### Journal #4

Choose a problem within the school community (from before break).

Come up with a concise research question based around that problem.

How would you get the data/information to better understand the problem? Explain.

Kelationships Acadomes / Tracts · Teacher/Student Respect - Dietrotion - Bothroom Regulations · Favoritism / Bias - Out of class - Cool, why people do it - effects - School regardion on education - Vapon (Health concerns) College School Budget - Too low - Maintanance - Teachers - Pushing Politics/agenda - Population - Saritary Supplies - Where the maney goes. Mental Health - Awareness / understanding School Shootings - Preparedness - Fences/Security Teaching Strategies Bullying -Fear - Montal Health - AHendence

# Unit 2: Research Methods Table of Contents

- 1. Unit 2 Table of Contents
- 2. Notes: Overview of Research Methods
- 3. Freakonomics: Correlation and Causation
- 4. Solving a Problem in the School Community
- 5. Notes: Ethics
- 6. Notes: Methodology and Assignment
- 7. Survey

# Methodology

 The methodology is the general research strategy that outlines the way in which research is to be undertaken and, among other things, identifies the methods to be used in it.

- How you will collect your data
  - Survey, interviews, case study, experiment, etc.
- How you will analyze your data
  - Rubric, Statistical Analysis, Qualitative Analysis, etc.
- Why you will do it that way
- What are the limitations
  - No research is perfect. What are the flaws?

#### **Cross-sectional**

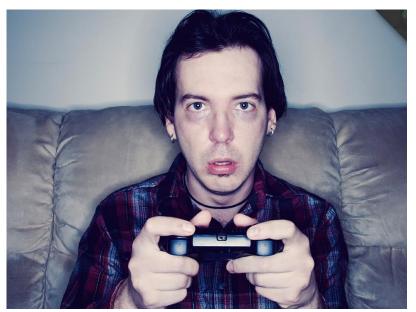
- A snap-shot or cross-section of the population at that time
- Study a number of individuals of different ages who have the same trait or characteristic of interest at a single time
- Simple in design
- Aimed at finding out the prevalence of a phenomenon, problem, attitude, or issue



• Study: How do individuals spend their free time?

- Cross-Sectional
- Survey 300 people
  - What do they do in their free time
  - What do they prefer to do in FT
  - How much FT do they have
  - Age
  - Sex

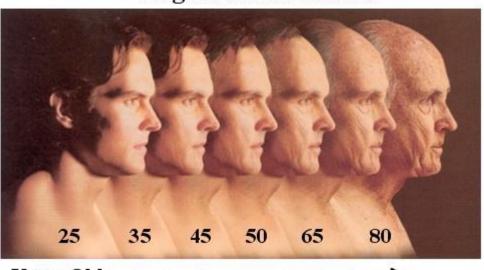




### Longitudinal

- Follow study subjects over a long period of time with repeated data collection throughout.
- Some longitudinal studies last several months, while others can last decades.
- Most are observational studies that seek to identify a correlation among various factors.

#### **Longitudinal Studies**



Years Old

• Study: How do individuals spend their free time?

- Longitudinal
- Survey 300 people every 4 years from 10yrs to 38yrs
  - What do they do in their free time
  - What do they prefer to do in FT
  - How much FT do they have
  - Age
  - Sex





### **Retrospective studies**

- Investigate a phenomenon or issue that has occurred in the past.
- Such studies most often involve secondary data collection, based upon data available from previous studies or databases.



• Study: How did individuals spend their free time in 1900?

- Retrospective
- Examine articles, books, magazines, records from 1900
  - What did they do in their free time?
  - How much FT do they have
  - Age
  - Sex





#### **Prospective studies**

- Seek to estimate the likelihood of an event or problem in the future.
- Attempt to predict what the outcome of an event will be.
- General science experiments are often classified as prospective studies because the experimenter must wait until the experiment runs its course in order to examine the effects.
- Randomized controlled trials are always prospective studies and often involve following a "cohort" of individuals to determine the relationship between various variables.

• Study: Who is more likely to play golf in their 50s?

- Prospective
- Look at past research to determine trends
- Design an experiment with
  - Kids exposed to golf at a young age vs not
  - Golfers at work vs not



#### **Cross-Sectional**

Right now

### Longitudinal

• Over time

### Retrospective

Past research

### **Prospective**

Making predictions

# In your Notebook: Methodology Design Models

### Come up with a study for each design model

- 1. Cross-Sectional
- 2. Longitudinal
- 3. Retrospective
- 4. Prospective
- Why would you use a longitudinal study over a crosssectional or retrospective? Explain
- What is an example of a potential longitudinal study that would not work as cross sectional or retrospective study?

# Case Study Research

- An investigator studies an individual or small group of individuals with an unusual condition or situation.
- Case studies are typically clinical in scope.
- Uses self-report measures to acquire quantifiable data on the subject.

#### **Limitations**

- On the negative side, they tend to apply only to individuals with similar characteristics rather than to the general population.
- The high likelihood of the investigator's biases affecting subjects' responses limits the generalizability of this method.

## Research with Existing Data

- Using data that other social scientists have already collected.
- The use of publicly accessible information is known as secondary analysis
- Most common in situations in which collecting new data is impractical or unnecessary.
- Sociologists may obtain statistical data for analysis from businesses, academic institutions, and governmental agencies.

#### Limitations

You may not be able to find the exact data you are searching for

### Observational Research

- Direct observation of subjects' reactions, either in a laboratory (called **laboratory observation**) or in a natural setting (called **naturalistic observation**).
- Reduces the possibility that subjects will give dishonest accounts of the experiences, not take the study seriously, fail to remember, or feel embarrassed.

#### Limitations

- Subject bias is common, because volunteer subjects may not be representative of the general public.
- Individuals who agree to observation and monitoring may function differently than those who do not.

# Participant Observation

- Become a member of the subjects' community.
- Observe what actually occurs within a community, and then consider that information within the political, economic, social, and religious systems of that community.
- Cross-cultural research demonstrates that Western cultural standards do not necessarily apply to other societies. What may be "normal" or acceptable for one group may be "abnormal" or unacceptable for another.

#### Limitations

- You may not be welcome in the community
- You may cause behaviors to change based on your presence