IME 481 and 482

Writing up the Project

Senior Project

- Abstract
- Executive Summary (optional)
- Introduction
- Background and literature Review
- Design
- Methodology
- Results
- Conclusion
- Bibliography
- Appendices

Abstract

- Tells a reader what is in the report
- Summary of the entire report
- Include findings (quantitative)
- Write it last

Executive Summary (optional)

- For the busy executive to read
- Contains the important conclusions

Introduction

- What is the report about
- Problem statement
- How did it originate, some background
- Summary of methods
- Deliverables or objectives
- What course (name)did you use to complete the project
- Organization of the report

Background

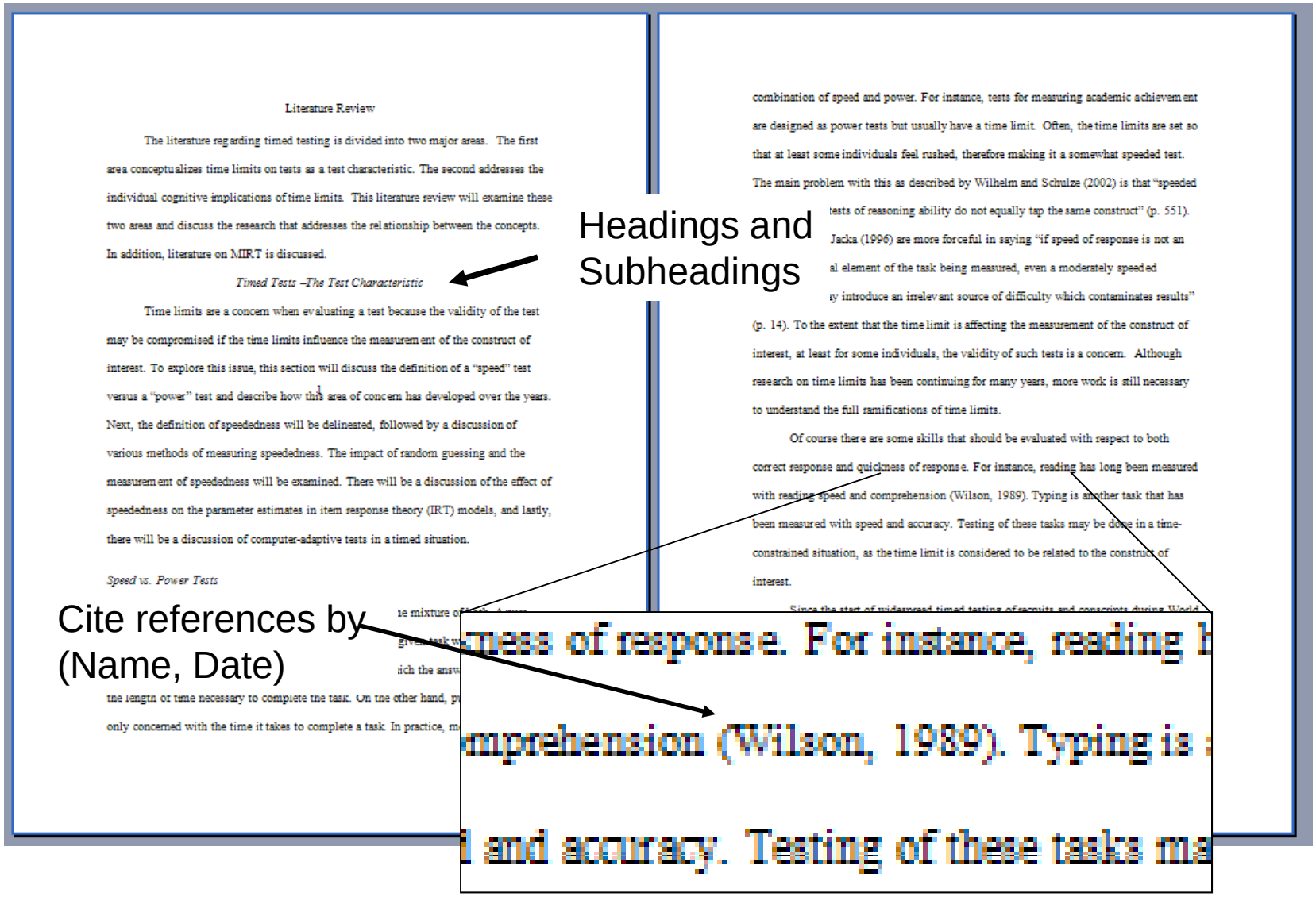
- Give the context of the project
- Where does this project fit into the entire company?
- Why is this an important problem to address?
- Lit review is sometimes part of this chapter
- Three parts
  - Company
  - Theory (Lit Review)
  - Recent Articles (Lit review)

Literature Review

- Research Report
- Choose 3 to 5 areas that relate to your project
- At Least 15 references
- 10 non-internet
- End with why this project is different than anything else ever done.

