an increase and 12 other students... |
| Common fractions | <ul style="list-style-type: none"> • Two-third majority | <ul style="list-style-type: none"> • One fifth of the class |
| Usage that was accepted | <ul style="list-style-type: none"> • Five Pillars of Islam | <ul style="list-style-type: none"> • The twelve Apostles |
| C) A combination of numbers and words | | |
| Situation to increase explanation | <ul style="list-style-type: none"> • Ten 7-point scale | <ul style="list-style-type: none"> • two-way interactions |
| D) Another short form | | |
| Be sure to use Latin abbreviations according to the situation: i.e. that is cf. compare e.g. for example et al..and others etc.. and so forth viz..namely | | |

17. References Page

- 17.1 Page Numbers: Continuation from the last page of the last chapter (**top right**)
- 17.2 Any reference thesis/dissertation either quoted directly or indirectly, should be listed in the references.
- 17.3 For each source used, the candidate must have a reference. This is to certify the source used and allow the reader to keep track of everything that candidates have used.
- 17.4 A complete reference can avoid allegations of plagiarism.
- 17.5 The reference list is to be started on a new page and word REFERENCE is typed in capital letters. Writing of references uses latest APA style guide.
- 17.6 It must be written in single spacing.



| Passage Type First reference | Passage Type First reference | Passage Type First reference | Passage Type First reference | Passage Type First reference |
|---|--|---|--|---|
| One author | Walker (2007) | Walker (2007) | (Walker, 2007) | (Walker, 2007) |
| Two authors | Walker dan Allen (2004) | Walker dan Allen (2004) | (Walker & Allen, 2004) | (Walker & Allen, 2004) |
| Three authors | Bradley, Ramirez, dan Soo (1999) | Bradley et al. (1999) | (Bradley, Ramirez, & Soo, 1999) | (Bradley et al., 1999) |
| Four authors | Bradley, Ramirez, Soo, dan Walsh (2006) | Bradley et al. (2006) | (Bradley, Ramirez, Soo, & Walsh, 2006) | (Bradley et al., 2006) |
| Five authors | Walker, Allen, Bradley, Ramirez, dan Soo (2008) | Walker et al. (2008) | (Walker, Allen, Bradley, Ramirez, & Soo, 2008) | (Walker et al., 2008) |
| Six or more author | Wasserstein et al (2005) | Wasserstein et al. (2005) | (Wasserstein et al., 2005) | (Wasserstein et al., 2005) |
| Organization (easily identified by the initials) as the author | Universiti Pendidikan Sultan Idris (UPSI, 2013) | UPSI (2013) | (Universiti Pendidikan Sultan Idris [UPSI], 2013) | (UPSI, 2013) |
| Organization (No abbreviation) as the author | Universiti Pittsburgh (2005) | Universiti Pittsburgh (2005) | (Universiti Pittsburgh, 2005) | (Universiti Pittsburgh, 2005) |

General Guidelines

a) One Author

Last name / family's name is written first, followed by the first letters of the author's first name.
Example:

Al-Attas, S.M.N (1980). The concept of education In Islam. Kuala Lumpur: ABIM.

b) Two Authors

Last name / family's name is written first followed by the first letters of the author's first name.
Use the symbol "&" but not "and" Example:

Creame, P. & Lea, M. R. (2003). *Writing at University*. 2nd ed. Maiden: Open University Press.

Wegener, D.T. & Perry, R.E. (1994). Mood management across affective states. The hedonic contingency hypothesis. *Journal of Personality & Social Psychology*, 66, 1034-1048.

c) Three to Six Authors

Last name / family's name is written first followed by the first letters of the author's first name; comma in each of the author's name and the last name of the author use the symbol "&" but not "and". Example:

Kernis, M.H., Cornell, D.P., Sun, C.R., Berry, A., White, A., Ganster, D.C & Harlow, T. (1993). There's more to self-esteem than whether it is high or low: The importance of stability of self-esteem. *Journal Of Personality and Social Psychology*, 65, 1190-1204.

d) More Than Six Authors

Insert the list of names of the first six authors followed with "et al.". No dots after "et". Example:

Harris, M., Keraper, E., Stacks, G., Hoffman, D., DeNiro, R., Cruz, P., et al (2001). Writing labs and the Hollywood connection. *Journal of Film and Writing*, 44(3), 213-245.

e) Malay Author Without Surname

Leave "bin" atau "binti" Example:

Asmah Binti Omar

Cited as:

Asmah Omar. (1991). *Kemahiran berbahasa*. Kuala Lumpur, Malaysia: Penerbitan Pustaka Antara.

f) Chinese Author Without Surname

Surname followed by the first letters of the next name of author. Example:

Chu Chin Ning

Cited as:

Chu, C.N. (1995). Simulated counter-current adsorption processes: A comparison of modelling strategies. *Chemical Engineering Journal*, 56,59-65

g) Chinese Author with English Name

Surname followed by the first letters of the next name of the author. Example:

Vincent Foo Hiap Khian

Cited as:

Foo,V.H.K (1983). Sarawak: Mini episodes of the past. Selangor, Malaysia: Fajar Bakti

h) Indian And Sikh Author (without surname)

General form: leave d/o, s/o, a/l, a/p

Example:

Narrayani a/p Jeganathan, dipetik sebagai: Narrayani Jeganathan (2009)

i) Inherited Name

Use the inherited name Example:

Raja Ahmad Niza

Cited as:

Raja Ahmad Niza. (2009).

j) Titles Given

Leave titles like Datuk / Tan / Sri / Tun / Prof / Dr / Hajj Example:

Tun Mahathir Mohamad, cited as: Mahathir Mohamad

k) Agency, Association or Institution as Authors

Use the official full name Example:

- i. Pahang, Jabatan Alam Sekitar. (2009)
- ii. Kementerian Pelajaran Malaysia (2006). *Kurikulum Bersepadu Sekolah rendah: Spesifikasi kurikulum tahun 6*. Kuala Lumpur: Pusat Perkembangan Kurikulum.

l) Corporations

Use the official full name Example:

- i. Yayasan Sabah. (2009).
- ii. Committe of Bank Rakyat finance. Kuala Lumpur. DBP.

m) Organizations as Author

Example:

American Psychology Association. (2003).

n) Conference Name

No need to enter the number/session Example:

Persidangan Fizik Asia Pasifik Ke Lima, cited as: Persidangan Fizik Asia Pasifik

o) Unknown Author

Use the title of the article to replace the author's name Example:

- i. Developing a team work. (2006)
- ii. *Merriam-Webster's collegiate dictionary* (10th ed.)(1993). Springfield, MA: Merriam-Webster.

REFERENCE

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- School of Graduate Studies. (2013). *Postgraduate student's guide thesis preparation*. Serdang: Universiti Putra Malaysia.