

Research Methods – Fall 2009  
UNC-CH INLS 780  
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Brief Description

Almost all the material in Babbie will be covered, with a disproportionate emphasis on materials students often find most difficult to learn from the book, such as notions of validation, basic statistics, etc.

My personal goal as the instructor is to increase the *leadership skills* in SILS Masters students by teaching them to recognize questions in the students' professional domains whose answers could improve professional practice; to learn methods for gathering original data to increase knowledge about the domain and the answer; and to learn analytic methods that allow one to answer questions and determine the degree of confidence one can have in the answer and the scope of the answer's applicability.

Text

Babbie, Earl, *The Practice of Social Research*, 12<sup>th</sup> edition, Thomson 2010. (in Bookstore). Using the 11<sup>th</sup> edition is acceptable.

Outline and Readings  
(Readings preceded by "\*" are optional)

**Introduction: Research and its Applications.**

Babbie, Chapter 1

\* Ben-Ari, M. *Just a Theory: Exploring the Nature of Science*. Prometheus, 2005.

\* Brockman, J. (editor) *What We Believe But Cannot Prove*, Harper, 2006.

\* Carruthers, P., Stich, S., and Siegal, M. *The Cognitive Basis of Science*, Cambridge, 2002.

\* Eldredge, J. "Inventory of Research Methods for Librarianship and Informatics" *J. of Medical Library Association* 92(1) January 2004.

\* Fuller, S. *Kuhn vs. Popper: The Struggle for the Soul of Science*, Columbia U., 2004.

\* Gilbert, D. *Stumbling on Happiness*, Vintage, 2007.

\* Gladwell, Malcolm. "Something Borrowed: Is it Fair to Complain about Plagiarism?" *New Yorker*, Nov 22, 2004, pp. 40-48. (Available through Davis Electronic Journals.)

\* Hermanowicz, J. *Lives in Science: How Institutions Affect Academic Careers*, U. of Chicago, 2009.

- \* Kealey, T. *The Economic Laws of Scientific Research*, 1996, Chapter 1
- \* Madigan, R., Johnson, S. and Linton, P. "The Language of Psychology: APA style as epistemology," 50, *American Psychologist*, (1995) 428-436.
- \* Stricker, G. "Are Science and Practice Commensurable?" *American Psychologist* 52 (April 1997) 442-448.
- \* Wildemuth, B. *Applications of Social Research Methods to Questions in Library and Information Science*. Libraries Unlimited, 2009.

### **Social Psychology of Research**

Babbie, Chapters 1-3.

- \* Kassin, S. "On the Psychology of Confessions," *American Psychologist*, 60 (April 2005), 215-228.
- \* Milgram, S. *Obedience to Authority*, Harper & Row, 1974.

### **Research Design and Topics**

Babbie, Chapter 4

- \* Black, T. "Questions and Hypotheses" in *Understanding Social Science Research*, Sage, 2002.
- \* Collins, J. and Porras, J. *Built to Last*, Harper Business, 1997.
- \* UNC Institutional Review Board, <http://research.unc.edu/ohre>

### **Conceptualization, Measurement, Operationalization, and Variables**

Babbie, Chapters 4-5

- \* the set of articles in *American Psychologist* on "The Science and Politics of Comparing Women and Men" and follow-up articles in the same issue (50 (March 1995)).
- \* Baker, S. and Lancaster, F. W. *The Measurement and Evaluation of Library Services*, second ed., Information Resources Press, 1991.
- \* Matthews, J. *The Evaluation and Measurement of Library Evaluation*. Libraries Unlimited, 2007. Paperback \$50.

### **Questions**

Babbie, Chapters 6 (Indexes and Scales) & 9 (Surveys)

- \* Fink, A. *How to Conduct Surveys: A Step-By-Step Guide*. Sage Publications, 2006.
- \* Levav and Fitzsimons "When Questions Change Behavior" *Psychological Science* 17 (2006) 207-213.

\* Lewontin, R. "Sex, Lies and Social Science," *New York Review of Books* XLII (April 20, 1995), 24-29.

