



# CS 3201N – CS Thesis 1 (Introduction and Abstract)

**Angie M. Ceniza-Canillo, PhD**  
**Full Professor, Department of Computer, Information Sciences and Mathematics**  
**School of Arts and Sciences**  
**University of San Carlos**

# Parts of CS Thesis1

1. Title Page
2. Abstract
3. Chapter 1 Introduction
4. Chapter 2 Review of Related Literature
5. Chapter 3 Technical Background
6. Chapter 4 Design and Methodology
7. Bibliography
8. Appendices (Transmittal Letter, Interview Guide, Software Requirements Specifications)
9. Curriculum Vitae

# Parts of Chapter 1

- Chapter 1 Introduction
  - 1.1 Rationale of the Study
  - 1.2 Statement of the Problem
    - 1.2.1 General Objective
    - 1.2.2 Specific Objectives
  - 1.3. Significance of the Study
  - 1.4 Scope and Limitation

# Introduction

“Well begun is half done.”

- 1 Why and 4 What?
- Why is the topic of interest?
- What is the background of previous solutions if any?
- What is the background on potential solutions?
- What was attempted in the current effort?
- What will be presented in this project/research?

# Rationale of the Study

- This section begins discussing the research problem itself. This presents situations that lead to the conceptualization of the study.
- Convince reader why the problem is important. You may use statistics to add depth and add historical account of recent research literature within the past 5 years.
- Avoid verbatim quotes except for key definitions. This is a form of plagiarism even with citations!

# Rationale of the Study

- Discuss key concepts and methods. Discuss the content in your own thoughts in your own words, confirmed by other background information. It is organized to move from general information to specific information.
- The background must be summarized succinctly, but it should not be itemized. Limit the introduction to studies that relate directly to the present study.
- End the introduction by explicitly declaring the novelty of your work or your specific contribution.
- The last sentence is usually a statement of your general objective.

# Rationale of the Study

- Hint in organization: Start with the big picture about your topic, something that readers will identify in concrete term (non-technical), then limit the problem, gradually focusing on your topic and gently lead the reader to your research problem and justification for choosing it. (Funnel–shape structure).

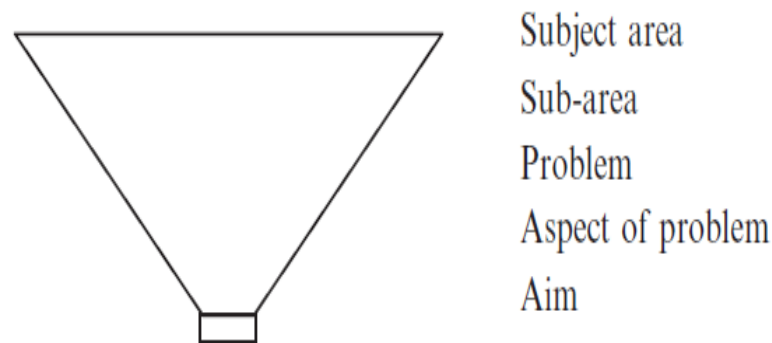


Figure 1. Funnel-shape structure of Introduction chapter

# Rationale of the Study

- Format of citations and quotations will be based from the APA format. This section must be 1- 2 pages long.
- Briefly you have three building blocks to present the overall picture:
  - (1) important concepts and factors
  - (2) motivations behind the aim and;
  - (3) the aim.



# Significance of the Study

- Presents the importance and contribution of the study to the discipline.
- Discusses the value of the study to individuals, groups, institutions and to the discipline;
  - mentions who are to benefit from the study, and
  - how each maybe benefited.

# Scope and Limitation

- This section discussed the extent of the study and what limitations are there. This section must state the weaknesses and limitation of the study.
- What it can do? (Scope)
- What it cannot do and why? (Limitation)

# Abstract

- State the problem.
- State the approach/methodology.
- State the solution/results.
- State the main contribution of the project.

# Abstract

- Every proposal, even very brief ones, should have an abstract. Some readers read only the abstract, and most readers rely on it initially to give them a quick overview of the proposal and later to refresh their memory of its main points.
- Though it appears first, the abstract should be written last, as a concise summary (approximately 200 words) of the proposal.

# Abstract

- Highlights the findings of the study.
- From 150 to 200 words of short, direct and complete sentences, the abstract should be informative enough to serve as a substitute for reading the thesis itself.
- Do not put citations or quotes in this section. Avoid beginning the abstract with “This paper/document/thesis/study/project/...”

# Abstract Structure

- **Background:** A simple opening sentence or two placing the work in context.
- **Aims:** One or two sentences giving the purpose of the work.
- **Method(s):** One or two sentences explaining what was (or will) be done.
- **Results:** One or two sentences indicating the main findings (or what you hope to accomplish with the project).
- **Conclusions:** One sentence giving the most important consequence of the work – what do the results mean? How will they be used?

# Abstract

- (1) a high-level presentation of the subject area studied (one or two sentences),
- (2) reason about the importance and why it is an interesting area worthy to be studied (one or two sentences),
- (3) a high-level description of the approach (one or two sentences), and
- 
- (4) summary of the contribution or results (one or two sentences).

# Questions an Abstract should answer:

- Why did you do this study or project? (Or why are you undertaking the project/study?)
- What did you do, and how? (What will you do? How?)
- What did you find? (What do you expect to find?)
- What do the findings mean?



# Sources:

- **Thesis Projects**

A Guide for Students in Computer Science and Information Systems

Authors: Mikael Berndtsson, Jörgen Hansson, Björn Olsson, Björn Lundell

ISBN: 978-1-84800-008-7 (Print) 978-1-84800-009-4

- **PSITE Undergraduate Research and Capstone Project Manual**

Authors: Cherry Lyn Sta. Romana, Randy Gamboa, Dave Marcial, Gregg Victor Gabbison, Allan Sioson

ISBN: 978-971-95389-0-5

- **IJCCE journal of Computer Science How to do Research Step by Step Guide**
- **Presentation of Jaderick from UPLB**

# Sources:

- **Thesis Projects**

A Guide for Students in Computer Science and Information Systems Authors: Mikael Berndtsson, Jörgen Hansson, Björn Olsson, Björn Lundell

- **ISBN: Book**

Gray, D. (2009). Doing Research in the Real World 2nd edition. British Library

- **Online**

Presentation of Danilo B. Largo, Ph. D.

Presentation of Shamanthakamani Narendan, Ph. D.

Presentation of Bobby Gerardo, Ph.D.

University of Michigan Proposal Writer's Guide by Don Thackrey

Department of Computer Science, Ryerson University

Jason Eisner of University of Pennsylvania

**Thank you for listening. 😊**