THE UNIVERSITY OF TEXAS AT AUSTIN
Department of Educational Administration
EDA 381P: QUANTITATIVE RESEARCH DESIGN AND ANALYSIS
Fall 2000 Unique 08945

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SZB 310
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Office Hours: W 1:00-4:00 p.m.

Class Time/Location:
Wednesday 4:00-7:00 p.m.
SZB 380

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IBM-PC Laboratory
Wednesday 7:00p.m.
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Course Description:

Social Service researchers and evaluators need to collect data other than that provided by traditional tests of achievement and aptitude. Researchers study a number of variables that can be best assessed through the use of such procedures as interview, observation, or content analysis. Also, the requirements of evaluation frequently demand the use of such procedures. As a result, there is growing literature on the development and use of different data-gathering procedures. The focus of this course is on building non-testing measures and to apply survey techniques to obtain data.

The objectives of the course are for students to:
1) familiarize the student with techniques of data collection other than formal standardized achievement and aptitude tests;
2) provide an opportunity for the student to develop and test a data-gathering instrument;
3) demonstrate some of the appropriate procedures for summarizing and analyzing data;
4) experience procedures for studying the reliability and validity of these techniques;
5) familiarize the student with survey research procedures;
6) learn how to analyze published quantitative research.

Course Requirements:

You **cannot** take this course for credit/no credit. If you have signed up this way, you must formally change your enrollment. Incompletes are available only for the most dire conditions.
All submitted work (critiques, journals, and final project) must be done electronically.

The use of male pronouns as a generic pronoun is increasingly unacceptable in academic work. Although different publications or different instructors have different rules, in this class you may either alternate between female and male pronouns or consistently use a "neutered" pronoun, such as s/he. Designations of racial groups should be consistent. For example, if you are using "Afro-Americans" to designate blacks, you should use "European-Americans" to designate whites. Whatever method you use should be consistent and should be sensitive to all races.

There are several different projects from which you can obtain points toward your grade for the course.

PROJECTS:

Journal: Keep a journal in which you are reflective about the course readings, class discussions, and your work. This must be e-mailed to me. It can be either single- or double-spaced. It will be graded only on the engagement with what you are discussing. In other words, superficial journal entries will be graded lower. I expect you to think seriously and reflectively about the various problems and issues of research. You must submit 12 journal entries. For a journal article to be counted, it must be e-mailed by noon Friday. This is a relatively easy way to accumulate points, so start doing this from the very beginning. A total of 60 points is available.

Each student needs to have access to e-mail. If a student does not already have an e-mail account and access to facilities for messaging, then they need to contact Computer Center User Services in the Hogg Building for information and assistance in establishing and using e-mail accounts.

Mid-Term Exam: All students will be required to take a mid-term exam during class time.

Critique of research articles: It is required that you find three research articles from refereed research journals. Be sure that the article includes all pertinent bibliographic information on the first page (author, title, journal name, volume, number, year, page numbers). Some journals provide this on the first page of each article. Write a brief summary of the article and a short critique (positive and/or negative) of the article. This can be as short as two typed, double-spaced pages. Each of these are worth a possible 30 points. The three journal articles must cover one of the three areas: leadership studies, policy research, or evaluation research. You must turn in a copy of the article and critique to the instructor.

Research Project: Each student is required to prepare a Research Project. The document will report on a database handed out in class. The database will contain demographic and subscale measures that can be analyzed and reported on. The Research Project will include a Crosstabs Table with Chi-Square statistics, an oneway ANOVA, T-Test, and multiple Regression tables. Details of the Research Project will evolve as the class time progresses. We will expect all the final projects to be formatted using the American Psychological Association (APA) manual.

Homework: Each student will be required to complete ten homework assignments. A homework assignment will typically be due the class period following the class period the homework was assigned unless stated otherwise by the instructor. Homework will typically consist of computer analyses and interpretations. The homework will be assigned directly from the book by Babbie, Halley, and Zaino, Adventures in Social Research. You will be using SPSS on windows. This means that you will be responsible for learning SPSS. The University offers a half-day workshop on how to use SPSS Students, therefore, must either find time to access the computers at UT or purchase a statistical package for their own computer. The computer room on the 5th floor of the Sanchez Building has SPSS on PC computers. The SPSS runs on Windows, thus is similar to using SPSS on the Macintosh. It is expected that each student will complete her/his own work, although you may receive help from other students. You will not gain anything from this course unless you learn how to operate the computer by yourself.

Expectations for students:

1) read and study the material suggested;
2) review mastery and practice problems before class;
3) read as widely in appropriate literature as time will permit;
4) participate actively in class discussions;
5) complete all homework assignments;
6) complete all weekly journals;
7) critique three research articles (a list of research journals is provided).

Grading: Grades will be determined by students' performance 10 homework assignments, a mid-term research project, three critiques, and student participation in class discussions.

