Psychology 616
Research Techniques for Non-Experimental Social Science

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This class provides a survey of a number of different issues and techniques in psychological research and gives you hands on experience with them through bi-weekly projects. The techniques covered should be relevant to students in a number of different areas such as social, clinical, developmental, and aging. The aim of this class is to acquaint you with a broad array of techniques, rather than to make you an expert in any particular technique. The topics covered in this class will be:

- Measurement: Development and analysis of scales
- Factor analysis as it relates to scale development
- Missing data. Cleaning up data.
- Survey Research
- Internet data collection
- Experimental and Quasi-experimental design and field research
- Observational research
- Event sampling. Diary studies.
- Analysis of data from dyads and groups.
- Content analysis and narrative analysis
- Meta-analysis (a technique for synthesizing and reviewing results from a number of studies)
- Causal modeling, structural equation modeling
- Focus groups

Class will be a mixture of lecture and discussion. Much of the discussion will focus on the class projects and problems that will be assigned. Typically, class projects will be discussed during the first hour or so of the class following the assignment of the project. Grades in the class will be based on students' performance on the class projects.

Readings for a given week should be done before that class period, because the classes will be based on those readings and your ability to successfully participate will depend on having done the readings.

Projects. Students will be assigned seven bi-weekly projects, as well as an extensive scale development project that will carry over the entire semester. For the bi-weekly projects students will be required to develop a research hypothesis and associated research questions, and then design a study using the research technique that they are learning in that section of the course. These projects will be written up and turned in to be graded and critiqued.
Readings: Xeroxes and paperback books. The following books will be available at the bookstore.


**Xeroxes will be posted on Blackboard**

Strongly recommended


**SCHEDULE OF CLASSES: TOPICS AND READINGS**

**Tuesday**

1/12  **Introduction**

1/19  **Measurement: Scale Construction**

DeVellis, R. F. *Scale Development* p. 1-113


Tabachnik & Fidell, chap. 13, 635-707 "Principal Components and Factor Analysis"(Xerox)

**Project:** Develop scales, administer questionnaire and analyze scales. Write up results. The completion of this project will be spread over a number of weeks of the class and will be due at the end of class. Administration of scale could be part of Internet data collection project. See Handout for questions to be answered in analyses.

1/26  **Cleaning up your act: Cleaning up data. How to deal with missing data.**

McClelland, G. H. *Nasty data: Unruly, ill-mannered observations can ruin your analysis*. (pp. 393-411). In Reis & Judd.

Tabachnik & Fidell, chap 4, 57-125 "Cleaning up your act: Screening data prior to analysis. [Xerox]

Survey Research

Workshop on scales. Critique and discuss the items you have written.


**Project:** Develop a simple telephone survey. Then design how to administer it, including a sampling plan, but do not actually administer it.

Survey Research continued


Discuss the survey design

Internet: Gathering data on the Internet

Discuss the advantages and disadvantages of collecting data on the Internet.

Discuss how to construct WEB based surveys. Look at some currently existing sites for on-line research.

**Project:** Develop and implement a simply survey or experiment on Qualtrics

Give out problems with studies with internal validity problems for discussion during class the following week.

Experimental and Quasi-experimental design

Brewer, M. B. *Research Design and Issues of Validity*. (pp. 3-16). In Reis & Judd.


In class will go over short descriptions of studies for problems with internal validity.

A summary of the articles to be critiqued will be presented and class discussion will center on problems with the articles.

Regression artifacts.

**Project:** Article by Elizabeth Cohen will be distributed. Critique of Elizabeth Cohen due the following week

Discuss issues in the logic and analysis of Quasi-experimental designs.
**Experimental and Quasi-experimental design continued**


Chapter(s) from Cook and Campbell.

Critique of Elizabeth Cohen due this week.

**3/9 Event sampling, Diary Studies.**

Reis, H. T., & Gable, S. L. *Event-sampling and other methods for studying everyday experience.* (pp. 190-222). In Reis & Judd.

Kashy, D. A., & Kenny, D. A. *The analysis of data from dyads and groups.* (pp. 451-477). In Reis & Judd.

**Project:** Develop and describe an event sampling study that can be done either as a diary study or with the use of PDAs, smartphones (e.g., iPhone).

**3/16 SPRING BREAK**

**3/23 Observational research**

Bakeman, R. *Behavioral observation and coding.* (Pp. 138-159). In Reis & Judd.

Bakeman, R. Chapter on coding observational data.

Discuss examples of different kinds of coding systems: Bales, rating scales versus behavioral measures, micro versus macro level systems, etc. Relative advantages and disadvantages of each.

**3/30 Observational research/ Content analysis**

Bartholomew, K., Henderson, A. J. Z., & Marcia, J. E. *Coding semistructured interviews in social psychological research.* (pp. 286-312). In Reis & Judd.


**Project:** Develop an observational coding system to test a particular question. Write-up a brief description that describes what you are trying to find out, what your coding system looks like and how your coding system will allow you to test your hypotheses. This should be turned in for the following week.
4/6  Content analysis


Description of observational coding system due.
Will discuss different students' examples as time permits.
May also discuss different techniques for analyzing such data.

**Project:** Develop a content analysis coding system and write up a 3-4 page description of a study in which it will be used. This will be due next week and will be discussed in class.

4/13  Meta-analysis

Johnson, B. T., & Eagly, A. H. *Quantitative synthesis of social psychological research.* (pp. 496-528). In Reis & Judd.


**Project:** Perform a simple meta-analysis and write it up.

4/20  Focus Groups
Barbour, R. *Doing Focus Groups.* SAGE Publications.

4/27  Causal modeling, structural equation modeling

Wegener, D. T. & Fabrigar, L. R. *Analysis and design for Nonexperimental Data: Addressing Causal and Noncausal hypotheses.* (pp. 412 – 450). In Reis & Judd.

Tabachnik & Fidell, Chap. 14, *Structural equation modeling.*


**SCALE CONSTRUCTION PROJECT DUE Friday, the first week of Finals.**