\* Moore, D., *The Opinion Makers: An Insider Exposes the Truth Behind the Polls*, Beacon Press, 2008.

\* Rubin, H. *Qualitative Interviewing: The Art of Hearing Data*, Second Edition. Sage Publications, 2004.

## **Sampling**

Babbie, Chapter 7

\* DiCarlo, M. and Maxfield, M. "Sequential Analysis as a Sampling Test for Inventory Need," *J. of Academic Librarianship* 13 (Jan. 1988), 345-348.

## **Experiments**

Babbie, Chapter 8 (Experiments) & 12 (Evaluation Research)

\* Franklin, R., Allison, D., Gorman., B. *Design and Analysis of Single-Case Research*, L. Erlbaum Associates, 1997

\* Koufogiannakis, C. and Crumley, E. "Research in Librarianship: Issues to Consider" *Library Hi Tech*, 2006, 24(3), pp. 324-340.

\* Lyubomirsky, S. "Why Are Some People Happier Than Others," *American Psychologist*, March 2001, pp 239-249. More recent is her *The How of Happiness*, Penguin, 2008.

## **Qualitative Research**

Babbie, Chapters 10 (Qualitative Research) & 13 (Qual. Data Analysis)

\* Silverman, D. *Doing Qualitative Research*, Second Edition, Sage, 2005.

## **Unobtrusive Research**

Babbie, Chapter 11

\* Rimland, E. L., "Do We Do It (Good) Well? A Bibliographic Essay on the Evaluation of Reference Effectiveness," *The Reference Librarian* 2007. 47(2) pp 41-55.

\* Webb, E. et al. *Unobtrusive Measures*, Revised Edition, Sage, 2000.

## **Content Analysis**

\* Neundorf, A. *The Content Analysis Guidebook*, Sage, 2002.

## **General Analysis of Data**

Babbie, Chapters 14, 16.

\* Bender, P. M. "Can Scientifically Useful Hypotheses Be Tested with Correlations?" *American Psychologist* 62 (2007) 772-782.

\* Byrne, G. "A Statistical Primer: Understanding Descriptive and Inferential Statistics" *Evidence Based Library and Information Practice* 2:1 (2007) 32-47.

\* Krueger, J. "Null Hypothesis Significance Testing: On the Survival of a Flawed Method," *American Psychologist* 56 (1) (2001) 16-26

## Evaluation

Class participation & Homework 25%,  
Test 40% (Last class, **Wednesday Dec. 9**),  
Proposal and Related Materials 35%.

(Late proposals will result in a considerably lower grade for the proposal)

## Research Proposal for Master's Papers

All projects must be submitted on paper. Students are recommended to read the following three pages of the syllabus several times.

### Professional Research

Students are free to choose a research hypothesis within the broad area of library and information science whose answer will result in better service to patrons across a range of organizations. The focus of this course is on practitioner-oriented research; using the answer to the student's hypothesis should result in improved operation and management of information systems like that studied and an increased understanding of performance issues. A descriptive study of the circulation habits of faculty teaching research methodology courses is very weak; better studies might show that modifying the circulation policy in a certain way increases the use of the collection by research methods faculty, or that the availability of research related materials would be improved. For professionals, knowing that a problem exists isn't half as helpful as knowing that one solution is superior to another. **Try to propose something constructive.** Students should minimize collecting information or using variables not having a bearing on the outcome of their study. As a rule of thumb, just building something is not acceptable; analysis of the system or procedure is almost always required. If all you discuss is a single product or group of people or "thing," you are missing a basic functionality. Gathering information solely to allow a single manager to make a decision isn't research. Research should produce generalizations that can be either applied directly to practice in the field or to further theoretical development.

### Outcome Variables

At the beginning of class on **Monday Nov 9**, students are expected to hand in a list of five possible outcome variables whose values you think you can improve in some circumstances. For each outcome variable, list an operational definition (discussed below in the Research Hypotheses section), some possible values for this outcome variable (examples), and bibliographic information for two research articles that discuss the study and measurement of this outcome variable. For operational definitions, try to specify who, what, when, and where for this variable in this study.

