

# Surveys in the Classroom

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# Workshop Focus Areas:

- When and how to use surveys in the classroom
  - As an assessment technique
  - To conduct research on teaching and learning
- Principles of question construction
- Principles of questionnaire design

# The Total Design Method:

(DILLMAN, DON A. 1978. MAIL & TELEPHONE SURVEYS: THE TOTAL DESIGN METHOD. NEW YORK: JOHN WILEY & SONS INC.)

- Surveys should be thought of as a form of interaction based on the rules of social exchange
  - Respondents act on the basis of what they expect to receive for their interaction
  - Follow the “golden rule”
- Benefits of using surveys to collect data
  - Low social costs
  - Amount of effort and time
  - Reinforces feeling of trust: confidentiality and anonymity

# When to Use Surveys in the Classroom:

- To evaluate instructors
  - Student assessment of instruction (SAIs)
  - Student assessment of specific instructional techniques
- To identify student preferences
  - Learning styles and related instructional preferences
  - Prior knowledge of topic areas
  - Special topics of interest related to the course
- To evaluate student comprehension of the material
  - What did students get out of the class session?
  - What questions do students have about the class material?

# When to Use Surveys in the Classroom:

- To conduct research on the Scholarship of Teaching and Learning
  - For example, Measuring Classroom Instructional Processes
    - Example Research Question 1: Do students and teachers hold similar views about classroom interaction?
    - Example Research Question 2: Is there a relationship between teaching techniques and the amount of participation that occurs?
    - Example Research Question 3: What are the behavioral correlates of effective teaching?
- The Trick: Representing these questions in a survey.

# Framework for SoTL Questions

(SIMKINS, SCOTT. 2008. "IT'S ALL ABOUT LEARNING." WCU SoTL RETREAT.)

- 4 Core Practices:
  - (1) Framing questions
  - (2) Gathering and Exploring Evidence
  - (3) Trying out and refining new insights in the classroom
  - (4) Going public with what is learned in ways that others can build on

# Examples of SoTL Survey Research

(1) **Laura Delong Frost, Department of Chemistry, Georgia Southern U.**

## **Research Questions:**

- What is the level of student interest in chemistry?
- Does an integrated curriculum increase student interest in the course?
- What aspects of work group experience impact course interest level?

## **Survey Questions:**

- What was your level of interest in this subject before taking the course?
- What was your level of interest in this subject after taking the course?
- What has been the most positive part of your group work experience in this class?
- What has been the most negative part of your group work experience in this class?
- If you could change anything about the way this course is designed, what would you change?

# Examples of SoTL Survey Research

(2) **Karen L. Hornsby, Department of Philosophy, NC A&T U.**

## **Research Questions:**

- What does deep ethical understanding look like?
- How can we measure the progression of this aptitude?

## **Survey Questions (pre-survey):**

- What ethics courses or classes where ethics was discussed have you previously taken in high school or college?
- The law and morality are essentially the same (strongly agree to strongly disagree).
- Physician assisted suicide is always morally wrong (strongly agree to strongly disagree).
- Identify three things that you think are morally wrong.

## **Published Article:**

Hornsby, Karen L. 2007. "Developing & Assessing Undergraduates' Moral Reasoning Skills." *International Journal for the Scholarship of Teaching & Learning* 1(2): 1-18.

# Examples of SoTL Survey Research

(3) Valerie Dean O'Loughlin, Medical Sciences Program, Indiana U.

## Research Questions:

- Can a large science course incorporate a student-participatory and group-focused interactive learning experience?
- Can a professor still cover the course content while also letting students take some control of their own learning in the classroom?
- Will incorporating these changes result in overall better student performance in the course?

## Survey Questions:

- What is working for you in this course?
- What would you like to see more of in this course?
- What was the muddiest point in this lecture? What needs more clarification?

# Examples of SoTL Survey Research

## (4) Bernice Pescosolido, Department of Sociology, Indiana U.

### Research Questions:

- How might we define and measure “consumerism” in higher education?
- What is the prevalence of consumerism among IUB undergraduates?
- Are there characteristics that separate IUB undergraduates who do and do not embrace this perspective?

### Survey Questions:

- (consumerist) I think of my education as a product I am buying (strongly agree to strongly disagree).
- (consumerist) My tuition dollars entitle me to certain benefits (strongly agree to strongly disagree).
- (critical thinking skills) I always do better in classes where I am expected to think things out for myself (strongly agree to strongly disagree).

# How to Use Surveys in the Classroom:

- Type of Survey: Self-Administered Questionnaire
  - Paper vs. Electronic
  - Time, effort, and monetary considerations
- When to Administer
  - Choosing your sample
  - Number of data collection times
  - During class time vs. outside of class time
  - Other things to consider

# Steps in the Research Process:

## Let's Take A Step Back . . . First Things First!

→ For Your SoTL Project:

- Select a general topic of study
- Narrow down the topic to focus on specific research questions for study
- Review past research related to your research questions
- Develop a hypothesis or hypotheses to reflect your research question(s)
- Design the study → Conduct survey research using a self-administered survey (potentially supplemented with other methods)

# Steps in Conducting a Survey:

- Once you have decided how to administer the survey . . .
  - Face-to-face, self-administered (e.g., paper, electronic)
- Decide on the type of questions and response categories you will use . . .
  - Structured vs. unstructured
  - Closed vs. open-ended
- Then design the layout
  - Stylistic considerations are important because they increase response, validity, and reliability

# Steps in Conducting a Survey:

- Plan how to record data . . .
  - Choose software program (e.g., Excel, SPSS, etc.)
- **PILOT TEST** the survey instrument . . .
  - Why? Who? How many times?
- Administer the survey . . .
- Record the data . . .
- And analyze the data

