

# From Research Ideas to Research Question

EDHE 6530

Pu-Shih Daniel Chen

# Overview

- Choosing a research topic
- How to ask research questions?
- APA assignment
- How to evaluate a literature review
- Questions on Assignments
  - Dissertation Literature Review Scoring Rubric
  - Draft of Research Questions

# How to choose a research topic?

- Your passion, interest, and expertise
- Related to a broader and more complex issue
- Availability of data
- Manageable (narrowly focused and carefully defined)
- The expertise of your advisor and committee
- Career aspiration
- Funding

# Where to find inspirations?

- Textbooks
- News
- Professional journals
- Dissertations
- Theories
- Your job
- Existing database

Share Your Research Interests

# What is research question?

- A research question is a well-crafted question that will guide the systematic planning of research. Formulating your questions precisely enables you to design a study with a good chance of answering them.

# Role of the Research Question

- Attempts to focus on a stated goal
- Gives direction to research process
- Suggests the hypothesis(es)

# How do you construct good research questions?

- Must be **CLEARLY** stated
- Must be **SIGNIFICANT**
- Must be **ETHICAL**
- Must be **FEASIBLE**
- Must indicate **RELATIONSHIP**



# Significance

- The educational significance of your study must be one/more of following:
  - Advance knowledge in the field
  - Improve practices
  - Help individual (person, school, agency)

# Research Question Clarity

- Operational definition
- Very specific meaning
- Ascribes meaning to concept and construct
- Specifies operations to measure – manipulate concept

# More on Operational Definitions

- Written in complete, grammatically correct sentences
- Two types of operational definitions:
  - **MEASURED** – measure of concept (e.g. IQ)
  - **EXPERIMENTAL** – steps to produce a certain condition (e.g. anxiety, frustration)
- Another way to define terms:
  - **CONSTITUTIVELY** – dictionary definition.

# Operational Definition

## Example

- **Anxiety** – If fear of shock were manipulated to vary anxiety levels., the levels of shock to which subjects were exposed in the different groups, and what the shock apparatus looked like, would be detailed.
- **Anxiety** was defined as a score of 50 or higher on the Anxiety Status Inventory Scale (ASIS).

# More Example

- For purposes of this study, first generation college students were defined as students who classified *both parents* as falling into the following categories of educational attainment: *grammar school or less, some high school, high school graduate, postsecondary school other than college*. Furthermore, to be included in the sample participants needed to indicate they were matriculating as full-time students without any previous higher education enrollment.

# More Example

- Financial need was defined as the amount of a student's first year educational expenses (room, board, tuition, and fees) the student estimates were covered from aid which must be repaid (loans).

# What are researchable questions?

- Data can provide answers
- No value judgments

# Sample of Researchable Questions

- Are there significant differences between more academically successful first generation college students (FGs) and FGs who are less successful academically on combinations of five factors (student background characteristics, agents of socialization, structural characteristics, institutional environment, and student effort)?



# Sample of Researchable Questions

- Is there a significant difference between client-centered therapy and behavior modification in client satisfaction among middle-aged adults?
- What is the effect of Ritalin on success rate in math of elementary school children?

# What are Nonresearchable Questions?

- Data **CANNOT** be collected to answer question
- Value judgment

# Sample Nonresearchable Questions

- Are children who attend Sunday School more likely to go to Heaven than children who do not?
- Is behavioral family therapy the **BEST** method for counselors to use with alienated youth?
- Which American university has the **MOST BEAUTIFUL** campus?

# Which are which?

- Does high school achievement influence the academic achievement of university students?

## **Researchable**

- What is the least effective way to teach grammar?

## **Nonresearchable**

# Which is which?

- Should elementary school teachers use the inquiry method to teach math concepts?

## **Value Judgment**

- Is there a significant difference in elementary student's math achievement between students taught by teachers using inquiry method and teachers using traditional method?

## **Researchable**

# Writing Your Own Questions

- Be within your area of expertise and interest
- Be able to collect data
- Be feasible
  - Time
  - Location
  - Resources
  - Money

# How to phrase research question

- What is the effect of [independent variable] on [dependent variable] among [population]
- Example
  - What is the effect of study skills on reading achievement among sixth grade students

# How to phrase research question?

- Is there a significant difference between [independent variable] and/versus [independent variable] on [dependent variable] among [population]?
- Example
  - Is there a significant difference between boys and girls on math achievement among at-risk students?



# Exercise

Write your own research questions!!