Homework	10 X 10 pts	=	100 points
Journal	12 X 5 pts	=	60 points
Mid-Term Exam	1 X 100 pts	=	100 points
Critique 1	1 X 30 pts	=	30 points
Critique 2	1 X 30 pts	=	30 points
Critique 3	1 X 30 pts	=	30 points
Research Project	1 X 150 pts	=	150 points
			500 points

All written work (i.e., critiques) will be graded in the following manner. Thirty points will be given for exceptional work; this is similar to an A+. Twenty-five points will be given for good work. This is similar to a range of B+ to B-. This is the grade that you should expect to get if you have done the assignment well. Twenty points will be given for work that is somewhat inadequate or lacking. This is similar to a range of B- to C. Anytime you get this grade there will be a written indication of what the inadequacies were. Ten points will be given for work that is substantially inadequate. This is similar to a range of C- to D-. When you get this grade, there will be a written explanation. A "0" will be given for required work that is not completed within the correct time frame.

Homework will be graded in the following manner: Ten points will be assigned for exceptional work. Eight points will be awarded for above average work. Six points will be assigned for good work. Four points will be assigned for average work, and below four points will be assigned for below average work.

Grade Distribution:

A+	488-500 points	B+	448-459 points	C+	408-419 points
A	472-487 points	B	432-447 points	C	392-407 points
A-	460-471 points	B-	420-431 points	C-	380-391 points

Required Textbooks:

Babbie, E. (1990). Survey Research Methods. Belmont, CA: Wadsworth Publishing Company.

Babbie, E., Halley, F., and Zaino, J. (2000). Adventures in Social Research: Data Analysis Using SPSS.

CLASS DATES	TOPIC FOR DISCUSSION	READING ASSIGNMENT
	Part I Measurement & Theory	
8/30	Class overview The Science of Psychological Measurement	Babbie Chapters 1, 2, 3 Babbie et al Chapters 1, 2
9/6	Validity	Handouts
9/13	Validity	Handouts
9/20	Reliability	Handouts
9/27	Reliability	Handouts
10/4	Measurement Error	Handouts
	Part II Survey Research Methods	
10/11	Research Designs	Babbie Chapter 4
10/18	Sampling	Babbie Chapters 5, 6
10/25	Instrument Design	Babbie Chapter 7
11/1	Index & Scale Construction	Babbie Chapter 8, 9, 10
	Part III Applying Theoretical Concepts	
11/8	Data Processing and Pilot Studies	Babbie Chapters 12, 13
11/15	Univariate Analysis	Babbie Chapters 14, 15, 16
11/22	Multivariate Analysis	Babbie Chapter 17
11/30	Reporting & Ethics of Survey Research	Babbie Chapter 18, 19
12/13	Final Exam / Project Due	

APPENDIX A:

TWO WORLD VIEWS (Positivist and Post-Positivist)
and
IMPLICATIONS OF POST-POSITIVIST VIEW FOR INQUIRY,
and
FOUR PARADIGMS (Functionalist, Interpretive, Critical Theory, and Postmodern)

TWO WORLD-VIEWS

	POSITIVIST (Objectivist)	POST-POSITIVIST (Subjectivist)
Ontology (Nature of Reality)	REALISM (Objectivism): There is a single "reality" out there that can be "unearthed."	NOMINALISM (Subjectivism): There is not a single "reality" that is "out there." Realities are multiple and constructed. Knowledge is constructed, contested, perspectival, and polyphonic.
Epistemology (Relationship of Knower and Known)	POSITIVIST: The inquirer (knower) and the object of inquiry (known) are independent.	POST-POSITIVIST: The inquirer (knower) and the object of inquiry (known) are not wholly separate ("subjectivists") or inseparable ("radical relativists/subjectivists").
Generalization	NOMOTHETIC: Focus of inquiry is to develop a nomothetic collection of "truth statements" that are time-free and context-free.	IDEOGRAPHIC: Focus of inquiry is to develop "working hypotheses" that are more ("radical relativist") or less ("subjectivist") time-and-context-bound.
Causality	POSITIVIST: There are "real" causes that are temporally prior to or simultaneous with their effects.	POST-POSITIVISTS: Impossible to distinguish causes from effects ("radical relativists") or must-be-done reflexively and carefully ("subjectivists").
Role of Values	POSITIVIST: Inquiry is value-free.	POST-POSITIVIST: Inquiry is value-bound, e.g., by values of inquirer, choice of paradigm, choice of substantive theory.

While I think that the above distinction is useful, let me emphasize that it oversimplifies and perpetuates a dualism with which I am uncomfortable. To wit, this bifurcation and the nomenclature ("post-positivist") suggests the wholesale rejection of positivism and even science--and many of us who work within the "post-positivist" tradition are not inclined to "throw the baby out with the bathwater." Closely related, there are rather sharp divisions between "post-positivists" who are "subjectivists" ("relativists") and those who are "radical subjectivists" ("radical relativists)." Placed within the context of these caveats, it may be useful to consider some implications of "post-positivism" writ large for "doing quantitative research."

FOUR PARADIGMS: FUNCTIONALIST, INTERPRETIVE, CRITICAL THEORY, AND POSTMODERN

Nested within the broad context of their particular world-view, qualitative researchers tend to work out of one of four general "paradigms." For our purposes, paradigm refers to the focus of research and related ways of approaching inquiry (see Gibson Burrell and Gareth Morgan, Sociological Paradigms and Organizational Analyses.) [Note: Since Thomas Kuhn's original work on the "paradigm revolution" in the 1960s, the word "paradigm" has been used in myriad ways, e.g., Lincoln and Guba refer to "positivist" and "post-positivist" as paradigm. Most individuals today doing qualitative research assume that "positivism" has been extended or superseded by "post-positivism" and hence the major overall question for researchers is which "paradigm" (as I have defined it) to use.] [Also, Note: The Functionalist Paradigm is generally associated with the "Positivist" World-View, whereas the other three tend to be associated with the "Post-Positivist" World-View--though many interpretivists consider themselves, and conduct their research, as "Positivists."]

