

Design Methodology

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Week 7

- 
- ▶ Research stepping stones
 - ▶ Sources of research problem
 - ▶ Study population
 - ▶ Subject areas
 - ▶ Considerations in research problem
 - ▶ Formulation steps

Research **Questions**

- ▶ Making an answerable question out of a research idea.
- ▶ The question must be answered using available and established scientific research techniques and procedures.
- ▶ Scientific Analysis should not be attempted on questions which cannot be answered

Example of an **answerable** question:

Can regular exercising reduce an individual's cholesterol level?

Example of a (currently) **unanswerable** question:

Is time travel possible?

Research **Questions**

Characteristics of Good Research Question

▶ **Feasible**

- ▶ Meaning that is capable of being investigated with available resources

▶ **Clear**

▶ **Significant**

- ▶ Refers to the rationale for the study and its relationship to theory, knowledge or practice
- ▶ Research questions should be worth investigating (time, energy? Is the knowledge gained valuable?)

▶ **Ethical**

- ▶ Should not involve physical or psychological harm or damage to human beings or to the natural or social environment of which they are a part

Research **Questions**

- ▶ **Quantitative**

Does organizational commitment affect college completion of students?

- ▶ **Qualitative**

What kinds of experiences have students had while completing their degree?

Hypotheses

Hypotheses attempt to explain phenomena of interest.

A hypothesis is a proposition which is empirically testable.

It usually seeks to explain relationships between variables, and predict, and must be falsifiable

Typical hypotheses structures:

Conditional : If Condition X is fulfilled, then Outcome Y will result

Correlational : The value of Variable B is observed to be related with changes in the value of Variable A

Causal : The value of Variable X determines the value of Variable Y

Hypotheses

Students who have a higher perception of organizational commitment will also have a higher likelihood of completing college.

Research **Purpose**

- ▶ Identify the purpose statement
 - ▶ The major intent of the study
 - ▶ The participants in the study
- ▶ Narrow the purpose statement
 - ▶ Quantitative: Write research questions and/or hypothesis
 - ▶ Qualitative: Identify a central phenomenon and write subquestions

Research **Purpose**

To examine the **correlation** between **organizational commitment** and the rate of **college completion**