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PSC 502.01: MPA Research Methods

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PSC 502
MPA Research Methods
Fall 2006

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Course Description

This course covers the essential ingredients for designing and carrying out both academic and applied research. These ingredients include defining the research problem, formulating hypotheses or research questions, operationalizing key concepts or variables, and choosing appropriate methods for gathering and analyzing data.

Course Objectives

1. To understand the scientific method as a distinct way of "knowing reality."
2. To learn to distinguish social science academic research from applied institutional research.
3. To develop skill in writing research designs.

A specific goal of this course is to encourage and enable students in the MPA program to complete their required applied project (PSC 597).

Required Text

Chava Frankfort-Nachmias and David Nachmias, **Research Methods in the Social Sciences** (New York: St. Martins, 2000).

Course Requirements

Students are required to read all assigned readings, participate in class discussions, take one exam, and write two research designs (one social science and one applied). The annotated bibliography is worth 10 points, draft sections of the social science design are worth 20 points each, and the final research designs and exam are worth 100 points each.

A = 326-350	B+ = 305-314	B- = 280-290	
A- = 315-325	B = 291-304	C+ = 270-279	C = 256-269

Weekly Assignments

Wed., Sept. 6 The Scientific Method

Read Chapter 1 (pp. 2-7 and 18-19 only), skim Chapters 5 and 6 to get a sense of the three primary types of research design, and Melissa Wangler's research design on electronic reserve to get a sense of the style and form of the social science research design that you will write.

Wed., Sept. 13 Conceptualizing the Research Problem

Read Chapter 2 (pp. 24-31 only) and Paul Trout's "What Students Want" on electronic reserve. Seek to determine the "research problem" that Trout's article implies.

Wed., Sept. 20 Developing Hypotheses and Operationizing Variables

Read Chapter 3 and Kraft and Clary's article "Citizen Participation and the NIMBY Syndrome," paying careful attention to how the research problem was conceptualized and how the variables were operationalized (i.e., defined for purposes of measurement).

Wed., Sept 27 No Class – Submit Bibliography by Monday, Oct 2 (see below)

Wed., Oct 4 Research Ethics and Institutional Review

Read Chapter 4 and complete sections 1, 2, and 6 of the Online Research Ethics Course as follows: 1) Go to the University's Institutional Review Board (IRB) page at www.umt.edu/research/irb/irboverview.htm, 2) click on the link to "Online Research Ethics Course" (Option 2), and 3) complete sections 1, 2, and 6 and, at the end of each section, take the assessment quiz.

Wed., Oct. 11 Types of Research Designs

Read Chapters 5 and 6, and submit the Research Problem and Research Hypothesis sections of your research design by **Friday, October 13**.

Wed., Oct 18 Measurement and Sampling

Read Chapter 7 (pp. 138-49) and Chapter 8.

Wed., Oct 25 Survey Research and Questionnaire Construction

Read Chapters 10 and 11, and pp. 420-424, and work on your Methodology section.

Wed., Nov. 1 Other Data Collection Methods and Data Analysis

Skim Chapters 9, 12, and 13 and read Chapter 14.

Submit the draft of your research design, i.e., the Research Methodology section and rewrites of the first two sections by **Friday, Nov. 3**. Ideally, your survey instrument will be appended.

Wed., Nov. 8 No Class – Submit your **Final Exam** by Friday, Nov. 10.

Wed., Nov. 15 Data Analysis

Take a look at Appendix A to familiarize yourself with SPSS and then meet in the Social Science Research Lab at 4:10 pm (Social Science Building 254). **Final Draft of Research Design due Friday, Nov. 17.**

Wed., Nov. 22 ****Thanksgiving Holiday****

Wed., Nov. 29 Introduction to Applied Research

Wed., Dec. 6 and 13 Continued Work on Applied Research Designs

****Applied Research Designs due by Friday, Dec. 15****

Writing Assignments

Design #1: Social Science Research Design -- The Situation

As a long-time college instructor, you have noticed that the performance levels of the students in your Freshman American Government course have declined in recent years. And, as a social scientist, you have decided to conduct research investigating the cause(s) of variations in student performance levels. Your thinking is initially informed by an article by Paul Trout, but you do additional reading to investigate this problem. Because of time and financial constraints, you have decided to investigate the problem by surveying students in a Freshman-level American government course.

You begin by reviewing the available literature relating to your "research problem" and writing an annotated bibliography with 8-10 entries (approximately 5-6 pages). Although articles such as Trout's can be included, the primary focus is finding scholarly research on the subject. In actual practice, you would read everything available relating to your "research problem", but time does not allow this here. **Annotated bibliography due by Monday, October 2.**

You next begin the task of drafting your research design (proposal). It is roughly 7-10 pages in length (double-spaced) and is comprised of three sections: 1) Problem Statement; 2) Research Hypothesis; 3) Research Methodology.