To complicate matters further, some scholars draw from more than one of these four paradigms and from various other "perspectives" such as feminism (to be sure, there are various feminisms). For example, there are individuals such as Patti Lather who work at the intersections of "post-positivism," critical theory, postmodernism, and feminism. [While we will not explore in-depth these intersections or the various "perspectives" within and across the four paradigms, I put in quotations below some of the perspectives generally associated with each of the paradigms.] Some scholars--such as Colleen Capper, Dennis Giola, and Evelyn Pitre--have embraced multi-paradigm perspectives that draw from across the four paradigms.

Identified below are the four paradigms. Under each paradigm I identify the major focus of research, origins of paradigm, major "perspectives" within the paradigm, key people associated with the paradigm and inclusive perspectives and, as appropriate, consider some general implications of the various paradigms for doing research.

I. Functionalist

FOCUS: Predict and Control (Develop/Test Theory)

ORIGINS: Anchored in nineteenth century sociological positivism (objectivism) in which biological and mechanical analogies were adopted to the study of human/organizational behavior. Functionalists assume that existing "systems" and "structures" are legitimate and desirable because they have endured and, in turn, they seek to understand how these systems/structures operate through methods derived from the natural sciences. In addition, functionalists focus on how structures define or cause human behavior/action--not on how people may create meaning. Major individuals: August Comte, Herbert Spencer, Emile Durkheim, B. Malinowski, A.R. Radcliffe-Brown, Ludwig Von Bertalanffy, Talcott Parsons, Robert Merton, David Easton, George Homans, Daniel Katz and Robert Kahn, and Richard Hall. (Note: Most of the scholarship in education has been from a functionalist paradigm--even though many scholars have not acknowledged such an affiliation.)

PERSPECTIVES:
"Structural Functionalism" (Organismic Analogy)
"Systems Theory"
"Conflict Functionalism"

SOME IMPLICATIONS FOR DOING RESEARCH: (Discuss: Compare/contrast with Post-Positivist World-View, e.g. sampling, open-endedness of design, generalizability, roles of researcher and "researched," data analysis and interpretation.)

II. Interpretive (Interpretivist)

FOCUS: Understand/Explain

ORIGINS: Grounded in nineteenth century German idealism and "verstehen" (understanding). Those using this paradigm posit that meaning is "socially constructed" through people. Hence, they focus not on "uncovering reality" but on generating understandings based on the "subjective" interpretations of people (researchers and "researched"), that is, how people "experience" and "interpret" their realities. Major individuals: Wilhelm Dilthey, Max Weber, Edmund Husserl, Peter Berger, Thomas Luckman, and Clifford Geertz.

PERSPECTIVES:

"Interpretivist"	(Clifford Geertz)
"Naturalistic"	(Yvonna Lincoln and Egon Guba)
"Ethnomethodology"	(Harold Garfinkel)
"Constructivist"	
"Grounded Theory"	(Constant Comparative Method of Glaser and Strauss)
"Phenomenological"	(Sartre, Heidigger, Husserl)
"Symbolic Interaction"	(George Herbert Mead)
"Hermeneutic"	(Dilthey, Gadamer)
"Liberal Feminist"	

SOME IMPLICATIONS FOR DOING RESEARCH:
(See Implications for Post-Positivist World-View)
1. Orientation of Research (De-Centering of Positivism/Objectivism):
Traditional (logical) positivists tend to view researchers as "subjects" and respondents as "objects." Alternatively, interpretivists take what conventionally have been viewed as "objects" (for example, teachers, students administrators) and make them "subjects." In turn, researchers operating within this paradigm don't wholly impose categories of observations (because "objects" are now "subjects") and hence the focus is--for the most part--on how subjects interpret/make sense of their world. Subjects are variously watched (observed) and interviewed in order to "understand."

III. Critical Theory

FOCUS: Critique/Emancipate/Radical Change (Suffering and Oppression Require Explication and then Social Change)

ORIGINS: As explicated by Burrell and Morgan, there are two major intellectual traditions within Critical Theory: radical structuralist and radical humanism. As to the first and oldest tradition--radical structuralist--this tradition (while committed to radical change) has many similarities with the "functionalist" paradigm (emphasis on social structures) and "positivism" (realism, nomothetic, and determinist, i.e., assumes causality). Its origins lay in the "mature Marx" and Russian social theorists (cf. Nikolai Bukharin) and have been continued by many Marxist and New Left social scientists such as Louis Althusser and Ralf Dahrendorf. This tradition is viewed as the more "conservative" of the two traditions and, over the last two decades, has been largely superseded by those working in the tradition of "radical humanism."

