LECTURE - IV

RESEARCH METHODS
CAUSE AND EFFECT

- Action
- Reaction
- Co-action
- Chain reaction
- Example: Touch Sugar
TYPES OF RESEARCH

- Quantitative
  Exact Phenomena

- Qualitative
  Spread Phenomena
RESEARCH METHODS

- Descriptive Methods.
- Predictive (Relational) Methods
- Explanatory Methods
DESCRIPTIVE METHODS

- **Observational Method.**
  - Naturistic Observations
  - Laboratory Observation

- **Case Study Method**
  - Selected site or Individual
DESCRIPTIVE METHODS

- **Survey Method**
  - Population
  - Sample
  - Random Sampling
  - Stratified Randomized Sampling.

- **Archive Method**
  - Use old data

- **Qualitative Method**
  - Use qualities in nature time vs. growth.
### QUESTIONS FOR SURVEY

**Table 8.1 Examples of types of survey questions**

#### Open-ended

Has your college experience been satisfying thus far?

________________________

#### Closed-ended

Has your college experience been satisfying thus far?

Yes____  No_____ 

#### Partially open-ended

With regard to your college experience, which of the following factors do you find satisfying?

Academics____

Relationships____

Residence halls____

Residence life____

Social life____

Food service____

Other____

#### Likert rating scale

I am very satisfied with my college experience.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

Correlational Method

Positive relationship
- Both variables increase.
- Example: Ht. + Wt., Age + Ht.

Negative Relationship
- One variable increase the second one decreases.
- Example: Elevation Vs Temperature.
Quasi – experimental Method

- Same individuals or Materials in different set of environment.
- Example: Group Behavior Crows, elephants, mob.
- Subject or Participant Variable.
- Alternative Explanation.
EXPLANATORY METHODS

- **Experimental Method**
  - Cause and effect relation.
  - Description and Prediction.
  - Answers When + Why.
  - Basic Premise.
    - Control base line.
    - Independent Variable and dependent variable.
    - The variables.
    - Experimental group/material.
<table>
<thead>
<tr>
<th>GOAL MET</th>
<th>RESEARCH METHODS</th>
<th>ADVANTAGES/DISADVANTAGES</th>
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<td>Description</td>
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<td></td>
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<td>Does not support reliable predictions</td>
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<td></td>
<td>Survey method</td>
<td>Does not support cause-and-effect explanations</td>
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<td>Correlational method</td>
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<tr>
<td></td>
<td>Quasi-experimental method</td>
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<td></td>
<td></td>
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<tr>
<td>Explanation</td>
<td>Experimental method</td>
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OBSERVATIONS

- Undisguised – Participant.
- Disguised – Non Participant.
- Laboratory.
  - Less Costly.
  - Less Time Consuming.
# Features of Observation

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<th>Features of Types of Observational Studies</th>
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<td><strong>Naturalistic</strong></td>
<td><strong>Laboratory</strong></td>
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<tr>
<td><strong>Description</strong></td>
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<td><strong>Options</strong></td>
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<td></td>
<td>Disguised versus undisguised</td>
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<tr>
<td><strong>Means of data collection</strong></td>
<td>Narrative records</td>
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<td>Checklists</td>
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<td>Time</td>
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<td>Lack of control</td>
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**In Review**

- Features of Types of Observational Studies

**Naturalistic**
- Description: Observing people or other animals in their natural habitats.
- Options: Participant versus nonparticipant, Disguised versus undisguised.
- Means of data collection: Narrative records, Checklists.
- Concerns: Reactivity, Expectancy effects, Time, Money, Lack of control.

**Laboratory**
- Description: Observing people or other animals in a contrived setting, usually a laboratory.
- Options: Participant versus nonparticipant, Disguised versus undisguised.
- Means of data collection: Narrative records, Checklists.
- Concerns: Reactivity, Expectancy effects, Lack of flexibility.
DATA COLLECTION

- Narrative Record.
- Check Lists.
- Tabloid Data.
- Digital Data.
- Pictorial Data.
LIMITATIONS

- Hidden Factor.
- Equipment – Non Availability.
- Phrenology.
- One Study.
- Past Theories.
1. Set up a research study for effect of use of cell phone on drivers.

2. Explain the difference between qualitative and Quantitative research.

3. Which is better? Natural or Laboratory Observation.