

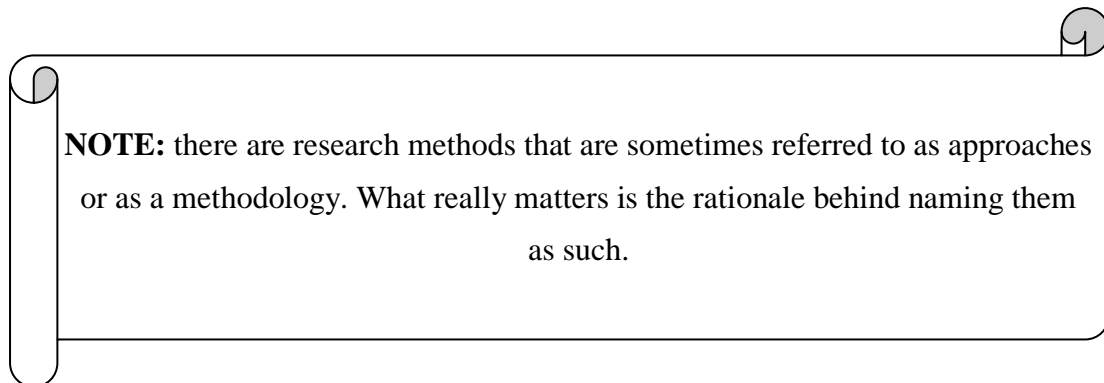
## ***Techniques for Writing the Research Methodology***

As it has been mentioned earlier, the research title should be informative regarding the problem as well as the solution of the research paper. In addition, it should dictate the research's methodology, methods and approaches.

### ***Methodology, Methods and Approaches***

Students do often confuse between the research methodology, methods and approaches. The methodology, as it may well be noticed, comes as a singular form because there is an only one methodology for any research paper. It is considered as the frame of your research, and what governs it. It is the reason why and the logic behind choosing certain methods and approaches for a certain study. As a result, the research methodology encompasses the sum of methods and approaches used as well as the rationale behind using them.

The method is more practical than the methodology which is considered as a philosophical framework. It is the processes taken by the researcher using different techniques to achieve the research's objectives. The research approach, on the other hand, is the way the researcher approaches and deals with a certain problem. An approach may contain different methods.



### ***Writing the Research Methodology Chapter***

The organization of this chapter differs from one supervisor to another. Just as it is mentioned earlier, what matters is the logic and reasons behind organizing it in a particular way. Just like the literature review chapter, the methodology starts with an introduction that outlines the whole chapter (check the template's example).

In the first title "methodology", you are going to discuss the methodology to be used throughout the research paper. It is worth noticing that an experimental study or a case study...etc are referred to as methodologies, not methods. In that context, they are considered as "*the lens through which the researcher views and makes decisions about the study*" (Harrison, Birks et Franklin). It means that relying on a case study, for instance, the research's logic follows.

The methodology's paragraphs are written the same way as the review of literature paragraphs. The only difference is that most of the quotes or paraphrases are used as a rationale behind choosing certain methods or approaches in accordance to the research's questions and problem.

# Thesis Template – Guide Only

## Explanatory Notes

(print these notes for future reference and then delete them including the page break at the end of them)

1. The structure of the thesis detailed in this template is intended to be a guide only, not a strict blueprint. The chapters and sections used in this template are those typically included in a research thesis; however the nature of the research undertaken may require a variation from this structure and the order of items within chapters may also vary. For example, you may need to use more than one results chapter. The structure of this template reflects the form of the traditional thesis. The traditional thesis structure is designed to show:
    - a line of argument across 6 chapters, namely, introduction, literature, design, results, discussion, and conclusions; and
    - logical relationships between pairs of these chapters, namely, introduction and conclusions, literature and discussion, and design and results.
    - This template is designed to be used in conjunction with the document *Thesis Presentation and Management in Word 2010* (hereafter abbreviated to *Thesis PAM*).
  2. This template is designed to be used in conjunction with the document *Thesis Presentation and Management in Word 2013* (hereafter abbreviated to *Thesis PAM*).
  3. This template has been set up for double-sided printing, which is required for your final thesis and is optional for all stages before that. This means it has *mirror margins*, with odd and even pages. After the title page, at the end of the preliminary pages, and at the end of each chapter, there is an *odd page section break*. This ensures that the following page will begin as an odd page, on the right hand side, and you do not need to insert blank pages.
  4. This template has been set up to use automatic numbering of headings. This allows you to use cross-referencing and automatic numbering of figure and table captions with the chapter number included. The headings and other styles used in this template can be modified if desired. For more information, refer to *Thesis PAM*. If you wish to use APA-style headings (which are not numbered), we have also prepared a *Thesis Template APA Headings*.
  5. This template can be used for your confirmation document as well as your final thesis. For your confirmation, use the first 3 chapters only (and see next note on use of verb tenses). You do not need to include the Statement of Original Authorship in your confirmation document.
  6. APA guidelines regarding the use of verb tenses (American Psychological Association, 2010, Sixth Edition) state that it is important to be consistent in the use of tenses in your document and not to shift the tense within the same paragraph or in adjacent paragraphs. For the literature review chapter, past tense (e.g., “Smith *showed*”) or present perfect tense (e.g., “researchers *have*
-

