DSPL 7011
Research Design: the Logic of Inquiry

University of Colorado Denver
College of Architecture and Planning, Fall Semester 2009

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Class meetings: Wednesday, 2:00 - 4:45 pm
Rm 320C of UCD Building (1250 14th St)

Description & Objectives This course introduces students to empirical analysis within the traditions of social science, focusing on issues of research design. It is an initial 'core course' for first year PhD students in the PhD Program in Design and Planning but is open to PhD students from all disciplines on either the Denver or Boulder campus. In addition, advanced/second year Master's students seeking to gain more appreciation for research design issues in preparation for writing a thesis are more than welcome.

Students are provided with a "hands on" understanding of methodological issues to become both intelligent consumers of social science research and, more importantly, competent producers of empirically based knowledge. The course moves through the research process, covering such topics as hypothesis formulation, research design, data collection, measurement, and some fundamentals of statistical inference.

Requirements There are five requirements for course: (a) 5 different analytical exercises, (b) Research proposal, (c) Learning Refinement Opportunity #1 (LRO aka Exam) (take home) , (d) LRO #2 (take home), (e) Engagement and Class Participation. Each requirement comprises 20% of your overall grade and is assessed on a 4.0 scale (3.5 being low "A" quality).

The reading load for this course is light relative to other graduate level courses. I prefer to emphasize "hands on" experience with designing and evaluating social science research through analytical exercises and the development of a research proposal. Weekly exercises may be employed to encourage you to work through concepts and develop skills before they are introduced in class. This may be frustrating; though no one will be giving you the answer before you undertake a research project. And, I will ask each of you to lead the class one during the semester for 30 minutes or so. In this time you will describe how the readings and topics for that day particularly relate to a research topic of your choosing (counted as part of "engagement").

The 5 analytical exercise sets are required throughout the semester. Assignments are to be turned in on appropriate due dates and will be assessed in this fashion: Check Plus (Very good); Check (Acceptable), or Check Minus (Significant Shortcomings Present). All students start the semester with grade of 3.5 for exercises. Each check Plus adds 0.1 point to that base (up to a maximum of 4.0), while each check minus reduces the grade by 0.1 point. A grade of Check is neutral (i.e., no points added or subtracted). Not turning in an assignment on time results in a 0.4 point loss on the base exercise set grade. The *only* exception is for *documented* family and/or medical emergencies. It is in your best interest to please respect this edict.

The research proposal assignment is intended to allow you to practice a skill that is essential to our profession– grant writing. While many students in this course are only beginning their graduate careers, it is acknowledged that the research project you propose will not be of dissertation quality. Nonetheless, becoming familiar with the mechanics of writing a research proposal will help you in the long run, especially when it comes time to draft your dissertation/thesis proposal and seeking funding.

Throughout the semester, there will likely be something due each week—either an exercise, a stage of the research proposal or an additional learning refinement opportunity. These are intended to reinforce our learning and keep us actively thinking about the myriad concepts we will be covering.

Readings draw from three sources (it is best to have convenient access to the first two books):

(1) Frankfort-Nachmias, Chava and David Nachmias (F-N & N) 2008. *Research Methods in the Social Sciences*, 8th edition New York: Worth Publishers (Earlier editions are acceptable as are used copies without the data disc);

(2) Gary King, Robert O. Keohane, & Sidney Verba (KKV) 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton University Press;

(3) Other articles or excerpts, most of which are listed and posted below.

Schedule

Week/Date	Content	Readings
1 (19 Aug)	**Orientation framework for course** -Science and pseudoscience -Answerable & analytical questions -Functions/uses of empirical research. -Evaluating empirical research.	-**KKV**. Preface, Chpt. 1. -**Garson**. Framing an Analytic Question -**Krizek, Forsyth, and Schively Slotterback**. Is There a Role for Evidence-Based Practice in Urban Planning and Policy?
2 (26 Aug) *Ex. 1 DUE*	**Theories, Hypotheses, and Models** -Deduction and induction. -Alternative hypotheses & rival explanations	-**F-N & N.** Chpt 1 (scientific approach) -**F-N & N**. Chpt. 2 (conceptual foundations) -**Lave & March**. Chpts. 1-3. -**Geddes, B**. 1994. "Big Questions, Little Answers."
3 (2 Sept) *Ex. 2 DUE*	**Research Design I: the Variety of Designs** -Experimental, quasi-experimental and non-experimental designs. -Cross-sectional vs. longitudinal designs. -Making inferences. -Causality	-**F-N & N.** Chpts. 5 (experiments), 6 (quasi-experiments), 9 (observational/field research). -**KKV**. Chpt 3 -**Krizek, Handy, and Forsyth**. Explaining Changes in Walking and Bicycling Behavior… -**Krizek.** Residential Relocation…
4 (9 Sept) *Ex. 3 DUE*	**Research Design II: Case selection** -Different uses of the "case study." -Selecting cases (e.g., on independent variable). -Counterfactuals.	-**F-N & N.** Chpt. 12 (Qualitative research). -**KKV** Chpt. 2, 4, & 6. -**Flyvbjerg**. Five misunderstandings…
5 (16 Sept) *Stage 1 DUE*	**Research Design III: Interpretive and Exploratory Approaches**	-**Eisenhardt.** Building theories from case study research -**Dick.** Grounded theory: a thumbnail sketch
6 (23 Sept)	**Ethically Responsible Research** (Alison Lakin)	-**F-N & N**. Chpt. 4 (ethics).
7 (30 Sept) *Ex. 4 DUE*	**Concepts, Indicators, and Measurement** -Types of measurement and variables -Data quality and consistency. -Indices, construct validity, dimensionality and proxy variables. -Measurement error	-**F-N & N.** Chpt 7 (measurement) -**KKV**. Chpt 5. -**Krizek**. Operationalizing…
8 (7 Oct) *LRO #1 DUE*	**Data Collection: Surveys & Interviews** -Types of surveys -Interviews	-**F-N & N.** Chpts. 10 (surveys) and 11 (questionnaires).
9 (14 Oct) *Stage 2 DUE*	**Sampling and External Validity I** -Populations vs. analytical vs. statistical sample. -Probability vs. non-probability sampling. -Random vs. non-random sampling. -Issues related to sample size. -Standard error and confidence intervals.	-**F-N & N**. Chpt. 8 (sampling). -**Krizek**. NMTPP Sampling Protocol**.** Pages 1-8 & Appendix H -**Firebaugh**, Chpt 1 (…possibility of surprise) -(optional) **Converse, P. and M. Traugott**. 1986. "Assessing the Accuracy of Polls and Surveys." *Science* 234 (4780): 1094-98.
10 (21 Oct) *Ex. 5 DUE*	**Sampling and External Validity II** -Statistical significance. -Substantive vs. statistical significance. -Type I and II errors.	-**F-N & N**. Chpt. 15 (univariate distribution) -**Babbie**. Chpt. 7 (logic of sampling). -Sample size calculator, site 1 -Sample size calculator, site 2 -(optional) **Cohen, J**. 1994. "The Earth is Round ($p < .05$)." *American Psychologist* 49 (12): 997-1003.
11 (28 Oct)	**Preparing Research Proposals**	-TBA

