Research Topics

- Theory
- Personal Experience
- Replication

Theory

- An organized body of:
  - Concepts
  - Generalizations
  - Principles

  that can be investigated

Theories for Investigation

- Evolution
- Creationism
- Cognitive development
- Disappearance of Dinosaurs

Investigation of Theories

- Test aspects of theory
- To confirm or disconfirm a theory
- To test application or generalization of theory

Personal Experience for Investigation

- Questions about why is something so
- Personal interest
  - PDK - KAPPAN

Replication

- Repeating existing study
- Slight modification

Library

- Fewest studies
- Best used after topic selected

Narrowing the Topic

- Too broad
  - Requires too much of the researcher
  - Complicates the Organization
  - Complicates the Data
    - Collection
    - Results
  - Complicates the Interpretation

Quantitative Research

- Specific topic
- Hypothesis related to topic
- Specific strategies (instruments)
- Methods for analyzing data BEFORE initiating study

Qualitative Research

- More general topic
- Topic revised AFTER observation of setting, beginning of data collected, or pilot study
- Requires personal interaction
- THEN narrow topic

How to Narrow Topic

- Consider personal preference
- Choose topic
- Read sources of current status of research in field
- Search for further research in dissertations or professional journals
- ASK ADVISORS

SPEND TIME

- Most important step is to select an appropriate topic

Characteristics of Good Topics

FIRST

- Researchable
- Not philosophical or ethereal
- Can be investigated
- AVOID – SHOULD

Characteristics of Good Topics

SECOND

- Interesting

  If you are not interested then you cannot conduct a well organized, interesting, and developed research study

Characteristics of Good Topics

THIRD

- Significant

  How does your research contribute to the field?

Characteristics of Good Topics

FOURTH

- Manageable

  Topic is narrow and well defined

Stating the Topic

- Quantitative Studies
  - Indicates variable
  - Relationships of Variables
  - Nature of Participants
- Qualitative
  - Generally not as specific
  - Revised as research begins

Statement of Topic

- First component in introduction of research
- Plan and report
- Sets the tone of research
- Allows readers to understand research

Organization of Report

- Statement of problem
- Background of topic
- Justification for study (significance)
- Limitations of study
- Information to understand topic
- Contribution to theory or practice

Review of Literature

- PLAN PLAN PLAN

What is a Review the Literature?

A systematic identification, location, and analysis of documents containing information related to the problem / topic

That Means …….

Knowledge

- What has already been done
- What has already been said
- What has already been researched

- Avoids duplication
- Suggests what needs to be done

SCOPE

- Review of literature
  - Helps provide
    - Strategies
    - Specific procedures
    - Instruments
- A way of profit from others
- DON’T REINVENT THE WHEEL

Review of Literature

- Aids in data interpretation
  - Do your finds concur or contradict others?
  - Why?

Concur – suggest further study

Contradict – describe differences (suggest why differences occur)

Guidelines for Review

- Don’t include everything or everyone
- Abundant information?
  - Try another topic
  - Narrow topic
- Little research?
  - Look at related research
  - Broaden topic
- Assess the value of topic from the review of literature

Review of Literature

- How to Start
- Know the Library
  - Talk to librarians (What sources? What rules?)
  - Take a tour
  - Use the data base
  - Make a list of KEY words

Review of Educational Research

- Summarizes research on topics
- Can be used to business or educational settings
- Summarizes current and past research

Sources

- *Encyclopedia or Educational Research*
- *National Society for the Study of Education Yearbooks*
- *Encyclopedia of Human Development and Education: Theory, research and Studies*
- *The Handbook of Research on Teaching*
- *Review of Research in Education*

ERIC – Educational Resources Information Center

- 800,000 Topic
- Updated monthly
- Articles, books, thesis, conference papers, curricula, standards, guidelines

What about Books?

- Books are great source
  - Research on many topics
  - Lists of sources
  - Touchstone research studies

Dissertation Abstracts

- Abstracts from 1,000 colleges and universities
- Abstracts from 1980-today
- Contains references to studies from 1861

The Internet

- Valuable sites
  - Table 2.4 pages 58 and 59

Evaluating Sources

- **On** or **Off** topic
- Professional or Popular
- Research results or opinion
- Refereed or Non-referred

Evaluating Sources

- Date
- Sources used in study
- Evidence of support
- Confirm or disconfirm other sources
- Adds to information on topic

Internet

- Carefully evaluate sources
- Confirm information through other sources

Abstracting

- Read pages 65 through 67 Carefully!

Organization

- Outline ! Outline ! Outline !
  - Spending time now will save valuable time and frustration later
- Categorize information into large sections
- Within each large section create subcategories
- Examine outline carefully
- Have others examine outline

Sorting References

- Use outline as a guide
- Sort references into piles
- Overlapping – decide best fit
- Over represented
  - Choose most compelling sources
- Underrepresented
  - Back to library

Sorting References

- Leftovers ?
- Crate a new category
- Discard
- Information for introduction

Writing the Review

- Introduction to Review
  - Get readers attention
  - Opinion articles
  - Other reports

Writing the Review

- Work with subheadings rather than the whole review
- Link resources together
- Do not summarize each one

The “V” Factor

- Begin with references least related to topic
- End with references most related to topic

Summary of Review

- Clearly but concisely give key points leading to your implications

The Hypothesis

- Begin with a tentative hypothesis
- After reviewing the literature revise hypothesis

What is a Hypotheses ?

- Your prediction of results
- Your expectations of relationships between variables

Proving the Hypothesis

- NEVER !
- Data confirms or disconfirms hypothesis

The Hypothesis II

- Comes from a theory
- Comes from review of the literature
- Based on implications
- Not all have same worth

Characteristics of Hypothesis

- Based on reasoning
- Provides reasonable explanation for predicted outcomes
- States relationship between/among defined variables
- Testable within a reasonable time frame

Defined Variables?

Be specific:

- What is “low-level reader?”
- What are “2nd generation ESL students?”

Define variables immediately after stating hypothesis

Types of Hypotheses

Inductive or deductive

Declarative or null

Inductive or Deductive

- Inductive—a generalization based on observed relationships
- Deductive—these come from theory not observations: they must be logical implications of theory

Research Hypothesis

- States expected relationships
  - Non-directional—states there is a relationship
  - Directional—states the expected direction of relationship
  - Null—states no significant relationship or difference between/among variables

Null Hypothesis

- Hypothesis to us when little research has been done
- Rarely expresses the researchers expectations
- WHY?

The Hypothesis III

- Critical element of quantitative research
- Focuses study
  - Methods
  - Strategies
- Strength of quantitative research is in testing hypothesis

Hypothesis IV

- Qualitative studies
  - Rarely have hypothesis
  - Generate hypothesis

Stating the Hypothesis

- Page 75

P who get X do better on Y than
P who do not get X (or some other Z)

P= participants
X=treatment (the independent variable)
Y=observed outcome (the dependent variable)

Your Turn

With a partner try writing a hypothesis

95 seconds