EDP 384: Research Design and Methods for Psychology and Education
Fall 2013, Tues/Thur, 11:00am - 12:30 pm
SZB 432

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Overview and objectives

This course will introduce essential concepts and core methods used in empirical research in the fields of education and psychology, in order to prepare students both to be informed, critical consumers of research and (eventually) to conduct high-quality empirical research of their own. The course is organized around five main themes: validity and reliability, quantitative descriptive research, qualitative research, experimental causal research, and quasi-experimental causal research. On each theme, we will read relevant theoretical/methodological literature, define key terms and concepts, and discuss important empirical research in light of those concepts. Emphasis will be placed on building intuition and heuristics regarding research designs and methods, rather than mastering technical details, though some essential statistical concepts will be introduced.

Readings

- Required text: Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and Quasi-Experimental Design for Generalized Causal Inference*. Boston, MA: Houghton, Mifflin, & Co.
- Further articles posted on Canvas.

Evaluation

- Class participation (25%). Students are expected to attend each meeting and to be informed, active participants in class discussions.
- Homework (25%). Periodic (approximately weekly) homework assignments will mostly involve reading an empirical research article and writing a short (~1 page) summary and critique. Homework must be submitted electronically by 9 a.m. on the date listed. Late submissions will not be accepted.
- Midterm exam (25%). The midterm exam will consist of several short essays in which you will be asked to apply concepts you have learned and critique empirical research articles. The articles will be made available in advance of the midterm.
- Final exam (25%). The final exam will also consist of several short essays, and will have a format similar to the mid-term.

Academic integrity

Following the University's honor code, students are expected to maintain absolute integrity and a high standard of individual honor in scholastic work. Assignments and exams must be completed with the utmost honesty, which includes acknowledging the contributions of other sources to your scholastic efforts; avoiding plagiarism; and completing assignments independently unless expressly authorized otherwise.

ADA accommodations

The University of Texas at Austin provides upon request appropriate accommodations for qualified students with disabilities. For more information, please contact the Office of the Dean of Students at 471-6259, 471-4671 TTY.

Tentative Schedule

Introduction

8/29 - Principles of scientific research

9/3 - Research questions and inferences

Validity and reliability

9/5 Construct validity, external validity

9/10 Internal validity, statistical validity

9/12 Instrumentation, measurement scales, Likert scales

9/17 Reliability

Quantitative descriptive research

9/19 Distribution, disparities, correlations, and trends

9/24 Probability sampling

9/26 More probability sampling

10/1 Longitudinal designs

Qualitative research

10/3 Clinical interviewing (Guest lecture: Dr. Ricardo Ainslie)

10/8 Ethographic observation

10/10 Qualitative paradigms

10/15 Midterm

Causal research: Randomized experiments

10/17 Confounding and causal models

10/22 Simple randomized experiments

10/24 Effect sizes

10/29 Block-randomization and covariate adjustment

10/31 Cluster-randomized designs

11/5 Implementation issues: Attrition, missing data, and compliance.

Causal research: Quasi-experiments and observational studies

11/7 Statistical adjustment

11/12 More on statistical adjustment

11/14 Matching and balancing

11/19 More on matching and balancing

11/21 Regression discontinuity

11/26 Interrupted time series

12/3 Single-case designs

12/5 General discussion