Literature Review

- Start with 3 to 5 areas
  - Brainstorm key words
- Find books http://www.lib.calpoly.edu/
- Find Articles http://www.lib.calpoly.edu/
- Note cards
- Organize
- Write – 5 to 10 pages double spaced


Literature Review
The literature regarding timed testing is divided into two major areas. The first area conceptualizes time limits on tests as a test characteristic. The second addresses the individual cognitive implications of time limits. This literature review will examine these two areas and discuss the research that addresses the relationship between the concepts. In addition, literature on MIRT is discussed.
Timed Tests –The Test Characteristic
Time limits are a concern when evaluating a test because the validity of the test may be compromised if the time limits influence the measurement of the construct of interest. To explore this issue, this section will discuss the definition of a "speed" test versus a "power" test and describe how this area of concern has developed over the years. Next, the definition of speededness will be delineated, followed by a discussion of various methods of measuring speededness. The impact of random guessing and the measurement of speededness will be examined. There will be a discussion of the effect of speededness on the parameter estimates in item response theory (IRT) models, and lastly, there will be a discussion of computer-adaptive tests in a timed situation.
Speed vs. Power Tests
combination of speed and power. For instance, tests for measuring academic achievement are designed as power tests but usually have a time limit. Often, the time limits are set so that at least some individuals feel rushed, therefore making it a somewhat speeded test. The main problem with this as described by Wilhelm and Schulze (2002) is that "speeded
tests of reasoning ability do not equally tap the same construct" (p. 551).
Jacka (1996) are more forceful in saying "if speed of response is not an
al element of the task being measured, even a moderately speeded
y introduce an irrelevant source of difficulty which contaminates results"
(p. 14). To the extent that the time limit is affecting the measurement of the construct of interest, at least for some individuals, the validity of such tests is a concern. Although research on time limits has been continuing for many years, more work is still necessary to understand the full ramifications of time limits.
Of course there are some skills that should be evaluated with respect to both correct response and quickness of response. For instance, reading has long been measured with reading speed and comprehension (Wilson, 1989). Typing is another task that has been measured with speed and accuracy. Testing of these tasks may be done in a time-constrained situation, as the time limit is considered to be related to the construct of interest.
Headings and Subheadings
Cite references by (Name, Date)
ness of response. For instance, reading h
mprehension (Wilson, 1989). Typing is
and accuracy. Testing of these tasks ma

Design

- Overall approach
- Design process steps explained
- Go through each of your analysis steps in detail
- Often the longest Chapter
- Subheadings – (i.e. for facilities project)
  - Define the problem
  - Identify primary and support activities
  - Determine interrelationship
  - Determine space requirements
  - ……..

or

- Start with customer design constraints finish with design
  - Customer Design constraints
  - -….
  - Picture or diagram of process

Methods

- How did you test your design?
- DOE?
- Prototype?
- Performance measure current state and proposed state
- Do not report data here, only describe how you determined the results
- Explain in enough detail for another person to replicate

Results

- Report your data
  - Charts
  - Tables
  - Comment on meaning of the results
- Summarize main points of the data
- Are these results expected?
- Translate results into Economic terms (economics can be a separate chapter)

Conclusions

- Summarize the report
- What are the important implications?
- What did you learn about the subject?
- Refer back to the objectives
- How did you satisfy the problem?

References

- Use MLA consistently
- Check the Libraries web site for format
- Alphabetize
- Cite in the literature review (by name and date)

http://www.lib.calpoly.edu/research/citations/mla.html

Appendices

- Include summary tables, graphs, pictures, illustrations in the body of the report.
- Everything else include it here.
- Always reference appendices in the body of the report

Other tips

- Check the SP Guidelines for formatting
  - Title page
  - Headings and subheadings
- Cite others
- Label all tables and figures (cite when appropriate)
- Have someone edit your report
- Use third person or passive voice
- Use present tense unless something was done long ago.
  - Methods chapter is an exception.
- Audience is Junior in your major
- Start and finish each chapter with explanations what is included

Faculty must haves

- Literature review with at least 15 sources (10 published and copywrited)
- Context of the project
- Description of current and proposed state
- Economic analysis