

The Pennsylvania State University
Department of Education Policy Studies

EDLDR/EDTHP/HIED 585: Research Design

Spring, 2008
Wednesdays, 6:00-9:00 PM
403 Rackley Building

Instructors:

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**The Pennsylvania State University
Department of Education Policy Studies**

EDLDR/EDTHP/HIED 585: Research Design

Required Texts:

Carmines, E. G. & Zeller, R. A. (1979). *Reliability and validity assessment*. Applied Social Science Research Methods Series, Volume 17. Newbury Park, CA: Sage.

Kalton, G. (1983). *Introduction to survey sampling*. Applied Social Research Methods Series, Volume 35. Newbury Park, CA: Sage.

Krathwohl, D. R. (2004). *Methods of educational and social science research (2nd ed.)*. Long Grove: Waveland.

Schneider, B., Carnoy, M., Kilpatrick, J., Schmidt, W.H., & Shavelson, R.J. (2007.) *Estimating causal effects: Using experimental and observational designs*. Washington, D.C.: American Educational Research Association.

Selected Readings in Pattee's Electronic Reserve System (denoted "ERS" in reading assignments below).

Course Objectives

By the end of this course, you should be able to:

1. Define and explain the following concepts/tools of social science research:

| | |
|--------------------------------------|--------------------------------|
| The scientific method | Survey designs and methods |
| Theory and its role | Sampling theory and designs |
| Constructs and variables | Approaches to data collection |
| Hypotheses and relations | Quasi-experimental designs |
| Experimental designs | Ethical practices |
| Measurement reliability and validity | <i>Ex post facto</i> designs |
| Quantitative analytical designs | Case study designs |
| Qualitative analytical designs | Mixed methodologies |
| | Positivism and post-positivism |

2. Apply these concepts/tools in designing a study relating to education research or policy analysis;

3. Effectively critique and evaluate both the theoretical bases (if any) and methods of a journal article or report of a piece of research or policy analysis;
4. Prepare a sound research proposal.

Course Requirements

1. **Three Papers, as follows:**
 - i. **Paper #1, due Feb. 20th (20% of grade):** A 3-4 page (double-spaced) paper identifying a significant research problem related to individuals, programs, institutions, or state or federal policy in education. **Topic must be approved on/before Feb. 6th.** This paper (the equivalent of the introductory section of a research proposal) should contain (1) a brief description of the background for the study, (2) a clear statement of the purpose of the study, and (3) a detailed explication of the importance of the study, including a brief literature review "placing" the study in the body of current knowledge. (See detailed guidelines.)
 - ii. **Paper #2, due April 2nd (20% of grade):** A 5-6 page (double-spaced) paper. This paper is essentially the "methods" section of a proposal.) in which you: 1) describe the conceptual basis of the research; 2) describe the research design to be used; 3) specify and describe the data to be collected, from whom, and how, and 4) outline briefly the analytical procedures to be used. (See detailed guidelines.)
 - iii. **Paper #3, due April 30th (30% of grade):** A complete, **revised** research proposal (max. of 10 double-spaced pages) based on critiques of papers 1 and 2 and other material covered in the course since the initial version was submitted.
2. **Four, 1-page Research Design Write-ups (20% of grade, total), due by** midnight via e-mail to both instructors on Friday, Feb. 8, Feb. 22, April 4, and April 18. Please indicate "*Research Design 585 Write Up*" in the subject line of the e-mail.
5. **Class and group participation (10% of grade)**

Academic Integrity

This course will be conducted in accordance with the principles of the educational and social science research professions and the University's Faculty Senate Policy 49-20 as articulated in the College of Education's Academic Integrity Policy statement. "Academic integrity is the pursuit of scholarly activity in an open, honest, and responsible manner, serving as a basic guiding principle for all academic activity. Academic integrity requires a commitment not to engage in or tolerate acts of falsification, misrepresentation, or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of

work completed by others” (from the College of Education Academic Integrity Policy, available at http://www.ed.psu.edu/edservices/certification/academic_integrity_policy.pdf). See also: http://www.ed.psu.edu/edservices/certification/academic_integ.htm

The basic principles of academic integrity require that we give credit where it is due and take no credit for ideas or written passages that are not our own. Incorporating the ideas and work of others into one’s own work is a perfectly acceptable and legitimate scholarly practice, provided that recognition is given to the sources of those ideas or passages. Academic integrity problems arise when such reliance on the work of others is not properly acknowledged. In short, we are bound to use references wherever and whenever they are appropriate to acknowledge that an idea or passage has been borrowed from another source.

COURSE SEQUENCE

Date

Topics and Assigned Readings

Jan. 16 **Course Introduction** (Heller)

Reading:

Lipson, C. (2004). *Doing honest work in college: How to prepare citations, avoid plagiarism, and achieve real academic success.*
[Chapter 3, excerpts]

Jan. 23 **Defining Problems and Reviewing Relevant Literature** (Schafft)

Readings:

Krathwohl, Chapter 4-6

Smart, J.C. (2005). Attributes of exemplary research manuscripts employing quantitative analyses. *Research in Higher Education*, 46, 461-477. [Read through page 469.]