"Radical humanism" is linked to the work of the "early Marx" who took a much more "subjectivist" point of view (nominalism, ideographic, non-deterministic), namely, that the individual(s) creates her/his world. (Note that this is similar to the interpretive paradigm, but the foci of the two paradigms are oriented--"critique and emancipation" versus "understanding"--are very different.) In radical humanism, the key focus is on "human consciousness"--that human beings create meaning--rather than on "structures" (functionalism). Beginning in the 1920s, when Georg Lukacs and Antonio Gramsci revived interest in "subjectivist interpretations" of Marxist theory, this tradition was continued in the so-called Frankfurt School (cf. Max Horkheimer and Theodore Adorno) in Germany and later moved in part to the U.S. (In the United States during the 1940s, the term "critical theory"--rather than Marxism--gained widespread usage owing to widespread public concern with anything having to do with Marx). Major individuals: Herbert Marcuse, Jurgen Habermas, Ivan Illich, Paulo Freire, and Henry Giroux.

Some underlying ideas informing Critical Theory include: 1) Marginalization and Emancipation (advanced capitalism has "marginalized" and "de-humanized" workers [more broadly, Critical Theory focuses primarily on economic considerations (social class) but some critical theorists focus increasingly on other forms of oppression particularly as they relate to race, ethnicity, gender, and sexual orientation; 2) Culture is used by "dominant groups" to legitimate their interpretations of the world; 3) Centrality and Ubiquity of Power; and 4) Importance of "Praxis" (linking theory with action).

PERSPECTIVES:
"Critical Theory"
"Neo-Marxist"
"Feminist"
"Praxis-Oriented"
"Freirian Participatory Action Research" (Paulo Freire)
"Hermeneutic"
"Critical Ethnography" (Neo-Marxist and Feminist)

SOME IMPLICATIONS FOR DOING RESEARCH:
1. Overall Orientation: Critical theorists orient their research (questions, analysis, reporting) to highlight "oppression" and to enable self-organization on the part of the "oppressed."
2. "Praxis" Orientation: Critical theorists engage in "action-oriented" research aimed at bringing together theory and practice in a way that is emancipatory and transformative for individuals.
3. Categories/Variables: Critical theorists tend to use such categories as race, class, gender, and sexual orientation.
4. REFLEXIVITY: As discussed by Patti Lather (1991) and other s (such as Gary Anderson, 1989), critical theorists take "reflexivity" beyond where "interpretivists" take it. For critical theorists such as William Tierney, reflexivity refers to the ability of researchers to engage in a dialectal process among the constructs of the researcher, the informants, the data, the researcher's ideological suppositions, and the relevant socio-cultural forces. This "reflexivity" is conveyed in the written text.
5. Research Problem/Design/Procedure: Critical theorists ask questions such as: How might I actively involve the "researched" as partners in the study? How will the research "empower" those I am studying? What steps have I taken that will enable the "researched" to develop their own interpretations?

IV. Postmodern

FOCUS: Deconstruct

ORIGINS: The broad and still-elusive idea of "postmodernity" originally was applied to an architectural movement but today it is used both as a descriptor of advanced societies and a lens for inquiry. At this juncture, "postmodern" is probably defined more by what it is not (modernism, that is, the emphasis on "rationalism" and traditional "scientific understanding") than what it "is." In a nutshell, postmodernism involves severe questioning or outright rejection of "ethnocentric rationalism" (modernism) in favor of a way of looking at the world in which a plurality of voices cry out for their version of reality (i.e., no single or "essentialist" view of truth exists). As a consequence, the "grand theories and narratives" of modernism are replaced by subject-centered pluralist discourses which are marked by differences, opposites, paradoxes, and enigmas. While postmodernism can be traced to the "nihilism" of Friedrich Nietzsche, it has taken many forms and, in recent years, has been fueled by the work of many feminists such as Sandra Harding and Patti Lather. At the risk of great oversimplification, a couple of central ideas seem to be important. First, moral absolutes have been abandoned. Second, "grand narratives" have been abandoned. Third, differences (race, gender, sexual orientation, and class) are highlighted. Individuals: Jacques Derrida, Michel Foucault.

PERSPECTIVES:
"Postmodern"
"Poststructural"
"Post-Paradigmatic Diaspora"
"Radical Feminist"

SELECTED BIBLIOGRAPHY

General Readings

*Isaak, Alan S. (1985. Scope and methods of political science. Homewood, IL: The Dorsey Press.

*****Kuhn, Thomas. (1970). The structure of scientific revolution. Chicago: The University of Chicago Press.

American Psychological Association. (1995). Publication manual of the American Psychological Association. (4th ed). Washington, D.C.: American Psychological Association.

Babbie, Earl R. (1983). The practice of social research. Belmont, CA: Wadsworth Publishing Company.

Ball, Terence. (1976). From paradigm to research program: Toward post-Kuhnian political science. American Journal of Political Science, 20, 151-177.

Blalock, H. M. (1964). Causal inferences in nonexperimental research. Chapel Hill, NC: The University of North Carolina Press.

Blalock, H. M. (1970). An introduction to social research. Englewood Cliffs, NJ: Prentice Hall.

Blumer, H. Science without concepts. American Journal of Sociology, 36(4), 515-553.

Borg, W. R., & Gall, M. D. (1983). Educational research. New York: McKay.