****Problem Statement and Research Hypothesis sections are due by Friday, October 13****

****Methodology section, with re-writes, is due Friday, November 3****

****Final draft of Research Design #1 is due Friday, November 17****

Research Design #2: Applied Institutional Research: You are a manager, program administrator, or administrative assistant in a government or nonprofit agency who has identified a problem that is undermining or threatening to undermine the performance and success of your agency, or who has identified an opportunity for improving organizational performance. You decide to address the problem or seize the opportunity by conducting research and generating appropriate conclusions and/or recommendations. Accordingly, you write a research design of approximately 5 pages in length. You then get it approved by your boss (me) and proceed to carry out the proposed research and write up the report as required to obtain your MPA degree (PSC 597).

****Applied Research Design due by Friday, December 15****

Take-Home Exam (due Friday, Nov. 10).

Write on all of the following using proper essay form:

1. The Scientific Method. Explain what is unique about the scientific method as a way of acquiring knowledge, i.e., how it is unique in terms of assumptions and methods, and offer your assessment of both its usefulness and its limitations.

Warning: This questions calls for more than linear analysis (lists and steps). You must address the larger questions of concern, e.g., does the scientific method enable us to "know social reality"? Does it help us live full, rich, and just lives?

2. Moving from Conceptualization to Measurement. You have decided to study loneliness among senior citizens using a survey methodology. Explain how you will go about moving from the conceptual level to the empirical level, i.e., the level at which something can be counted.

Warning: This question calls for more than linear analysis. You must address the larger questions of concern, e.g., can we really measure things that don't have empirical existence? Can we really "count" loneliness, alienation, anti-intellectualism, or nimbyism??

3. Sampling and Generalizing. You have decided to study loneliness among senior citizens in Missoula County using a survey. Define your research population (i.e., give an example of a research population statement), identify the sampling frame you will use and possible problems with it, and explain how you can study some subset of the population (i.e., your sample) and still be able to generalize the results of the study to the research population as a whole.

Warning: This question calls for more than linear analysis. You must address the larger questions of concern, e.g., how can we study 400 people and draw conclusions about 4,000, or 40,000, or even 4,000,000? HOW is this possible; what is the underlying theory?

4. The Classic Experiment. You wish to determine whether a training program improves the skills of employees using an experimental design. Explain the logic of experimentation and describe how you might conduct an experiment in this instance. In the process, define internal

validity, identify some of the intrinsic and extrinsic factors that may threaten internal validity, and explain how the features of the classic experimental design (e.g., pretesting, control groups) allow you to safeguard it.

Warning: This question also comes with its own context: how can we ensure the validity of the results of our research?

Score Sheet for Evaluating Social Science Research Designs

A research design describes the steps that will be taken in completing a research project. Its purpose is to guide the researcher in collecting, analyzing, and interpreting data. It should contain the three major components identified below.

Each item below will be scored on a five point scale, with 5 being "excellent" and 1 being "poor."

I. Problem Statement

_____ 1. The design presents a clear, concise overview of the problem to be addressed by the proposed research.

_____ 2. The design presents a clear statement of the purpose(s) of the proposed research.

_____ 3. The significance of the research problem is clearly established with reference to one or more of the following:

a) results will help policymakers address a societal or organizational problem that holds serious consequences;

b) results will help fill a significant research gap, i.e., a gap in our substantive knowledge.

c) results will help build theoretical knowledge regarding the relationships among important variables.

d) results will clarify problems in ways that will facilitate further research and exploration.

_____ 4. The research literature is cited, where appropriate, to demonstrate the relationship of the proposed research to the previous research and/or to place the proposed research in the context of a larger theoretical framework.

II. Research Hypotheses

_____ 5. Hypotheses to be tested are clearly stated and their rationales clearly explained.

_____ 6. The proposed research is limited in scope to goals that can be achieved realistically.

_____ 7. Independent and dependent variables are identified and the hypothesized relationship between them is described and/or illustrated with a causal model.

_____ 8. Variables are operationally defined in a way that allows for their accurate measurement.

III. Research Methodology

_____ 9. The research population (and sample population where appropriate) is defined and the method of collecting data is clearly explained.

_____ 10. Data collection methods are appropriate to stated research objectives.

_____ 11. Methods for analyzing the data and presenting results are clearly explained and are appropriate to testing research hypotheses.

_____ 12. Limitations of the methodology and/or potential threats to validity are identified and discussed.

IV. Other

_____ 13. Design is well written and carefully edited.

_____ 14. Design utilizes appropriate reference and bibliographic style.