

San Francisco State University
Spring 2007

PA 706-01
RESEARCH METHODS AND DATA ANALYSIS II
Mondays 7:00 - 9:45 PM
HSS building: classroom 259 and computer lab 380

Professor: Sheldon Gen, Ph.D.

Office: HSS room 235

Hours: Mondays 6:00-7:00 PM, Wednesdays 3:00-4:00 PM, and by appointment.

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Course website accessible at: <http://ilearn.sfsu.edu/>

Introduction

How is research related to public administration? Consider these recent quotes made in various fields of public administration:

“Only 12 percent of those surveyed -- sinking to 5 percent in San Francisco -- think Schwarzenegger has a great deal of understanding of the Bay Area and its residents, while a third believe he has little or no concern for the region.”¹

“Tuition and fees at public colleges soared a record 14 percent this year, continuing a quarter-century trend of higher-education prices rocketing faster than inflation.”²

“The results indicate that California's Three Strikes law will not accelerate the rate of growth of the elderly prison population.”³

“Public policy students, whose training is intended to produce managers, advocates, and analysts for public programs, are increasingly likely to enter private-sector employment upon graduation and less likely than their predecessors to plan long-term careers in government.”⁴

Each of these claims is based on empirical evidence gathered by accepted methods of research. Countless other claims fill journals, government reports, and news media. Increasingly, the management of our government and organizations is driven by knowledge obtained through empirical research. Such knowledge informs important decisions such as: which programs to cut, or which taxes to raise, during a budget crisis; where to focus limited resources; how to alleviate social problems like homelessness; etc. Institutions and entire markets have evolved to meet the demand for such knowledge (e.g., Congressional Research Service, General Accounting Office, Rand Corporation, Brookings Institute, Cato Institute, university research organizations, etc.), and consumers of such knowledge range from world leaders to the general public.

This course is the **second** in a two-part series on the conduct of empirical research in public administration. The goal of the series is to build and hone your research skills toward the production of knowledge relevant to the administration of public agencies and non-profit organizations. The first course, PA 705, focused on fundamental concepts in research, designs for empirical research, and data collection. This second course, PA 706, focuses on

¹ Wildermuth, J. (2005, January 13). Locals like governor, trust area legislators. *San Francisco Chronicle*.

² Price, T. (2003). Should Congress penalize schools that raise fees? *CQ Researcher*, 13(42).

³ Auerhahn, K. (2002). Selective incapacitation, three strikes, and the problem of aging prison populations: Using simulation modeling to see the future. *Criminology and Public Policy*, 1(3).

⁴ Chetkovich, C. (2003). What's in a sector? The shifting career plans of public policy students. *Public Administration Review*, 63(6): 660-674.

data analysis. This includes introductions to a popular method of qualitative analysis (content analysis) and many quantitative methods (descriptive and inferential).

Also, this course will devote a significant amount of time to the important managerial skill of critiquing empirical research. Public administrators (and even professors) spend far more time reading research than producing it. We read research to help us make decisions in our jobs. But we must know how to tell “good” research from “bad”. Thus, while we will certainly hone our skills in conducting research, we will also develop ones in judging the research we read.

Objectives

The objectives for this course are as follows:

- To understand and practice methods of data analysis in empirical research
- To implement an empirical research project of your design
- To critically review research done by others

Procedure

The objectives will be met through reading assignments, class discussions and activities, homework assignments, and a research project. Assigned readings and homework should be completed prior to the class meetings in which they are listed. This will facilitate class discussions and activities. Lectures and readings will reinforce each other. Thus, class attendance and participation is critical to your success in this course. Specifics elements of these procedures are as follows:

Grading

Your final grade in the class will be based upon four types of activities described below. Details on these will be discussed in class.

- *Homework (30% total, equally weighted)*: Four assignments will provide practical experience in major methods of data analysis and the evaluation of existing research.
- *Multi-method research project (30%)*: You will implement the multi-method research project you proposed in PA 705. The project will result in a professional quality report and display.
- *Class participation (10%)*: You are expected to participate in class discussions and activities. You are also required to answer assigned problems from the text, and be prepared to demonstrate your solutions and discuss your answers in class.
- *Examination (30% total)*: One test at the end of the semester will cover the major concepts covered in the course.

In general, your grade for each assignment will follow these guidelines:

<i>Grade</i>	<i>Standard</i>
A (90-100%)	Meets all requirements of the assignment in a sound, clear, thorough, and professionally presented manner. Analytic tools are applied appropriately, performed correctly, and interpretations are accurate.
B (80-89%)	Meets almost all of the requirements in a sound, clear, thorough, and professionally presented manner; or meets all of the requirements but lacks soundness, clarity, thoroughness, or professional presentation. Analytic tools are mostly applied appropriately, performed correctly, and interpretations are mostly accurate.
C (70-79%)	Meets some of the requirements in a sound, clear, thorough, and professionally presented manner; or meets all of the requirements but lacks a combination of soundness, clarity, thoroughness, or professional presentation. Analytic tools are not applied appropriately, or not performed correctly, or interpretations are not accurate.
D or F (<70%)	Less than the standard for “C”. Both of these grades are failing.