Bohrnstedt, G. W., & Knoke, D. (1988). Statistics for social data analysis. (2nd ed) Itasca, IL: F. E. Peacock.

Conant, J. (1967). Science and common sense. New Haven: Yale University Press.

Frankfort-Nachmias, Chava. (1999). Social Statistics for a Diverse Society. Thousand Oaks, CA: Pine Forge Press.

Glass, G.V. & Hopkins, K.D. (1996). Statistical methods in education and psychology. (3rd edition). Needham Heights, MA.: Allyn & Bacon.

Hopkins, C. D. (1980). Understanding educational research. Columbus: Merrill.

Kaplan, A. (1964). The conduct of inquiry. San Francisco: Chandler.

Kaplan, Abraham. (1979). The conduct of inquiry. New York: Harper and Row.

Kerlinger, F. N. (1986). Foundations of behavioral research. New York: Holt, Rinehart, and Winston.

Kirk, R. E. (1982). Experimental design (2nd ed.). Belmont, CA: Brooks-Cole.

Lewis-Beck, S.M. (1990). Applied Regression: An Introduction. Beverly Hills, CA: Sage Publications.

Moore, D.S. & McCabe, G. (1993). Introduction to the practice of statistics. New York: Freeman.

Nachmias, David, & Nachmias, Chava. (1976). Research methods in the social sciences.

Pedhazur, E.J. and Pedhazur, S.L. (1991). Measurement, Design and Analysis: An Integrated Approach. Hillsdale. N.J.: Lawrencce Erlbaum Associates.

Popper, Karl R. (1968). The logic of scientific discovery. London: Hutchinson. Pedhazur, E.J. and Pedhazur, S.L. (1991). Measurement, Design and Analysis: An Integrated Approach. Hillsdale, N.J.: Lawrence Erlbaum Associates.

Punch, Maurice. (1989). The politics and ethics of fieldwork. Newbury Park, CA: Sage.

Rubin, A. & Babbie, Earl. (1993). Research methods for social work. Pacific Grove, CA: Sage.

SPSS Inc. (1990). SPSS reference guide. Chicago, IL: SPSS, Inc.

Shively, W. Phillips. (1984). The research process in political science. Itasca, IL: F. E. Peacock.

Tuckman, B. W. (1988). Conducting educational research. New York: Harcourt, Brace and Janovich.

*Strongly Suggested Reading

Regression

***** Stimson, James A. (1985). Regression in space and time: A statistical essay. American Journal of Political Science, 29(4), 915-947.

Achen, Christopher. (1982). Interpreting and using regression. Sage Publications.

Balestra, P., & Nerlove, M. (1966, May). Pooling cross section and time series data in the estimation of a dynamic model: The demand for natural gas. Econometrica, 34, 585-612.

Baltagi, Badi H. (1981, September). Pooling: An experimental study of alternative testing and estimation procedures in a two-way error component model. Journal of Econometrics, 17, 21-49.

Berry, William, & Feldman, Stanley. (1985). Multiple regression in practice. Sage Publications.

Box, G. E. P., & Jenkins, G. M. (1976). Time series analysis: Forecasting and control. San Francisco: Holden-Day.

Box, G. E. P., & Tiao, G. C. (1975, March). Intervention analysis with applications to economic and environmental problems. Journal of the American Statistical Association, 70, 70-79.

Dawson, R., & Robinson, J. A. (1963, May). Interparty competition, economic variables, and welfare politics in the American states. Journal of Politics, 265-287.

Draper, N. R., & Smith, H. (1981). Applied regression analysis (2nd ed.). John Wiley and Sons.

Dye, Thomas R. (1966). Politics, economics, and the public. Chicago: Rand McNally.

Gray, B. (1976, May). Models of comparative state politics: A comparison of cross-sectional and time series analysis. American Journal of Political Science, 235-256.

Hanushek, Eric, & Jackson, John. (1977). Statistical methods for social scientists. Academic Press.

Iversen, Gudmund, & Norpoth, Helmut. (1976). Analysis of variance. Sage Publications.

King, Gary. (1986, August). How not to lie with statistics: Avoiding common mistakes in quantitative political science. American Journal of Political Science, 30, 669-678.

Lewis-Beck, Michael, & Skalaban, Andrew. (1988, April). The R-squared: Some straight talk. Paper presented at annual meeting of the Midwestern Political Science Association, Chicago, IL.

Lewis-Beck, Michael. (1980). Applied regression: An introduction. Sage Publications.

Namboodiri, Krisnan. (1984). Matrix algebra: An introduction. Sage Publications.

Ostrom, Charles W., Jr. (1978). Time series analysis: Regression techniques. Sage Publications.

Schroeder, Larry, Sjoquist, David, & Stephan, Paula. (1986). Understanding regression analysis: An introductory guide. Sage Publications.

Tucker, Harvey J. (1984). It's about time: The use of time in cross-sectional state policy research. American Journal of Political Science, 26, 176-196.

Wallace, T. D., & Hussain, A. (1969, January). The use of error component models in combining cross section with time series data. Econometrica, 37, 55-72.

Wilson, L. A. (1987). Trend and drift and their implication for corss-sectional analysis: An investigation of possible method bias. Policy Studies Review, 7(2), 326-346.

