

CSCM10/CSCM10J Research Methodology

Specification Report

Dr Scott Yang
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Empirical research

- Involves collecting new data and analysing it in order to answer your research questions
- It can be quantitative (focused on numbers), qualitative (focused on words and meanings), or a combination of both

Theoretical research

- Does not involve original data collection
- The methodology section will focus more on the theory you plan to work with in your dissertation: relevant conceptual models and the approach you intend to take

About Specification Report

Various terminologies are used to refer it

- Research outline
- Synopsis of research
- Plan of research
- Research/project proposal
- Thesis plan

❑ A blueprint of future activities for a research project

❑ Some sort of preconceived framework for starting the activities

Ideas of

- what **research** wants to do;
- what **objectives** and **methodology** has set;
- how much **time** and **resources** are required to complete it;
- how the research **findings** are to be reported...

- Can be considered as an individual's (or a research institute's) formal offer
- A work plan, prospectus, outline, and statement of intent ahead
- In short, a work frame for completing the research

Convince others that you

- have a worthwhile research project
- have the competence and the work-plan to complete it

Contain

- all the key elements involved in the research process
- sufficient information for the readers to evaluate the proposed study

All research proposals must address the following questions:

- ☐ **What you plan to accomplish**
- ☐ **Why you want to do it**
- ☐ **How you are going to do it**

Segmentations

Encapsulate sufficient information to convince your readers that you have an important **research idea**, that you have a good grasp of the relevant **literature** and the major **issues**, and that your **methodology** is sound

Title (two types)

- Concise and descriptive. Titles are stated in terms of a functional relationship, because such titles clearly indicate the independent and dependent variables.

Abstract

- A brief summary of approximately 300 words. It should include the research question, the rationale for the study, the hypothesis (if any), the method and the main findings

Introduction

- Provide necessary background for your research problem
- How to frame the research problem could be the biggest problem
 - Place your research question in the context of either a current "hot" area, or an older area that remains viable
 - Provide a brief but appropriate historical backdrop
 - Provide the contemporary context in which your proposed research question occupies the central stage
 - Identify "key players" and refer to the most relevant and representative publications

In short, try to paint your research question in **broad** brushes and at the same time bring out its **significance**

Should include:

- detailed statement of research intention
- present and justify the plan of action
- show the investigation plan

The introduction generally covers the following elements:

- State the research problem, which is often referred to as the purpose of the study
- Provide the context and set the stage for your research question in such a way as to show its necessity and importance
- Present the rationale of your proposed study and clearly indicate why it is worth doing
- Briefly describe the major issues and sub-problems to be addressed by your research

- Identify the key independent and dependent variables of your experiment. Alternatively, specify the phenomenon you want to study
- State your hypothesis or theory, if any. For exploratory or phenomenological research, you may not have any hypotheses (Please do not confuse the hypothesis with the statistical null hypothesis)
- Set the delimitation or boundaries of your proposed research in order to provide a clear focus
- Provide definitions of key concepts (This is optional)

Most professors prefer a separate section, which allows a more thorough review of the literature

The literature review serves several important functions:

- Ensures that you are not "reinventing the wheel"
- Gives credits to those who have laid the groundwork for your research
- Demonstrates your knowledge of the research problem

- A professional conversation framed by a guiding concept
- A comprehensive exploration of existing scholarship on a specific topic
- “An account of what has been published on a topic by accredited scholars. . .” (Taylor & Procter, 2001)
- An answer to a persistent question (R. Elmore, Harvard Graduate School of Education)
- A well-**framed** presentation of the current state of topic knowledge, which is designed to highlight past research findings and to pave the way for your study

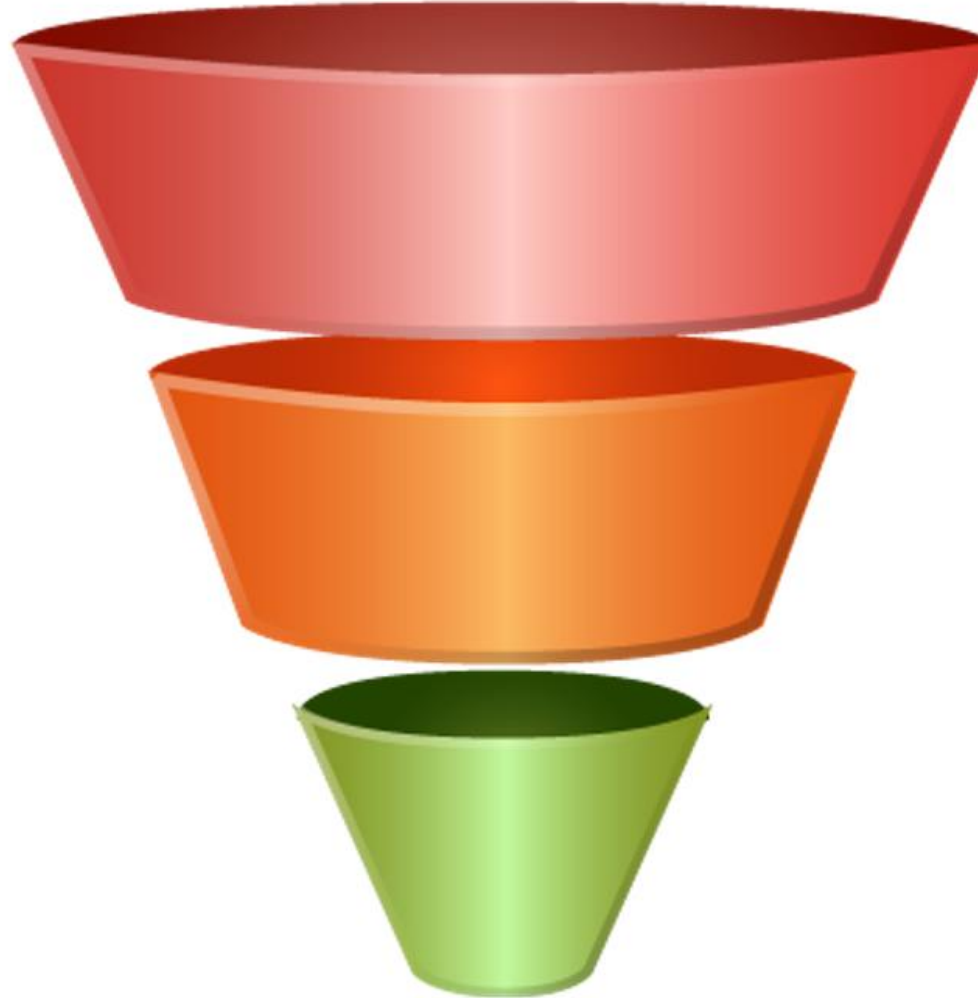
- Understanding of the research related to your research question
- Critically evaluate relevant literature information
- Integrate and synthesize the existing literature
- Provides new theoretical insights or develops a new model as the conceptual framework for your research
- Convinces your reader that your proposed research will make a significant and substantial contribution to the literature (i.e., resolving an important theoretical issue or filling a major gap in the literature)