# Appropriate Research Questions for Surveys

## Questions about self-reported:

- Beliefs
- Attitudes
- Opinions
- Characteristics
- Expectations
- Self-classifications
- Knowledge

# A Survey Question . . .

- Should represent one variable of interest, not the relationship between variables
- Should get at “**what**” and “**how**” research questions, not “**why**” research questions
  - Issues related to causality (i.e., temporal order and controlling for alternative explanations)

# Writing a Question:

- What is the purpose of the question?
  - Content? Scope?
- What question wording will you use?
- What response format do you want to use?
  - Open ended vs. Closed ended
  - Structured vs. Unstructured

# Principles of Good Question Writing:

- **2 Key Principles:**

(1) Keep the respondent's perspective in mind.

(2) Avoid confusion related to wording issues

- Use simple vocabulary and grammar

- Consider the effects of specific words or phrases

NOTE: KEY PRINCIPLES AND SPECIFIC PRINCIPLES ARE DERIVED FROM NEUMAN (2004).

# Principles of Good Question Writing:

- Both principles reduce error because:
  - They increase the respondent's willingness to answer, which increases response.
  - They increase reliability and validity.
  - Note: Less error = better data

# Principles of Good Question Writing:

- **10 Specific Principles:**

- (1) Avoid jargon, slang, and abbreviations**

- Target the vocabulary and grammar to the respondents sampled
- For the general public, use an 8<sup>th</sup> grade vocabulary
- **POOR EXAMPLE:** “Did you get annihilated last night?”
- **IMPROVED EXAMPLE:** “About how many drinks did you have last night?”

# Principles of Good Question Writing:

## (2) Avoid ambiguity, confusion, and vagueness

- Don't make implicit assumptions without thinking about your respondents
- Don't use vague/undefined words or response categories (e.g., “regularly”)
- POOR EXAMPLE: “Do you go to the movies a lot?”
- IMPROVED EXAMPLE: “In a typical week, about how many times do you pay to see a movie outside of your home?”

# Principles of Good Question Writing:

## (3) Avoid emotional language and prestige bias

- Use neutral language
- POOR EXAMPLE: “The respected Jones Commission documents that a staggering \$350 billion in tax dollars are wasted every year. Is eliminating government waste a top priority for you?”
- IMPROVED EXAMPLE: “How important is it to you that Congress adopt measures to reduce government waste?”

# Principles of Good Question Writing:

## (4) Avoid double-barreled questions

- Ask two separate questions
- POOR QUESTION: “ Do you support raising education and military spending?”
- IMPROVED QUESTION: “Do you support raising education spending?” “Do you support raising military spending?”

# Principles of Good Question Writing:

## (5) Avoid leading questions

- Do not word questions in a way that leads the respondent to choose one response over another
- POOR QUESTION: “Were you a good citizen who voted in the last presidential election?”
- IMPROVED QUESTION: “Did you vote in the last presidential election?”

# Principles of Good Question Writing:

## (6) Avoid asking questions that are beyond the respondent's capabilities

- Recall (and behavior): Give fixed time frame and location references
- Respondent tendency to compress time and over-report events when asked about time (a.k.a., telescope)
- Use filter/contingency questions
- POOR QUESTION: “Two years ago, how many hours did you exercise per week?”
- IMPROVED QUESTION: “In the past two weeks, how many hours did you exercise on a typical day?”

# Principles of Good Question Writing:

## (7) Avoid false premises

- Never begin with a premise because all respondents may not agree with it
- POOR QUESTION: “When did you stop beating your child?”
- IMPROVED QUESTION: “Have you ever slapped, punched, or hit your child?”

# Principles of Good Question Writing:

## (8) Avoid asking about future intentions

- Survey responses are poor predictors of behavior
- POOR QUESTION: “After you graduate from college and get a job, will you invest money in the stock market?”
- IMPROVED QUESTION: “Do you have definite plans to invest money in the stock market in the next month?”

## (9) **Avoid double negatives**

- They are confusing to respondents
- **POOR QUESTION:** “Do you disagree with people who do not want to increase education taxes?”
- **IMPROVED QUESTION:** “There is a proposal to increase education taxes. Do you agree or disagree with the proposal?”

# Principles of Good Question Writing:

## (10) Avoid overlapping or unbalanced response categories

- Use mutually exclusive and mutually exhaustive response categories
- POOR QUESTION: “Was the service you received outstanding, excellent, superior, or good?”
- IMPROVED QUESTION: “Was the service you received outstanding, very good, adequate, or poor?”

## Some Other Question Issues:

- Knowledge Questions
- Threatening Questions
- Open vs. Closed Ended Response Categories
- Non-attitudes and Middle Position Response Categories
- Agree/Disagree, Rankings, or Ratings?

# Questionnaire DESIGN Issues:

- Length of Questionnaire
  - Always keep the survey as short as possible
- Question Order/Sequence
  - Importance of FLOW

# Questionnaire DESIGN Issues:

- Format and Layout Checklist:
  - ✓ Begin with easy, non-threatening questions (think about the respondent's first impression)
  - ✓ Place more difficult or threatening questions near the end because they will be more likely to answer the questions
  - ✓ Ask about one topic at a time (place similar questions together)
  - ✓ Use transition statements when changing topics
  - ✓ Reduce the tendency to keep checking the same response (a.k.a., response set)
  - ✓ Use a flow diagram for filter/contingency questions

# Interpreting and Using Your Survey Data:

- The Next Step . . . . .
- The Next Workshop!

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