*shown*") is appropriate. In the research design chapter, use future tense in your confirmation document (e.g., "This study *will use* an action research methodology") but past tense in your final thesis (e.g., "This study *used* an action research methodology"). In the results chapter, use past tense to describe the results (e.g., "anxiety *decreased* significantly") but use the present tense to discuss the results and to present the conclusions (e.g., "the results of Experiment 2 *indicate*") (APA, 2010, pp. 65-66). In this template, future tense for the confirmation document, where relevant, has been placed in square brackets.

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**FULL TITLE OF YOUR THESIS. THE  
STYLE IS CALLED “TITLE, PHD TITLE”**

**[Put your full name here]**

**[Put your existing degrees here]**

[For your Confirmation document, list your Supervisors here]

Submitted in [partial] fulfilment of the requirements for the degree of  
[e.g. Doctor of Philosophy or Master of Education (Research)]

Centre for Learning Innovation

Faculty of Education

Queensland University of Technology

[year in which the thesis is submitted]

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# Keywords

Put a paragraph of keywords here in alphabetical order (for cataloguing purposes).

# Abstract

Put your abstract here (do this last).



# Table of Contents

Keywords .....	i
Abstract.....	ii
Table of Contents .....	iii
List of Figures .....	iv
List of Tables .....	v
List of Abbreviations .....	vi
Statement of Original Authorship.....	vii
Acknowledgements.....	viii
<b>Chapter 1: Introduction .....</b>	<b>1</b>
1.1 Background.....	1
1.2 Context.....	1
1.3 Purposes.....	1
1.4 Significance, Scope and Definitions.....	1
1.5 Thesis Outline.....	2
<b>Chapter 2: Literature Review.....</b>	<b>3</b>
2.1 Historical Background [optional] .....	4
2.2 Topic 1 .....	4
2.3 Topic 2.....	4
2.4 Topic 3.....	4
2.5 Summary and Implications.....	4
<b>Chapter 3: Research Design.....</b>	<b>5</b>
3.1 Methodology and Research Design.....	5
3.2 Participants .....	6
3.3 Instruments .....	6
3.4 Procedure and Timeline.....	6
3.5 Analysis .....	6
3.6 Ethics and Limitations .....	7
<b>Chapter 4: Results.....</b>	<b>9</b>
<b>Chapter 5: Analysis.....</b>	<b>11</b>
<b>Chapter 6: Conclusions .....</b>	<b>13</b>
<b>Bibliography .....</b>	<b>15</b>
<b>Appendices .....</b>	<b>17</b>
Appendix A Title .....	17

# List of Figures

[The List of Figures can be created automatically and updated with the F9 key – refer to *Thesis PAM*.]

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# List of Tables

[The List of Tables can be created automatically and updated with the F9 key – refer to *Thesis PAM*.]

No table of figures entries found.

# List of Abbreviations

If appropriate, list any abbreviations used in the thesis.

# Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# Acknowledgements

# Chapter 1: Introduction

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The introduction chapter needs to state the objectives of the program of research, include definitions of the key concepts and variables and give a brief outline of the background and research approach. The aim of the introduction is to contextualise the proposed research.

In the opening paragraph, give an overall view of what is included in the chapter. For example:

This chapter outlines the background (section 1.1) and context (section 1.2) of the research, and its purposes (section 1.3). Section 1.4 describes the significance and scope of this research and provides definitions of terms used. Finally, section 1.5 includes an outline of the remaining chapters of the thesis.

## 1.1 BACKGROUND

Give the background of the problem to be explored in your study and what led you to doing the thesis. For example, you might discuss educational trends related to the problem, unresolved issues, social concerns. You might also include some personal background.

## 1.2 CONTEXT

Outline the context of the study (i.e., the major foci of your study) and give a statement of the problem situation (basic difficulty – area of concern, felt need).

## 1.3 PURPOSES

Define the purpose and specific aims and objectives of the study. Emphasise the practical outcomes or products of the study. Delineate the research problem and outline the questions to be answered or the overarching objectives to be achieved.

## 1.4 SIGNIFICANCE, SCOPE AND DEFINITIONS

Discuss the importance of your research in terms of the topic (problem situation), the methodology, and the gap in the literature. Outline the scope and delimitations of the study (narrowing of focus).

