CHAPTER TWO: Doing Sociology: Research Methods

LEARNING OBJECTIVES

1. Explain the steps in the sociological research process.
2. Analyze the strengths and weaknesses of the various research designs.
3. Know what independent and dependent variables are.
4. Know what sampling is and how to create a representative sample.
5. Recognize researcher bias and how it can invalidate a study.
6. Explain the strengths and weaknesses of the various measures of central tendency.
7. Read and understand the contents of a table.
8. Explain the concepts of reliability and validity.
9. Understand the problems of objectivity and ethical issues that arise in sociological research

CHAPTER OUTLINE

I. The Research Process
- A. Define the Problem
- B. Review Previous Research
- C. Develop One or More Hypothesis
- D. Determine the Research Design
  1. Survey
  2. Interview
  3. Participant Observation
  4. Secondary Analysis
- E. Define the Sample and Collect data
  1. Sample
  2. Sampling Error
  3. Stratified Random Sample
- F. Researcher Bias
- G. Analyze the Data and Draw Conclusions
- H. Prepare the Research Report

II. Objectivity in Social Research

III. Ethical Issues in Sociological Research
- A. Sociology in Strange Places

IV. Summary

KEY CONCEPTS

research process: a sequence of steps when designing a research project; involves defining the problem, reviewing previous research on the topic, developing one or more hypotheses, determining the research design, defining the sample and collecting data, analyzing and interpreting the data, and preparing the research report.

empirical question: a question that can be answered by observing and analyzing the world as it is known.

operational definition: a definition of an abstract concept in terms of the observable features that

describe the thing being investigated.

hypothesis: a testable statement about the relationships between two or more empirical variables.

variable: anything that can change (vary).

statement of causality: a declaration that something brings about, influences, or changes something else.

statement of association: a declaration that changes in one thing are related to changes in another, but that one does not necessarily cause the other.

independent variable: a factor that causes or changes another variable.

dependent variable: a factor that is influenced by the independent variable.

survey: a research method in which a population, or a portion thereof, is questioned in order to reveal specific facts about itself.

cross-sectional study: a study that cuts across a population at a given time.

longitudinal research: research that investigates a population over a period of time.

interview: a conversation between two (or occasionally more) individuals in which one party attempts to gain information from the other(s) by asking a series of questions.

structured interview: a research interview entirely predetermined by a questionnaire (or so-called interview schedule) that is followed rigidly.

semi-structured or open-ended interview: a form of research conversation in which the investigator asks a list of questions but is free to vary them or even to make up new questions on topics that take on importance in the course of the interview.

participant observation: researchers entering into a group's activities and observing the group members.

experiment: an investigation in which the variables being studied are controlled and the researcher obtains the results through precise observation and measurement.

secondary analysis: the process of using data that has been collected by others.

sample: the particular subset of the population chosen for study.

sampling: a research technique through which investigators study a manageable number of people, known as the sample, selected from a larger population or group.

representative sample: a sample that shows, in equivalent proportion, the significant variables that characterize the population as a whole.

sampling error: the failure to achieve a representative sample.

random sample: technique of selecting subjects so that each individual in the population has an equal chance of being chosen.

stratified random sample: a method to prevent certain groups from being under- or over-represented in a sample.

researcher bias: the tendency for researchers to select data that support, and to ignore data that seem to go against, their hypotheses.

blind investigators: investigators who do not know whether a specific subject belongs to the group of actual cases being investigated or to a comparison group.

double-blind investigators: investigators who are kept uninformed not only of the kinds of subjects (case subjects or comparison group subjects) they are studying but also of the hypotheses being tested.

analysis: the process through which large and complicated collections of scientific data are organized so that comparisons can be made and conclusions drawn.

validity: the extent to which a study tests what it was intended to test.

reliability: the extent to which the findings of a study are repeatable.

LECTURE AND CLASSROOM SUGGESTIONS

1. **The Research Process.** Choose a research study with which you are familiar. Select a topic you believe will appeal to students and follow it through each of the steps of the research process. You may want to construct a flowchart to emphasis the decisions and tradeoffs that are made at each step of the process. A handout that can be used to reinforce the information on the research process may be found in the Resources section at the end of this chapter. It is important to convey to students the contingent nature of research.

2. **Students and the Research Process.** After you have modeled the process for students, see if they can do it. Have the class agree on a particular problem they want to know more about. Then have them generate hypotheses, think about measurement and research design, etc. (If your class is a large lecture one, this activity can be done in small groups as well. Just allow more organization time as well as time for them to get together, as there will be more time conflicts with greater numbers of participants.)

3. **Sociologists as Detectives.** Tischler suggests in his introduction to the research process that sociological research and detective work have a lot in common. Use this metaphor to model the research process. You may want to draw explicitly on famous detectives from literature, film, or television. Not only does this make for a lively class, but also it connects sociological knowledge to things the students already know. Whenever you can make this kind of connection, you are engaged in a proven effective teaching and learning technique.

4. Researcher Bias. Discuss the phenomenon of the self-fulfilling prophecy, showing both how it introduces biases into research and how it can be controlled through techniques like random selection and blind and double-blind investigations. Pose situations to the class in which a researcher's objectivity may potentially be compromised even for laudable reasons (e.g., wanting desperately to find a cure for AIDS, desiring to find a magnitude and seriousness in the problem of homelessness such that politicians will be forced to take action, etc.).