Outcome variables may be qualitative or quantitative variables that may take on several values. The outcome variable "self-reported emotion" might be happy or sad or glad. "Daily circulation" might be 100 or 347. "Ease of use" might be easy, difficult, or confusing. If you pick outcome

variables in the area in which you hope to be working after graduation, any knowledge you gain from studying these outcome variables will benefit you professionally for years. For help on outcome variables, you might want to look up “dependent variables” in the text.

Focus on an outcome variable and not on an environment. Your entire research paper will bring together the outcome variable(s) and the environment. Clearly, if you pick a specific outcome variable and a narrow environment, there will be little or no literature on the variable. Look at the literature on using your outcome variable in a range of studies in a range of environments. Which help best? Use this literature. Use specific outcome variables when possible. Variables like “use” and “happiness” are very broad and their use is almost sloppy in a professional context; be more specific.

## **Research Hypotheses**

Students are expected to hand in a formal statement of the research hypothesis to be used in their proposal, phrased as a single hypothesis, by **the start of class on Monday Nov 16**. Late hypotheses will be penalized.

Research hypotheses that will have little impact on professional actions and managerial decision-making will be penalized; this is a professional school. Think about *specific actions or behaviors* that could be changed to improve measurable factors. Your paper should provide a statement of best practice. The hypothesis should make a *direct recommendation* to other professionals, a statement of *best practice*. Hypotheses need to address topics similar to those examined in library and information science journals, such as *JASIST*, *IP&M*, *LISR*, or the ALA research journals. Showing that 20% of SILS students have a certain desirable characteristic isn’t constructive; showing that taking a certain action *increases* the population with this desirable characteristic to 30% is constructive.

Note that even though someone you work with thinks an idea would be interesting or useful or a faculty member has done research like this, it doesn’t mean that the research hypothesis is constructive. Lower grades are given to non-constructive hypotheses than are given to constructive hypotheses. This is a professional program, and this course places the constructive recommendations you can provide to the profession over your own personal interests, although the latter are certainly important.

Avoid using proper nouns (specific Libraries, Systems, People) in the hypothesis; the hypothesis should be emphasizing concepts and their relationships. The concept may be related to the proper nouns in the operational definitions. For example, instead of saying that you are trying to discover something about Duke undergrads, make the research hypotheses about undergrads in general or undergrads at private schools. Then, in the operational definition, state that you are using a random sample of undergrads in a section 37 of a beginning English class at Duke.

After formally (1) stating *the research hypothesis*, and on the same page, should be (2) precise operational definitions for the concepts mentioned in the hypothesis (ideally someone else should be able to develop something like your study from your operational definitions.) Operational definitions aren’t dictionary definitions: I recommend that you look up “operational definition” in several sources. In the operational definitions, you should be specifying exactly where the data will come from, what populations you are using, etc. For “library,” for example, you might have “a random selection of entries in Library Directory A” and for “users” you might have “all members of Ms. Smith’s third grade class in Jones Elementary School” or “those students in SILS who expressed a willingness to participate in a study described on a solicitation placed in their mail folders” or “those entering Davis Library who are listed in the UNC Directory as students on the day of the study.” Operational definitions are *project specific* definitions. Low grades for this assignment are most frequently given because of the lack of

quality operational definitions for each significant concept in the hypothesis. (3) Explicitly list the outcome variable(s) or concept(s) that you hope to improve. (4) Provide a list of bibliographic databases you will search to locate related materials (including relevant databases outside the common library and information science databases, such as those covering management, marketing, psychology, sociology, education, computer science, etc.), accompanied by a list of search terms you will use.