Define and discuss terms to be used (largely conceptual here; operational definitions may follow in Research Design chapter).

## **1.5 THESIS OUTLINE**

Outline the chapters for the remainder of your thesis.



## Chapter 2: Literature Review

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The literature review chapter should demonstrate a thorough knowledge of the area and provide arguments to support the study focus. The aim of the literature review chapter is to delineate various theoretical positions and from these to develop a conceptual framework for generation of hypotheses and setting up the research question. The literature review chapter needs to:

- Critically evaluate the literature rather than merely describe previous literature (i.e., what is good/bad about the body of literature?).
- Show a synthesis and be integrated rather than being more like an annotated bibliography.
- Identify key authors and the key works in the area, thus acquainting the reader with existing studies relative to what has been found, who has done work, when and where latest research studies were completed and what approaches to research methodology were followed (literature review of methodology sometimes saved for chapter on methodology).
- Constitute an argument.
- Clearly identify the gap in the literature that is being addressed by the research question.

Suitable sources for the literature review include:

- General integrative reviews cited that relate to the problem situation or research problem such as those found in psychological and sociological reviews of research.
- Specific books, monographs, bulletins, reports, and research articles – preference shown in most instances for literature of the last 10 years.
- Unpublished materials (e.g., dissertations, theses, papers presented at recent professional meetings not yet in published form, etc.).

The literature review chapter can be arranged in terms of the questions to be considered or objectives/purposes set out in the Introduction chapter.

Start with an overview of this chapter by outlining the topics to be discussed. For example [your thesis may have more than 3 topics and therefore more sections]:

This chapter begins with a historical background [optional] (section 2.1) and reviews literature on the following topics: [topic 1] (section 2.2) [briefly describe the topic]; [topic 2] (section 2.3) [briefly describe the topic]; and [topic 3] (section 2.4) [briefly describe the topic]. Section 2.5 highlights the implications from the literature and develops the conceptual framework for the study.

## **2.1 HISTORICAL BACKGROUND [OPTIONAL]**

### **2.2 TOPIC 1**

Present and discuss your first topic.

### **2.3 TOPIC 2**

Present and discuss your second topic.

### **2.4 TOPIC 3**

Present and discuss your third topic.

## **2.5 SUMMARY AND IMPLICATIONS**

Summarise the literature review and discuss the implications from the literature for your study – the theoretical framework for your study. Here you can make an explicit statement of the hypotheses, propositions or research questions and how they are derived from existing theory and literature. Establish from the literature (or gap in the literature) the need for this study and the likelihood of obtaining meaningful, relevant, and significant results. Outline any conceptual or substantive assumptions, the rationale and the theoretical framework for the study. Explain the relationships among variables or comparisons, and issues to be considered. This section should demonstrate the contribution of the research to the field, and be stated in a way that leads to the methodology.

# Chapter 3: Research Design

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This chapter of the thesis should outline the design and methodology of your research. The basis for the choice of research method should be whether it will help you answer your research question(s).

Give an overview of what is to be included in this chapter. For example:

This chapter describes the design adopted by this research to achieve the aims and objectives stated in section 1.3 of Chapter 1 [if you wish, you can restate those objectives]. Section 3.1 discusses the methodology [to be] used in the study, the stages by which the methodology was [will be] implemented, and the research design; section 3.2 details the participants in the study; section 3.3 lists all the instruments [to be] used in the study and justifies their use; section 3.4 outlines the procedure [to be] used and the timeline for completion of each stage of the study; section 3.5 discusses how the data was [will be] analysed; finally, section 3.6 discusses the ethical considerations of the research and its [potential] problems and limitations.

## **3.1 METHODOLOGY AND RESEARCH DESIGN**

### **3.1.1 Methodology**

Discuss the methodology [to be] used in your study (e.g., experimental, quasi-experimental, correlational, casual-comparative, survey, discourse, case study, analysis, action research). If using stages, outline them here. The methods used must link explicitly to the research question and must be suited to the nature of the question. Discuss any methodological assumptions.

### **3.1.2 Research Design**

Outline the research design (e.g., quantitative, qualitative). If quantitative, spell out the independent, dependent and classificatory variables (and sometimes formulate an operational statement of the research hypothesis in null form so as to set the stage for an appropriate research design permitting statistical inferences). If qualitative, explain and support the approach taken and briefly discuss the data gathering procedures that were [will be] used (observations, interviews, etc.)

### **3.2 PARTICIPANTS**

Give details of who were [will be] the participants in your study (including, if applicable, sample type and size, reasons for the number selected and the basis for selection).