5. Ethical Issues in Research. Pose some ethical dilemmas in research to the class; it usually is not hard to get a lively discussion going on this issue. The Tuskegee Experiment or Laud Humphrey's famous study are good discussion materials. Also, you may want to talk about the problem of reactive effects and efforts to research humans in a naturalistic setting. Given that the technology of "snooping" is highly advanced today, how far can we justifiably go in invading people's privacy, even in public places? Even when this invasion generates highly reliable data about people's social behavior?

STUDENT ACTIVITIES

1. Operational Definitions in Research. The first problem in research design is to define what it is you seek to measure or find information about from the people you will use in a sample. Tischler discusses the challenge of defining love. Here are some thinking exercises for small groups of students. How would you study vampires and their impact on American society? What kinds of data would you use? What is empirical about the study? Define a vampire or a range of vampires that you would include in your investigation. Take this cultural studies exercise seriously. Students can later do a content analysis of media portraying vampires. Do vampires in the content analysis represent something else in our society, such as gender roles, problems in relationships, generational experiences, or life passages? You can replace vampires with zombies or other cultural products of imagination, such as romatic love or perfect sex.

2. Decoding Popular Presentations of Research. Review Tischler's "How to Spot a Bogus Poll." Find relatively detailed presentations of social research findings in newspapers and magazines. Copy and pass this information out to the class after you have covered the research process. Then have the students go through it (collectively, in small groups, or individually as a writing assignment) and assess the strengths and weaknesses of the research along each step of the process. This experience makes them far more critical consumers of social science data.

3. Generating Hypotheses. Prepare in advance a number of lists of variables that may indeed be related, but do not indicate that relationship— simply list the variables. In class, divide students into groups and give each group a list of variables. Ask them to generate hypotheses around this list. They should be encouraged to begin by brainstorming—no idea is too wild or far out to be listed. This usually gets their creativity moving, particularly if you encourage consideration of virtually all hypotheses regardless of how farfetched they might seem initially.

4. Evaluating Research Designs. Pose a hypothesis to the students (or have them come up with one) and then, in small groups, have them discuss and write up how they would research the identical hypothesis using *each* of the three designs presented by in the text.

5. Representative Samples and Sampling Bias. Bring in examples of research reported in newspapers and magazines. Copy and pass it out to students. Then ask them to evaluate (possibly as a writing assignment) the representativeness of the samples used. Be sure you have some reasonably good as well as trashy examples. In the class discussion, make sure that students become aware of the whole range of possible biases (e.g., response rates and reactive effects of mail vs. phone vs. in person interviews). Give students as many examples and as much practice as possible in evaluating samples and thinking about how to ensure randomness.

6. **Reading Tables.** Copy one or more data tables of interest and hand them out to the class. Good sources of tables include the *Current Population Reports* from the U.S. Census and the *Monthly Labor Review,* which includes data on employment and income. As a writing assignment and/or in small groups, have the students analyze the data according to the criteria laid out by Tischler in "How to Read a Table." Another possibility is to ask students to generate hypotheses that are capable of being tested with the data you have given them. This is a pretty sophisticated application of knowledge and skills. If you use table analysis as a writing assignment, it is a good candidate for peer critique. Have students read each other's papers and give feedback on whether the table is summarized and analyzed clearly and accurately. This provides an alternate method for learning and reinforcing the necessary skill of table reading.

INTERNET ACTIVITIES

General Social Survey

http://www3.norc.org/GSS+Website/

The General Social Survey is one of the best research resources for longterm trends in U.S. society. Since

1972, the GSS has been one of the most frequent sources of variable survey data in social science. Secondary research reports are available, as well as code books and data sets for primary research. Have students explore relationships between variables using the GSS. Even a 100-level course without statistical background can learn about how variables are defined and how the research process is reported after a study.

Paula England Offers Data on Hook Up Culture – Sociological Images
http://thesocietypages.org/socimages/2012/02/15/paula-england-offers-data-on-hook-up-culture/
Watch Paula England's summary of her research on contemporary sex seeking hook ups. Have your students design a survey to discover student behavior and beliefs about dating that you can deliver over the Internet. Use a free survey application from the Internet to deliver the survey by email to the class. Ask student organizations if they would participate and distribute the survey to their members.What is sex? As Dr. England from Stanford showed, how students interpret what hooking up means and what actually happens in a hook up may vary from person to person and between genders. The definition of sex has recently come to debate in states such as North Carolina where only married couples are legally entitled to have consensual sex with privacy guaranteed. Single people may still be committing a code violation. Some people do not believe that oral sex or manual stimulation "counts" as full sex. Research debates over how to define sex. Write a definition and description for a research study. Jason Young and Paula England have published a classroom aid, The Media Education Foundation Study Guide, Understanding Hook Up Culture that is available online. Your students can locate it by title through Google.

The U.S. Government's Official Web Portal
http://www.usa.gov/
Émile Durkheim based his famous theories about suicide on data from the French Census. Explore secondary research sources for data about social science under the Topics tab on usa.gov. Have each student find a government website that organizes access to secondary data. Students can write a summary paragraph about the kind of research data that is available. Include the definition of the topic, description of charts, type of data, how it is reported, by what rate or category, and the number of cases in the survey. The class can post their findings on a class blog, wiki, or list.

RESOURCES

Earl R. Babbie. *The Practice of Social Research, 13th ed.* Wadsworth, 2013.
The most widely used and cited textbook for sociological methods in the United States.

Norman K. Denzin and Yvopnna S. Lincoln (eds.), *The SAGE Handbook of Qualitative Research, 4 ed.* Thousand Oaks, CA: Sage, 2011.
Often instructors devote more time to quantitative research as opposed to qualitative varieties. This classic anthology contains more than three dozen articles ranging from ethical issues in research to the techniques of observation