### List of Related Research Literature

At the beginning of class on **Monday Nov 23**, students are expected to hand-in a list of the best literature describing the relationships between the variables (most noun phrases and possibly other terms or phrases) in the research hypothesis, those aspects of the research hypothesis for which you have a operational definitions. This bibliography, which should be 3 to 6 pages, should consist of the research hypothesis followed by a list of individual variables and groups of variables, with each variables or group of variables followed by a list of the most relevant citations. Each citation should have attached a one to four (no more) word statement about the kind of information provided about the variable or relationship (e.g., “opinion”, “assumption”, “empirical data,” “methodology,” etc.) Don’t mention the position they take; the point of this is to find out what kind of data or arguments you have about each variable. In all cases, try looking broadly in other disciplinary literature for functional (less environmental) discussions of the variables or groups of variables, for other types of institutions, other types of humans, etc.

### Research Proposal

Each student will develop a short research proposal to be handed in on paper by **the start of class Monday Dec. 7**. Late proposals will be penalized. Note that the requirements and standards for this research hypothesis and proposal *will likely differ from those of your advisor* in many respects; everybody in this class will be held to the same professional standards. The proposal will contain the following sections with approximate lengths (double or 1.5 spaced) as given:

1 page	Introduction to problem (including the research hypothesis)
2-6 pages	Brief prose literature review. Emphasize relationship between problem, literature, methodology, and possible solutions. This should be a prose presentation and argument rather than a list as in the “literature review” assignment
3-6 pages	Precise statement of methodology & analytic techniques. Include operational definitions (in prose)
0 to 2 pages	Limitations of this study (weakness of data, methodology, analysis)
½ to 2 pages	Expected results, and significance of the work (and who it will directly benefit). If possible, include a statement of “best practice” that you hope to be able to support or defend
¼ to 1 page	Qualifications. What special background or access will make this study successful? What experience do

you and your probable advisor have in this area?

½ to 1 page	Summary.
5 to 10 lines	Project Schedule

Proposals should be a maximum of 14 pages, double spaced, excluding support material such as sample cover letters, surveys, etc. Do not use a sans serif font; these fonts (e.g. Helvetica or Arial) are designed for headlines and captions, not the body of text in a paper. Serif fonts have tails at the tops and bottoms of lines that aid the eye scan horizontally and are designed for prose.

The project schedule should provide both (1) expected completion dates and (2) worst-case completion dates for all major stages in the project, possibly including the completion of the literature review, design of questionnaire, Human Subject Committee review, data collection, data analysis, completion of the rough draft, etc. Most faculty members expect a draft of the masters paper two weeks before the final due date for the finished copy.

The proposal does not commit you to using this research hypothesis. If you believe you will be doing a project which is not research based as your master's paper or project, you still need to develop a proposal based upon a research hypothesis that involves data gathering and analysis, and you will need to show how the results can be applied outside the environment where the data was gathered. If you don't think your research will result in the kind of knowledge that might be presented in a SILS class by the instructor or published in an LIS journal, you need to consider another research hypothesis.

The literature review should be organized topically and should not be organized by article. Find a broad way to functionally describe the question and bring in the literature from other disciplines that address this basic question.

## Honor Code

Students should familiarize themselves with the University of North Carolina at Chapel Hill Honor Code which is described in University publications. It should be noted that in this course, students are expected to receive (and provide) some assistance regarding the use of hardware and software in the computer laboratories and general problem solving techniques for the proposal and homework assignments. Students should NOT receive (or provide) major creative assistance or continuing minor support for projects.

**Plagiarism:** Student assignments that are handed in that contain more than 5 consecutive words that the instructor feels were taken from another source without proper attribution (without the proper quote marks and citations) *definitely will be referred* to the appropriate administrative authorities who address issues of Academic Integrity (e.g. the *Honor Court*) I assume that all students are equally likely to be honest and will put an equal amount of effort into considering the possibility of plagiarism for each student's paper.

Separate from the Honor Code but related to respect for classmates is classroom behavior. Students are expected to behave in a professional manner in class. Students in class are expected to focus on classroom discussion and materials. Students are expected to avoid student-to-student conversations during class. Use of laptop computers should be limited to taking notes for class. Similarly, materials being read (on paper or electronically) should be limited to those appropriate for the classroom lecture or discussion. Students who appear to be involved in non-class related activities during class time will be graded as not participating in class. Cellular telephones and computers should have ringers and speakers muted so as to not disturb others.