



Writing a Research Proposal

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Components of a Research Proposal

1. Introduction

- Statement of the problem
- Review of related literature
- Statement of the hypothesis

2. Method

- Subjects
- Instruments
- Research design
- Procedure(s)

3. Data Analysis (your plan to analyze the data)



Statement of the Problem

1. For beginning researchers most difficult
2. Identify a general problem area (brain storm)
3. Narrow general problem to specific sub problem that is:
 - Of interest
 - Manageable
 - Information Available
 - Reasonable time frame



Review of the Related Literature

1. Typically viewed as necessary evil.
2. Systematic identification, location, and analysis of documents containing related information.
3. What has been done provides rationale for your research.
4. Avoid trying to include everything. More is not better.
5. Synthesize findings.

Review of the Related Literature

Statistical Significance

Significant

Non - Significant

E
F +
F
E
C -
T



Writing the Literature Review

1. Make an outline (identify topics and order)
2. Analyze each reference in terms of your outline.
3. Analyze subheading references for relationships or differences. Do not present references as a series of abstracts (i.e., so and so did this and so and so did that). Present a synthesis.
4. Write in such a way that references least related to problem are discussed first and those most related are discussed last.
5. End with summary.



HYPOTHESIS:

Definition and Purpose

1. Tentative explanation for certain behaviors, phenomena, or events that have occurred or will occur.
2. Formulated following the review of related literature and prior execution of study.
3. Entire study is determined by the hypothesis.



Characteristics of a Well Formulated Hypothesis

1. Consistent with previous research
2. Provides reasonable explanations
3. States clearly and concisely the expected relationship (or difference) between two variables and refines the variables in operational, measurable terms
4. A well stated hypothesis must be testable within some reasonable period of time

Types of Hypotheses

Hypotheses can be classified in two ways:

1. By how they are derived
(rationale/logic)

- + inductive (generalization based on specific observations)

- + deductive (derived from general theory)

Types of Hypotheses

Hypotheses can be classified in two ways:

2. How they are stated

- Declarative Hypotheses

- + non – directional

- + directional

- Null Hypotheses

Types of Hypotheses

Non – Directional Declarative Hypothesis

“There is a significant difference in the achievement of 10th grade biology students who are instructed using interactive multimedia and those who receive regular instruction only.”

The hypotheses states there is a significant difference, but does not suggest what the differences will be (no direction indicated).



Types of Hypotheses

Directional Declarative Hypothesis

“Tenth-grade biology students who are instructed using interactive multimedia achieve at a higher level than those who receive regular instruction only.”

In the above hypothesis, notice the stated direction (achieve at a higher level).



Types of Hypotheses

Null Hypothesis

“There is no difference in the achievement level of 10th grade biology students who are instructed using interactive multimedia and those who receive regular instructions.”