Wonnacott, Ronald, & Wonnacott, Thomas. (1979). Econometrics (2nd ed.). John Wiley and Sons.

Wonnacott, Thomas, & Wonnacott, Ronald. (1984). Introductory statistics for business and economics (3rd ed.). John Wiley and Sons.

Zuk, G., & Thompson, W. R. (1982, March). The post-coup military spending question: A pooled cross-sectional time series analysis. American Political Science Review, 76, 60-74.

Sampling and Measurement

*****Babbie, Earl R. (1979). The practice of social research. Belmont, CA: Wadsworth

*****Carmines, Edward G., & Zeller, Richard A. (1979). Reliability and validity assessment. Beverly Hills: Sage Publications.

*****Kish, Leslie. (1965). Survey sampling. New York: John Wiley.

*****Lynch, M. D., & Huntsburger, C. V. (1976). Elements of statistical inference for education and psychology. Boston: Allyn & Bacon.

*****Sudman, Seymour. (1976). Applied sampling. New York: Academic Press.

*****Sullivan, John L., & Feldman, Stanley. (1979). Multiple indicators: An introduction. Beverly Hills: Sage Publications.

Blalock, Herbert. (Ed.). (1974). Measurement in the social sciences. Chicago: Aldine.

Brewer, J. K. (1977, April). Effect, size and power: The most troublesome of the hypotheses testing considerations. Paper presented at the annual meeting of the American Educational Research Association, New York.

Campbell, David, & Fiske, D. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. Psychological Bulletin, 56, 81-105.

Cohen, J. (1977). Statistical power analysis for the behavioral sciences (rev. ed.). New York: Academic Press.

Duncan, Otis D. (1984). Notes on special measurement: Historical and critical. Russell Sage Foundation.

Heise, D. R., & Bohnrstedt. (1970). Validity, invalidity, and reliability. In E. Borgatta and G. Bohnrstedt (Eds.), Sociological methodology, 1970 (pp. 104-129). Jossey-Bass.

Kirk, J., & Miller, M. (1986). Reliability and validity in qualitative research. Beverly Hills: Sage Publications.

Nunnaly, J. (1979). Psychometirc theory. New York: McGraw-Hill.

Rosenthal, Robert, & Rosnow, Ralph L. (1975). The volunteer subject. New York: John Wiley.

Torgerson, W. (1958). Theory and methods of scaling. New York: John Wiley.

Zeller, Richard A., & Carmines, Edward G. (1980). Measurement in the social sciences: The link between theory and data. New York: Cambridge University Press.

*****Campbell, Donald T., & Stanley, Julian C. (1963). Experimental and quasi-experimental designs for research. Chicago: Rand McNally.

*****James, A. Davis. (1985). The logic of causal order. Beverly Hills: Sage Publications.

*****Spector, Paul E. (1981). Research designs. Beverly Hills: Sage Publications.

Asher, Herbert. (1983). Causal modeling. Beverly Hills: Sage Publications.

Blalock, Herbert M. (1964). Causal inferences in nonexperimental research. Chapel Hill: University of North Carolina Press.

Blalock, Herbert M. (Ed.). (1985). Causal models in panel and experimental designs. Chicago: Aldine.

Cook, T. D. (1969). Reforms as experiments. American Psychologist, 24, 409-429.

Cook, T. D., & Campbell, D. T. (1979). Quasi-experimentation: Design and analysis issues for field settings. Skokie, IL: Rand McNally.

Cook, T., & Mark, M. (1977). Randomized and quasi-experimental designs in evaluation research: An introduction. In L. Rutman (Ed.), Evaluation research methods: A basic guide (pp. 103-139). Beverly Hills: Sage Publications.

Dooley, David. (1984). Social Research Methods. Englewood Cliffs, NJ: Prentice-Hall.

Heise, D. (1975). Causal analysis. New York: John Wiley.

James, L., Muliak, S., & Brett, J. (1982). Causal analysis: Assumptions, models, and data. Beverly Hills: Sage Publications.

Kenney, D. (1979). Correlation and causality. New York: John Wiley.

Keppel, G. (1973). Design and analysis: A researcher's handbook. Englewood Cliffs, NJ: Prentice-Hall.

Mohr, Lawrence B. (1988). Impact analysis for program evaluation. Chicago, IL: The Dorsey Press.

Survey Research

*****Kish, Leslie. (1965). Survey sampling. New York: Wiley. Sections 1.0-1.7, 2.0-2.7, 3.1, 3.4A, 3.5, 5.1, 5.4, 6.4B, 7.2-7.3, 9.1-9.3.

*****Moser, C. A., & Kalton, G. (1971). Survey methods in social investigations. New York: Basic Books. Chapters 4-8.

Hess, Irene. (1983). Sampling at the survey research center. Institute for Social Research.

Kish, Leslie. (1953). Selection of the sample. In L. Festinger and D. Katz (Ed.), Research methods in the behavioral sciences. Holt, Reinhart, & Winston. Chapter 5.

Levy, Paul S., & Lemeshow, Stanley. (1980). Sampling for health professionals. Belmont, CA: Lifetime Learning Publications.

