

SI 840

Research Methods

syllabus v. 1.0, 8 Sept. 2009

Tues 8:30-11:30 AM
Rm. 3244, SI North

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Course Description

The central focus of this course will be how to formulate and defend claims in the general domain of the human use of information systems.

The intellectual agenda of the School of Information draws upon many referent disciplines, and SI students need to be conversant with many scholarly literatures. Therefore, we need to examine a wide variety of research methods and their use in defining and defending claims. This course explores research methods from the behavioral sciences, computer science, economics, history, sociology, and communication studies, as well as other disciplines, which all have quite different styles of persuasion.

Learning objectives

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

1. Understand the various kinds of methods, argumentation, proof, and claims used in a variety of School of Information referent disciplines
2. Understand the complementary relationship of qualitative and quantitative methods, including which kinds of research questions each one can best address
3. Define an interesting and do-able research question
4. Conduct a literature search and write a literature review that situates the research question within a field of scholarly inquiry
5. Design at least two studies, using different methods, that could answer the research question
6. Review and evaluate research from School of Information referent disciplines appropriately
7. Understand basic concepts in statistics and apply them to your research
8. Design an experiment.

Readings

Required books:

- Bernard, H. Russell. *Social Research Methods: Qualitative and Quantitative Approaches*. Newbury Park, CA: Sage, 2000.
- Creswell, John. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 3rd edition, Sage, 2009.
- Booth, W. et al.. *The Craft of Research*, 3rd edition, The University of Chicago Press, 2008.

Recommended books:

- Hart, C., *Doing a Literature Review: Releasing the Social Science Research Imagination*, Sage, 2007.
- Becker, H., *Writing for Social Scientists*, 2nd edition, The University of Chicago Press, 2007.

Course Assignments and Exams

The course is reading and writing intensive. You should expect to read 150-200 pages per week. We are surveying many, many methods.

Assignments. The assignments will be loosely coupled with your first-year paper. Each assignment is due at the beginning of the following Tuesday, specified on ctools. When you turn in a component of your first-year paper, turn it in together with the previous components. NO LATE WORK is accepted. Indicated weeks are due dates; obviously you should be working on these assignments more or less continuously throughout the semester.

1. Week 3: choose a research topic for your first-year paper after consulting your advisor. Write a 600-1000 word paper that defines the topic and answers the question, "Why does this topic matter?"
2. Week 5: write a 1000-1500 word literature review for your chosen topic that answers the question, "What do we already know about this topic, and what do we still need to find out?"
3. Week 7: describe a detailed qualitative research design that could help to extend knowledge about your topic (1000-1500 words).
4. Week 9: a statistics assignment.
5. Week 11: an assignment on experimental methods.
6. Week 13: finish the research design section of your first-year paper, which should include a preliminary theoretical model, or simulation model, or experimental design, or data summary.

Exams.

- The **midterm** (Oct. 27, 1 hour) is a standard in-class, closed-book exam over all the readings through Week 7.
- The **final exam** is a closed-book exam over the research methods covered in the 2nd half of the semester. It is scheduled on Friday December 18, 10:30 am - 12:00 pm in our regular classroom.

Do your own, original work

Collaboration. We strongly encourage collaboration while working on homework problems, and while discussing and interpreting the reading assignments. Active learning is effective. Collaboration will be especially valuable in summarizing the reading materials and picking out the key concepts. *You must,*

however, write all paper and exam submissions on your own, in your own words, before turning it in. If you worked with someone on the homework before writing it, you must list any and all collaborators on your written submission.

Plagiarism. All written submissions must be your own, original work. Original work for narrative questions is not mere paraphrasing of someone else's completed answer: you must not share written answers with each other at all. At most, you should be working from notes you took while participating in a study session. Largely duplicate copies of the same assignment will receive an equal division of the total point score from the one piece of work.

You may incorporate selected excerpts from publications by other authors, but they must be clearly marked as quotations and must be attributed. If you build on the ideas of prior authors, you must cite their work. You may obtain copy editing assistance, and you may discuss your ideas with others, but all substantive writing and ideas must be your own, or be explicitly attributed to another. See the Rackham Graduate policy on Academic and Professional Integrity <http://www.rackham.umich.edu/policies/gsh/appb/> for the definition of plagiarism, and associated consequences.

Grading

Class participation 10% (includes speaking up in class, showing evidence of serious preparation)
Assignments 60%
Midterm exam 15%
Final exams 15%

Schedule

Week 1 (Sept. 8): Introduction: What is research? How do we know what we know? (Edwards)

Recommended: Bernard, Ch. 1

Week 2 (Sept. 15): Disciplines and empirical inquiry (Edwards)

Required: Bernard, Ch. 2 and 4
Booth, Ch. 1-2, 10-11
Hart, Ch. 3
Edwards, "[How to Read a Book](#)"

Recommended: Taubes, "[Do We Really Know What Makes Us Healthy?](#)"
Becker, Ch. 1

Week 3 (Sept. 22): From topics to questions to designs: building a do-able project (Edwards)

Required: Creswell, Ch. 1, 5-7
Booth, Part II (pp. 31-101)
Davis, "That's Interesting!"

Recommended: Becker, Ch. 6
Hart, Ch. 2

Assignment 1 due - topic for first-year paper (600-1000 words)

Week 4 (Sept. 29): Writing literature reviews; using and developing theories (Edwards)

Required: Study the literature reviews in your 701 readings for this week – especially Ackerman and Cummings & Kiesler, which are article-length literature reviews.

Creswell, Ch. 2-3

Booth, Part III (pp. 103-170)

Carlile and Christensen, "The Cycles of Theory Building in Management Research" (2006)

Whetten, "What Constitutes a Theoretical Contribution?" (1989)

Recommended: Eisenhardt, "Building Theories from Case Studies" (1989)

Hart, Ch. 4

Week 5 (Oct. 6: 8:30-10:00): Economic theory (Chen)

Required: Varian, "How to Build an Economic Model in your Spare Time"

Assignment 2 due - literature review for first-year paper (1000-1500 words)

Week 6 (Oct. 13): Interviews and direct observation (Edwards)

Required: Bernard, Ch. 6-7, 9-10

Creswell, Ch. 9

Geertz, "The Balinese Cockfight"

Oct. 20: Fall break

Week 7 (Oct. 27): Historical methods, textual analysis, and qualitative data analysis (Edwards)

Required: Bernard, Ch. 11-13

Booth, Ch. 13-15

Recommended: Booth, Ch. 16-17

Assignment 3 due - describe a detailed qualitative research design for your first-year paper (1000-1500 words)

– Midterm exam (1 hour, in class) –

Week 8 (Nov. 3): Basic statistics (Chen)

Required: Bernard, Ch. 14, 15

Week 9 (Nov. 10): Multivariate analysis (Chen)

Required: Bernard, Ch. 16

Week 10 (Nov. 17): Experimental Design (Chen)

Required: Bernard, Ch. 4

Week 11 (Nov. 24): Lab and Field experiments (Chen)

Required: Bernard, Ch. 5

Week 12 (Dec. 1): Simulations (Chen)

Required: Bernard, Ch.

Week 13 (Dec. 8): Presentation of 1-year papers (Chen)