Texts and Resources

There are three **required texts** for this course (two were also required in PA 705, so there is only one *new* text for this class):

- **(Berg)** Berg, B. (2004). *Qualitative Research Methods for the Social Sciences*. 5th edition. San Francisco: Pearson, Allyn and Bacon.
- **(MB&B)** Meier, K., Brudney, J., & Bohte, J. (2006). *Applied Statistics for Public and Nonprofit Administration*. 6th edition. Belmont, CA: Thomson Wadsworth.
- **(OR&B)** O’Sullivan, E., Rassel, G., & Berner, M. (2003). *Research Methods for Public Administrators*. 4th edition. San Francisco: Longman.

There are two other **optional texts** and resources that you might want to purchase, depending upon your experience with statistical software and your professional needs:

- **(Schmuller)** Schmuller, J. (2005). *Statistical Analysis with Excel for Dummies*. Hoboken, NJ: Wiley Publishing, Inc. While I despise the title, the book is an excellence reference on Excel’s data analysis tool pack. Many users of Excel are unaware of the full range of statistical tools it offers, including most of those that we will cover in this class. If you have never used Excel’s data analysis pack, then I highly recommend this text. Of course, you can also use your Excel owner’s manual or the program’s help function.
- **(Wagner)** Wagner, W. (2007). *Using SPSS for Social Statistics and Research Methods*. Thousand Oaks, CA: Pine Forge Press. If you do not own this program and the owner’s manual, then I highly recommend this reference book to help you as you use SPSS on the university’s computers.

Additionally, there are several **articles** and **references** we will read that will enhance our understanding of research and research methods. These articles will be available on the course website:

- **(Arnett)** Arnett, J. (2002). High hopes in a grim world: emerging adults’ views of their futures and ‘generation X’. In T.C. Lomand (Ed.), *Social Science Research* (3rd ed.) (pp. 104-112). Los Angeles: Pyrczak Publishing.
- **(Bahk)** Bahk, C.M. (2002). College students’ responses to content-specific advisories regarding television and movies. In T.C. Lomand (Ed.), *Social Science Research* (3rd ed.) (pp. 1-3). Los Angeles: Pyrczak Publishing.
- **(C&T)** Clawson, R., & Trice, R. (2002). Poverty as we know it: media portrayals of the poor. In T.C. Lomand (Ed.), *Social Science Research* (3rd ed.) (pp. 41-48). Los Angeles: Pyrczak Publishing.
- **(MS&W)** Maguire, B., Sandage, D., & Weatherby, G. (2002). Crime stories as television news: a content analysis of national, big city, and small town newscasts. In T.C. Lomand (Ed.), *Social Science Research* (3rd ed.) (pp. 34-40). Los Angeles: Pyrczak Publishing.
- **(Page)** Page, S. (2002). An unobtrusive measure of racial behavior in a university cafeteria. In T.C. Lomand (Ed.), *Social Science Research* (3rd ed.) (pp. 30-33). Los Angeles: Pyrczak Publishing.
- **(P&G)** Pendola, R. & Gen, S. (2007). BMI, auto use, and the urban environment in San Francisco. *Health & Place*, 13: 551-556.
- **(Saad)** Saad, L. (2002). Most working women deny gender discrimination in their pay. In T.C. Lomand (Ed.), *Social Science Research* (3rd ed.) (pp. 22-24). Los Angeles: Pyrczak Publishing.
- **(WPZ&M)** Werner-Wilson, R.J., Price, S.J., Zimmerman, T.S., & Murphy, M.J. (2002). Client gender as a process variable in marriage and family therapy: are women clients interrupted more than men clients? In T.C. Lomand (Ed.), *Social Science Research* (3rd ed.) (pp. 25-29). Los Angeles: Pyrczak Publishing.

Schedule

- On the **shaded weeks** we will meet in the computer lab at the beginning of class. On all other weeks we will meet in the classroom.
- * OR&B chapter number (problem types and numbers): Q = “questions for review”; P = “problems for homework and discussion”; D = “disk work”. For example, 2(Q3,4; P1) stands for chapter 2, questions for review 3 and 4, and problem 1.