Stage 3 DUE	(class is meeting from 10:15 until 1:15)	
12 (4 Nov)	**Controls, Counterfactuals, & Review**	**-F-N & N.** Chpt. 17 (control). **-Fearon**. Counterfactuals
13 (11 Nov) *Stage 4 DUE*	**Communicating the Results of Your Research** -Claims, presenting an argument -Reasons and evidence -Catering to multiple audiences	**-Booth, Colomb, & Williams** (2003). *The Craft of Research,* Chpts. 7, 8, 9, 10, 11.
14 (18 Nov)	**Learning Refinement Opportunity #2 Review**	**-TBA**
15 (2 Dec)		

A note on Readings I expect each of us to come to class having carefully read the day's reading. Some of the readings will be covered in more detail than others. The class liberally relies on several of the professor's research projects as examples of the different processes and perspectives of research and research design. We will reflect on these writings in class, paying special attention to how the project changed as it unfolded, the written products, how these were disseminated, and how they have mattered to subsequent scholarship and planning outcomes. You are encouraged to *skim* these readings by Krizek, making sure to pay attention just to some of the key research design elements. It is more important to pay closer attention to the other readings. In class discussion we will *not* cover *all* the material described in the readings in detail. You will get the most out of class if you are familiar with the arguments and main points in each reading. Keep in mind we meet only once per week. If you cannot attend just two sessions, this means you miss almost 15 percent of the course. The above schedule is subject to change, with advance warning, and will be posted on www.kevinjkrizek.org.

Other readings The literature surrounding research design in the social sciences is rich with texts, articles, perspectives and other writings; each provide various (and mostly valuable) perspectives. I provide the following list of works to further supplement the main writings referred to above in the syllabus.

- Kristin Luker, *Salsa Dancing into the Social Sciences: Research in an Age of Info-glut* 2008
- John Creswell, *Research Design* (Third Edition) 2009
- Robert Yin, *Case Study Research* (Fourth Edition) 2009
- David Krathwohl, *How to Prepare a Dissertation Proposal* 2005
- Stanley Lieberson, *Making it Count: The Improvement of Social Research and Theory* 1985
- Charles C. Ragin, *Constructing Social Research* 1994
- Joel Best, *Damned Lies & Statistics: Untangling Numbers from the Media, Politicians, and Activists* 2001
- Guy Peters, *Comparative Politics: Theories and Methods* 1998
- Glenn Firebaugh, *Seven Rules for Social Research* 2008
- Chris Hart, *Doing A Literature Review* 2008
- Bent Flyvbjerg, *Making Social Science Matter* 2001
- Henry E. Brady and David Collier (ed), *Rethinking Social Inquiry: Diverse Tools, Shared Standards* 2004
- Don Campbell and Julian C. Stanley, *Experimental and quasi-experimental designs for research* 1963
- Edward G. Carmines and Richard A. Zeller. *Reliability and Validity Assessment* 1979

Touching base The best way to communicate with Professor Krizek and get a quick response is by attending office hours (please see: www.kevinjkrizek.org). I will do everything within my power to always be available during these times, although sometimes important meetings are scheduled at that time without my consent. E-mail is also a suitable medium for communication, although I apologize for rarely being able to provide you the immediate reply we have come to expect from this medium.

Other I believe that I can only be an effective teacher if I know what you are thinking and where you are struggling with the material or argument. I welcome your thoughts regardless of whether they are the

perfectly constructed answer to the question because they help me to focus the class discussion in a way that will be most helpful to learning. I will bring to class my excitement and knowledge about the material, a determination to help you learn it to the best of my ability, and an aim to keep the bar high for all of us. The University prohibits me from allowing individual students to submit additional work for extra credit. In addition, I do not grant 'incompletes' unless they fully comport with University protocol. Please let me know if you have a disability which may require some modification of seating, testing, or other class requirements so that appropriate arrangements may be made. Disability Services is also located on campus. My policy is to prosecute plagiarism, cheating, and scholastic misconduct to the fullest extent permitted by University rules.