Guest Lecture:

Carol Wright, University Librarian, Pattee Library
(6:30pm at W211 Pattee Library)

Jan. 30 Research Paradigms and Philosophy of Science (Schafft)

Readings:

Krathwohl, Chapter 1 & 3

Kuhn, T.S. (1970). *The structure of scientific revolutions (2nd ed.)*
Chicago: University of Chicago Press. [Chapters 1-4, pp. 1-42; each
chapter is a separate entry in the ERS]

Feb. 6 Experimental and Quasi-Experimental Designs (Heller)

Design Exercise 1: Quasi-Experimental and True Experimental Designs

Readings and Assignments:

Krathwohl, Chapter 7, 20

Schneider et al., Chapters 1-3

Approval of Paper #1 Topic Due 2/1

Design Write-Up #1 Due Friday, Feb. 8 by Midnight

Feb. 13 Article and Design Critiques – Experimental Designs (Heller)

Readings:

Schneider et al., Chapters 4-5

Finn, J., & Achilles, C. M. (1990). Answers and questions about class
size: A statewide experiment. *American Educational Research Journal*,
27(3), 557-577.

Hanushek, E. (1999). Some findings from an independent
investigation of the Tennessee STAR experiment and from other
investigations of class size effects. *Educational Evaluation and Policy
Analysis*, 21, 143-163.

Feb. 20 Ex Post Facto Designs (Heller)

Design Exercise #2: Ex Post Facto Design

Readings and Assignments:

Krathwohl pp. 535-539

Lesik, A.A. (2006). Applying the regression-discontinuity design to infer causality with non-random assignment. *The Review of Higher Education*, 30, 1-19.

Paper # 1 (2 Copies) Due at Start of Class
Design Write-Up #2 Due Friday, Feb. 22 by Midnight

Feb. 27 Multiple Method Designs (Schafft)

Readings:

Krathwohl Chapter 9

Krathwohl Chapter 23 (optional) and Chapter 24 (required)

Johnson R.B. & A.J. Onwuegbuzie (2004). "Mixed method research: A research paradigm whose time has come." *American Educational Researcher*. 33(7): 14-26.

March 5 Article and Design Critiques – Multiple Method Designs (Schafft)

Readings:

Oreck, B. (2004). The artistic and professional development of teachers: A study of teachers' attitudes toward and use of the arts in teaching. *Journal of Teacher Education*, 55, 55-69.

Scales, P.C. et al. (2005). School-business partnerships, developmental assets, and positive outcomes among urban high school students. *Urban Education*, 40, 144-189.

Williams, L., Archavanitkul, K. & Havanon, N. (1997). Which children will go to secondary school? Factors affecting parents' decisions in rural Thailand. *Rural Sociology*, 62, 231-261.

March 12

SPRING BREAK

March 19 Case Study Methodologies (Schafft)

Reading:

Yin, R.K. (2003). *Case study research design and methods*. Thousand Oaks: Sage. Chapters 1-2 (pp. 1-56)

March 26 Article and Design Critiques (Heller)

Readings:

TBA (to be chosen by instructors based on students' research interests)

April 2 Sampling in Quantitative and Qualitative Methods (Heller/Schafft)

Design Exercise #3: Survey research

Readings:

Kalton (1983). *Introduction to Survey Sampling* [entire book]. Don't get bogged-down in the algebra. Read for *concepts*.

N.B.: Skim pp. 38-52, 56-63 (top), and 69-81

Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods*. Sage: Newbury Park. [Pp. 169-186]

**Design Write-Up #3 Due Friday, April 4 by Midnight
Paper # 2 (2 Copies) Due at Start of Class**

April 9 Measurement (Heller)

Readings:

Carmines & Zeller (1979) [entire monograph]

Smart, J.C. (2005). Attributes of exemplary research manuscripts employing quantitative analysis. *Research in Higher Education*, 46, 461-477. [Read page 469-477.]

Optional: **Krathwohl**, Chapter 18 (pp. 421-449)

April 16 Instrument Design and Data Collection (Schafft)

Design Exercise #4: Multiple Methodologies

Reading and Assignments:

Dillman, Chapter 1 (Introduction to Tailored Design, pp. 3-31) and Chapter 3 (Constructing the Questionnaire, pp. 79-148)

Design Write-Up #4 Due Friday, April 18 by Midnight

April 23 Ethics and Integrity in Research (Schafft)

Readings:

Krathwohl Ch 10

(**Note for 2009**) See: Hostetler, K. (2005). What is “good education research? *Educational Researcher*, 34, 6, 16-21

Guest lecturers:

Gretchen Schafft, Ph.D., M.H.S.

Applied Anthropologist in Residence
American University

Jodi Mathieu

Research Compliance Coordinator
Penn State Office of Research Protections

April 30 Last Class – Wrap up loose-ends. (Schafft & Heller)

Paper # 3 (2 Copies) Due at Start of Class