Scheaffer, Richard L., Mendenhall, W., & Ott, Lyman. (1979). Elementary survey sampling. North Scituate, MA: Duxbury Press.

Slonim, Morris J. (1960). Sampling. Simon and Schuster.

Stephan, F. F. (1957). History of the uses of modern sampling procedures. JASA, 43, 12-39.

Stuart, A. (1962). Basic ideas of scientific sampling. London: Charles Griffin.

Sudman, Seymour. (1976). Applied sampling. New York: Academic Press.

Basic Analysis of Complex Survey Data

*****National Center for Health Statistics. (1970, June). Estimation and sampling variance in the health interview survey, Series 2, Number 38.

*****Wonnacott and Wonnacott. (1977). Introductory statistics (3rd ed.). Chapters 7, 10, 12.

National Center for Health Statistics. (1971, August). Sample design and estimation procedures for a national health examination survey of children, Series 2, Number 43.

National Center for Health Statistics. (1978, Janaury). National survey of family growth, cycle 1, Series 2, Number 76.

U.S. Bureau of the Census. The current population survey. Chapter V, pp. 55-67.

Multivariate Models Using Complex Survey Data

*Belson, William A. (1981). The design and understanding of survey questions. Aldershot, England: Gower.

*Berdie, D. R., & Anderson, J. F. (1974). Questionnaires: Design and use. Metuchen, NJ: Scarecrow Press.

*DuMouchel, W. H., & Duncan, Greg J. (1981). Using sample survey weights in multiple regression analyses of stratified samples. Proceedings of the ASA, section on survey research methods, 629-637.

*Fay, Robert. (1985). A jackknifed chi-squared test for complex samples. Journal of the American Statistical Association, 80(389), 148-157.

*Hansen, M. H., et al. (1983). An evaluation of model-dependent and probability-sampling inferences in sampling surveys. JASA, 78(384), 776-807. (Article and comments).

*Heberlein, Thomas A., & Baumgartner, Robert. (1978). Factors affecting response rates to mailed questionnaires: A quantitative analysis of the published literature. American Sociological Review, 43, 447-62.

*Kalton, G. (1981). Models in the practice of survey sampling. Proceedings of the ISI.

*Kish, L., & Frankel, M. R. (1974). Inference from complex samples. JRSS, B, 1-37.

*Lee, Eun Sul, et al. (1986). Analysis of complex sample survey data. Sociological methods and research, 15(1-2), 69-100.

*National Center for health Statistics. (1982, September). A statistical methodology for analyzing data from a complex survey, Series 2, Number 92.

*Orlich, Donald C. (1978). Designing sensible surveys. Pleasantville, NY: Redgrave.

*Schuman, Howard, & Presser, S. (1981). Questions and answers in attitude surveys: Experiments on question form, wording, and context. New York: Academic Press.

Binder, D. A. (1983). On the variances of asymptotically normal estimators from complex samples. International statistics review, 51, 279-292.

Bishop, John. (1977). Estimation when the sampling ratio is a linear function of the dependent variable. Proceedings of the social statistics section of the ASA.

Brewer, K. R. W., & Mellor, R. W. (1973). The effect of sample structure on analytical surveys. Australian Journal of Statistics.

Davis, M. A., et al. Living arrangements and dietary patterns of older adults in the United States. Journal of Gerontology, 40, 434-442.

DeMets, D., & Halperin, M. Estimation of a simple regression coefficient in samples arising from a sub-sampling scheme. Biometrics, 33, 47-56.

Heckman, J. Sample selection bias as a specification error. Econometrica, 47, 153-161.

Holt, D., Scott, A. J., & Ewings, P. D. (1980). Chi-squared tests with survey data. JRSS, A, 143, 303-320.

Klein, L. R., & Morgan, James N. (1951). Results of alternative statistical treatments of sample survey data. JASA, 46, 442-460.

Koch, G. G., Freeman, D. H., & Freeman, J. L. (1975). Strategies in the multivariate analysis of data from complex surveys. International Statistical Review, 43, 59-78.

Konijn, H. (1962). Regression analysis in sample surveys. JASA, 57, 590-605.

Lepkowski, James M. (1982). The use of OSIRIS IV to analyze complex sample survey data. proceedings of the ASA, section on survey research methods, 38-43.

Linsky, Arnold S. (1975). Stimulating responses to mailed questionnaires: A review. Public Opinion Quarterly, 39, 82-101.

Nathan, G., & Holt, D. The effect of survey design on regression analysis. JRSS, B, 42, 377-386.

Nathan, Gad. (1981). Regression analysis under differential non-response. Proceedings of the ASA, section on survey research methods, 618-622.

National Center for Health Statistics. (1973, March). Approximate tests of independence in contingency tables from complex stratified cluster samples, Series 2, Number 53.

Pfeffermann, D., & Nathan, Gad. (1981). Regression analysis of data from a cluster sample. JASA, 76, 681-689.

Porter, Richard D. (1973). On the use of survey sample weights in the linear model. Annals of economic and social measurement, 212, 141-158.

Rao, J. N. K., & Scott, A. J. (1979). Chi square tests for analysis of categorical data from complex surveys. Proceedings of the American Statistical Association.