Literature Review cont.

**Reader
knows**



**Reader
doesn't
know**



- Narrow down your search terms
- Peer-reviewed articles
- Current literatures
- Review vs. primary literature



Include a conclusion that clarifies how the literature demonstrates the efficacy of the dissertation study

- Does it demonstrate a gap in the literature?
- Does it identify a conflict that needs resolution?
- In many cases the specific research questions for the student author's proposed study will be shared here too

The purpose of this research is to.....

Aims

- short but general statement of intent

Objectives

- very specific statements that define the practical steps you will take to achieve your aim(s)

- The Method section is very important because it tells your Research Committee how you plan to tackle your research problem. It will provide your work plan and describe the activities necessary for the completion of your project
- The guiding principle for writing the Method section is that it should contain sufficient information for the reader to determine whether methodology is sound
- Furthermore, since there are no well-established and widely accepted canons in qualitative analysis, your method section needs to be more elaborate than what is required for traditional quantitative research
- More importantly, the data collection process in qualitative research has a far greater impact on the results as compared to quantitative research.

- For quantitative studies, the method section typically consists of the following sections:
 - ☐ Design -Is it a questionnaire study or a laboratory experiment? What kind of design do you choose?
 - ☐ Subjects or participants - Who will take part in your study ? What kind of sampling procedure do you use?
 - ☐ Instruments - What kind of measuring instruments or questionnaires do you use? Why do you choose them? Are they valid and reliable?
 - ☐ Procedure - How do you plan to carry out your study? What activities are involved? How long does it take?

You may not have results at this stage yet

However, you need to have some idea about

- **what kind of data you will be collecting**
- **what statistical procedures will be used in order to answer your research question or test you hypothesis**

- It is important to convince your reader of the potential impact of your proposed research
- You need to communicate a sense of enthusiasm and confidence without exaggerating the merits of your work
- You also need to mention the limitations and weaknesses of the proposed research
 - which may be justified by time and financial constraints as well as by the early developmental stage of your research area

Experiences & advices

A simple guideline

Question to be asked	Steps to be taken	Elements of the step
What is the problem? Why should be studied?	Selection and statement of the problem	<ul style="list-style-type: none">- Problem identification- Problem prioritization- Justification
What information is already available?	Literature review	<ul style="list-style-type: none">- Sources- Reviewing
Why do conduct research? What is the achievement of the research?	Formulation of aim and objectives	<ul style="list-style-type: none">- Aim, goals- General and specific objectives- Hypothesis
How to carry out the research? How to collect data and information? Wherefrom to collect data and information?	Research methodology	<ul style="list-style-type: none">- Variables- Types of the research- Data collection techniques- Sampling- Data analysis process, plan- Data processing plan- Data interpretation process, plan

A simple guideline cont.

Question to be asked	Steps to be taken	Elements of the step
Who will collect and when?	Work plan	-Personnel, manpower - Timetable
How will be monitored? How the research findings will be used?	Research administration plan	-Administration - Monitoring -Identification of potential users
What and how much resources are needed? Who will provide the resources ?	Budget Funding Organizations	-3 Ms: Man, materials, money - Fund collection, fund raising
Who will submit? How to submit? Where to submit?	Proposal preparation Proposal presentation Appropriate authority	-Researcher - Proposal - Presentation techniques

- Failure to provide the proper context to frame the research question
- Failure to delimit the boundary conditions for your research
- Failure to cite landmark studies
- Failure to accurately present the theoretical and empirical contributions by other researchers
- Failure to stay focused on the research question

(Paul T. P. Wong, Ph.D., C.Psych. Research Director, Graduate Program in Counselling Psychology, Trinity Western University, Langley, BC, Canada)

- Failure to develop a coherent and persuasive argument for the proposed research
- Too much detail on minor issues, but not enough detail on major issues
- Too much rambling -- going "all over the map" without a clear sense of direction. (The best proposals move forward with ease and grace like a seamless river.)
- Too many citation lapses and incorrect references
- Too long or too short

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