Week Date	Required readings	Recommended readings	Topics	☺ Class activities, discussions 🔌 Computer lab activities ⚡ Text exercises due* 📄 Graded assignments due
1 Jan. 29			Introduction	☺ Progress reports on projects ; assign research project

Week Date	Required readings	Recommended readings	Topics	☺ Class activities, discussions 🖱 Computer lab activities ⚡ Text exercises due* 📄 Graded assignments due
Part 1: Qualitative Analysis and Descriptive Statistics				
2 Feb. 5	Berg (11) MS&W		Content analysis	🖱 Content analysis exercise ☺ Assign HW1
3 Feb. 12	MB&B (1,2) OR&B (11: pp. 357-358 [Appendix 11.2])	Wagner (1,2)	Quantitative data preparation: levels of data; coding, recoding, and constructing new variables	📄 HW1: content analysis ☺ OR&B 11(P1) in class 🖱 SPSS orientation; coding and data preparation in SPSS ☺ Assign HW2
4 Feb. 19	OR&B (11) MB&B (4,5, 6)		Descriptive statistics	⚡ MB&B 2(11,12) 📄 HW2: code book
5 Feb. 26	Saad	Schmuller (2, 3,4,5,7) Wagner (3,4, 10)	Descriptive statistics (continued)	⚡ OR&B 11(Q1,5,6; P9[not part e]); MB&B 5(15,16), 6(1,2) 🖱 Descriptive statistics with Excel and SPSS ☺ Assign HW3
Part 2: Inferential Statistics and Multi-variate Analysis				
6 Mar. 5	MB&B (7,8, 11,12,13) C&T	Schmuller (1, 9,10)	Introduction to probability Hypothesis testing with 1 sample: t-tests, confidence interval, sample size	⚡ OR&B 11(D2); MB&B 4(1), 6(8,10,15) ☺ “Bush dismisses Iraq death toll study”
7 Mar. 12	MB&B (14) OR&B (12, pp. 385-386) Bahk	Schmuller (11) Wagner (7,8)	Hypothesis testing with 2 samples: t-tests (continued)	📄 HW3: descriptive statistics ⚡ OR&B 12(Q1); MB&B 11(2,6,7), 12(1,2), 13(1,4) 🖱 t-tests with Excel and SPSS ☺ Assign HW4
8 Mar. 19	OR&B (13: pp. 410-416) WPZ&M	Schmuller (12) Wagner (9)	Hypothesis testing with 3 or more samples: analysis of variance	⚡ OR&B 12(P4,6; D3,4a); MB&B 14(2,24) 🖱 ANOVA with Excel and SPSS
9 Mar. 26	MB&B (15, 16 pp. 259-269) OR&B (12: pp. 367-369, 384-385) Page	Wagner (5)	Hypothesis testing with categorical data: chi-square	⚡ OR&B 13(D6b,d) 🖱 Chi-square with Excel and SPSS
10 Apr. 2	MB&B (18, 19, 23 pp. 435-440) OR&B (14: pp. 427-435, 461-462 [Appendix 14.1])	Schmuller (14,15) Wagner (6)	Correlation Simple linear regression	📄 HW4: inferential statistics ⚡ OR&B 12(P2,5; D1,2); MB&B 16(1,6) 🖱 Correlation and simple linear regression in Excel and SPSS
11 Apr. 9			Spring break! No class meeting.	
12 Apr. 16	MB&B (21, 23 pp. 440-443, 446-450) OR&B (14: pp. 435-453)		Multiple regression, assumptions of regression	⚡ OR&B 14(Q1,5; P5,6; D1); MB&B 18(1,2)

Week Date	Required readings	Recommended readings	Topics	☺ Class activities, discussions 🔌 Computer lab activities ⏏ Text exercises due* 📄 Graded assignments due
13 Apr. 23	P&G		Regression (continued)	⏏ OR&B 14(Q2,3; P1,2,4,7); MB&B 21(1,2) 🔌 Regression in Excel and SPSS
Part 3: Putting It All Together				
14 Apr. 30	OR&B 15 Berg 12 Arnett		Research symposium	⏏ OR&B 14(D2,3,5) ☺ Poster board displays & judging 📄 Research poster boards due
15 May 7			Review; selecting analytic methods	☺ MPA Tournament tentatively scheduled for May 5 ; course evaluation 📄 Research paper due
16 May 14				☺ advanced research methods? 🔌 Work on computer portion of final examination
17 May 21				📄 Final examination

Policies

The overwhelming majority of students in our MPA program need no reminder of these policies. To the very few that do, they are simply incentives to put forth your very best professional effort in all your work in this course.

Class attendance

Absences will reduce your grade. Class time will include lectures and several learning activities that cannot be gained by other means. Students are expected to attend all classes, be on time for class and stay for the entire length of class unless cleared with the professor in advance.

Submission of assignments

Written assignments should be submitted in hardcopy to the instructor, unless otherwise noted. Assignments turned in after the due dates will be accepted, but *severely* marked down. Assignments submitted by the next class meeting after the due dates will be marked down 20%; thereafter, 50%.

University policies

All university policies still apply to this class, of course. Pay particular attention to the University's policies on "Principles of Conduct for a Multicultural University," which can be found in the latest edition of *Gatoraid*.

Changes to syllabus

This syllabus is subject to change, depending upon the circumstances and needs of the class.

Professor's obligations to you

To complement your best efforts in this class, I am obligated to give you my best efforts in honing your knowledge and skills in research methods and data analysis. This includes the academic and pedagogic structure for learning, accessibility, and constructive feedback.