Royall, R. M. (1971). Linear regression models in finite population sample theory. In V. P. Godambe and D. A. Sprott (Eds.), Foundations of Statistical Inference. Ontario: Holt, Rinehart, & Winston.

Scott, A. J., & Smith, T. M. F. Estimation in multistate surveys. JASA, 64, 830-840.

Selltiz, C., Wrightsman, L. S., & Cook, S. W. (1976). Research methods in social relations (3rd ed.). New York: Holt, Rinehart & Winston.

Sewell, W. H., & Hauser, R. M. (1975). Education, occupation, and earnings. New York: Academic Press.

Shah, B. V. (1981). The logic of inference in sample survey practice. Proceedings of the ASA, section on survey research methods, 638-644.

Shah, B. V., & LaVange, Lisa. (1982). Software for inference on linear models from survey data. Proceedings of the ASA, section on survey research methods, 34-37.

Shah, B. V., Holt, M. M., & Folsom, R. E. (1977). Inference about regression models from sample survey data. Bulletin of the International Statistical Institute, 47, 43-57.

Smith, Kent W. (1976). Analyzing disproportionately statified samples with computerized statistical packages. Sociological methods and research, 5, 207-230.

Sudman, Seymour, & Bradburn, Norman M. (1974). Response effects in surveys. Chicago: Aldine.

Thomsen, Ib. (1978). Design and estimation problems when estimating a regression coefficient from survey data. Metrika, 25, 27-36.

Warwick, Donald P., & Lininger, Charles A. (1975). The sample survey: Theory and practice. New York: McGraw-Hill.

Interviews

*****Bradburn, Norman M., Sudman, Seymour, and Associates. (1981). Improving interview method and questionnaire design. San Francisco: Jossey-Bass.

*****Graves, R. M., and Kahn R. L. (1979). Surveys by telephone: A national comparison with personal interviews. New York: Academic Press.

*****Survey Research Center. (1976). Interviewer's Manual (rev. ed.). Ann Arbor, MI: Institute for Social Research, University of Michigan.

Gorden, Raymond L. (1975). Interviewing strategy, techniques and factors (rev. ed.). Homewood, IL: Dorsey Press.

Stewart, Charles J., & Cash, William, B., Jr. (1974). Interviewing: principles and practices. Dubuque, IA: William C. Brown.

Weiss, Carol H. (1975, September). Interviewing in evaluation research. In Elmer L. Struening and Marcia Guttentag (Eds.), Handbook of evaluation research. Beverly Hills, CA: Sage.

Observation

***** Boehm, A. E., & Weinberg, R. A. (1977). The Classroom observer--A guide for developing observation skills. New York: Teachers College Press.

Ahola, J. A., & Lusthaus, C. (1980, April). The development of the participant observer's role in the elementary and secondary school. Paper presented at the annual meeting of the American Educational Research Association, Boston.

Dunnette, Marvin D. (Ed.). (1976). Handbook of industrial and organizational psychology. Chicago: Rand McNally.

Schatzman, Leonard, & Strauss, Anselm L. (1973). Field Research. Englewood Cliffs, NJ: Prentice-Hall.

Selltiz, C., Wrightsman, L. S., & Cook, S. (1976). Research methods in social relations. New York: Holt, Rinehart & Winston.

Observational Instruments

***** Herbert, J., and Altridge, C. "A Guide for Developers and Users of Observation Systems and Manuals." American Educational Research Journal 12 (1975): 1-20.

Borich, G. D., & Madden, S. K. (1977). Evaluating classroom instruction: A sourcebook of instruments. Reading, MA: Addison-Wesley.

Simon, Anita and Boyer, E. Gil. Mirros for Behavior III: An Anthology of Observation Instruments. Wyncote, Pa.: Communications Materials Center, 1974.

Content Analysis

***** Krippendorff, Klaus. Content Analysis, An Introduction to Its Methodology. Beverly Hills, Calif.: Sage, 1980.

Historical Research

***** Barzun, Jacques, and Graff, Henry F. The Modern Researcher. 3rd ed. New York: Harcourt, Brace Jovanovich, 1977.

***** Brooks, Philip C. Research in Archives: The Use of Unpublished Primary Sources. Chicago: University of Chicago Press, 1969.

***** Dollar, Charles M., and Jensen, Richard J. Historian's Guide to Statistics: Quantitative Analysis and Historical Research. Huntington, N.Y.: Krieger, 1974 (reprint of 1971 ed.).

*****Gottschalk, Louis. Understanding History: A Primer of Historical Method. New York: Alfred A. Knopf, 1969.

*****Graff, Harvey J. "The New Math': Quantification in the `New' History, and the History of Education." Urban Education 11 (1977): 403-40.

Carr, Edward Hallett. What is History? New York: Random House, 1967.

Cutler, William W. "Oral History: Its Nature and Uses for Educational History." History of Education Quarterly (1971): 184-94.

Fischer, David H. Historians' Fallacies: Toward a Logic Historical Thought. New York: Harper & Row, 1970.

Sloan, Douglas. "Historiography and the History of Education." In Review of Research in Education, Vol. 1, Fred N. Kerlinger, ed. Itasca, Ill.: F. E. Peacock, 1973.

Winks, Robin W., ed. The Historian as Detective: Essays on Evidence. New York: Harper & Row, 1979.