### **3.3 INSTRUMENTS**

List and briefly describe all the instruments (e.g., tests, measures, surveys, observations, interviews, questionnaires, artefacts) [to be] used in your study for data collection and discuss their theoretical underpinnings, that is, justify why you used [will be using] these instruments. So that the line of argument is not broken, it is useful to place copies of instruments in Appendices to which this section can refer.

### **3.4 PROCEDURE AND TIMELINE**

Outline the procedure across and within the techniques [to be] used in your study for collecting and recording data. This could include how, when (in what order) and where the instruments were [will be] administered (for example, field, classroom or laboratory procedures, instructions to participants or distribution of materials) and how the data was [will be] recorded. Include the rationale for the procedures used. If the study was [is to be] done in stages, give a timeline for the completion of each stage.

### **3.5 ANALYSIS**

Discuss how the data was [will be] processed and analysed (e.g., statistical analysis, discourse analysis). This section needs to link the analysis of the research to the methods and demonstrate why this is the best approach to analysis. For qualitative research, justification needs to be provided for methods such as coding and dealing with divergent data. For quantitative research, justification of the choice of statistics and the expected results that they will provide [confirmation document] should be described. There should be enough detail for the reader to replicate the analysis. For example, “NVivo or SPSS will be used” is not adequate. Rather, the approach to coding, including how categories were [will be] derived and validated, how the data was [will be] structured, and specific analytical techniques applied, should be included.

### **3.6 ETHICS AND LIMITATIONS**

Outline the ethical considerations of the research and any [potential] problems and limitations (weaknesses), as well as any [anticipated or actual] threats to the validity of the results.



## Chapter 4: Results

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Chapter 4 details all the results of your study. You can put some analysis of the results here, but generally just the results are presented, without interpretation, inference, or evaluation (which will be in Chapter 5). The results should be linked inextricably to the design – describe what happened factually and unemotionally. However, in certain historical, case-study and anthropological investigations, factual and interpretive material may be interwoven rather than being presented as “findings”.

Include a paragraph at the beginning of the Results chapter outlining the structure of the chapter. The results should be reported with respect to furnishing evidence for your research question(s) as outlined in Chapter 1. Thus, you might choose to use headings that correspond to each main question of your hypothesis/objectives from Chapter 1 and/or your theoretical framework from Chapter 2. Or you might organise your results in terms of the stages of the study (if applicable).

Present the findings/results in tables or charts when appropriate, making sure to use correct APA formatting for any tables used (refer to *Thesis PAM* for further guidance on formatting).

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## Chapter 5: Analysis

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Chapter 5 contains a full discussion, interpretation and evaluation of the results with reference to the literature. This chapter can also include theory building.

As with the previous chapters, include a paragraph at the beginning summarising the structure of the chapter. Organise the chapter in terms of the objectives of the study and/or the theoretical framework. For each objective, discuss the results with reference to the literature, for example, the similarities/differences to the findings in the literature review. Develop theory or models from this comparison and evaluation.

It can be useful to check your literature and try to find a place for as much of the literature as you can. If you find that a section of your literature can not be used in this chapter, it may be useful to consider the pertinence of this literature and reduce the space in the literature chapter given to it.

Thus your research outcomes are tied together in relation to the theory, review of the literature, and rationale.

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## Chapter 6: Conclusions

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This chapter contains conclusions, limitations, and recommendations – so what is the theory? Where to from here? What are the practical implications? Discussion of where the study may be extended.

Again, the chapter should begin with a summary paragraph of the chapter structure. The opening section(s) of the chapter should be a brief summary of everything covered so far. Follow this with your conclusions. This is the “so what” of the findings – often the hypothesis/research question(s) restated as inferences with some degree of definitive commitment and generalisability, and the raising of new and pertinent questions for future research. You could include a final model of the theory.

It can be useful to use the purposes from Chapter 1 as an organising structure for this chapter. The chapter should also include a discussion of any limitations of the research, and should end with your final recommendations – practical suggestions for implementation of the findings/outcomes or for additional research.

[Extra page inserted to ensure correct even-page footer for this section. Delete this when chapter is at least 2 pages long.]

# Bibliography

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American Psychological Association (APA). (2010). *Publication Manual of the American Psychological Association* (6<sup>th</sup> Ed.). Washington, DC: Author.

For Faculty of Education theses, the bibliography and all in-text citations must conform to APA style. Refer to QUT's Cite/Write guidelines (available from [www.citewrite.qut.edu.au](http://www.citewrite.qut.edu.au)).

For further information on citations and referencing, see *Thesis PAM*.

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# Appendices

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## Appendix A

### Title

Start each appendix on a new page. Place appendices in the same order as they are referred to in the body of the thesis. That is, the first appendix referred to should be Appendix A, the second appendix referred to should be Appendix B, and so on. Appendix formatting can be different to the main document. Refer to *Thesis PAM* for information about appendix figures and tables.