UNDERSTANDING RESEARCH

INF 397C

#28705

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School of Information
University of Texas at Austin

Fall 2011

Class time: Monday, 6:00 - 9:00 PM
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Thou shalt not answer questionnaires
Or quizzes upon World Affairs,
    Nor with compliance
Take any test. Thou shalt not sit
With statisticians nor commit
    A social science.

-- W.H. Auden, excerpted from “Under Which Lyre: A Reactionary Tract for the Times” (Phi Beta Kappa Poem, Harvard 1946)

INTRODUCTION TO THE COURSE

Why should an introduction to understanding research be required in the master’s program in the UT iSchool? There are many ways to respond to that question:

- To engender skepticism about the knowledge claims that researchers make about what they have seen and what it means. That is NOT to say that readers should be cynical about researchers’ motives or achievements, but rather they should subject researchers’ claims to appropriate scrutiny.
- To give students the opportunity to identify and explore some important research programs, literatures, and sources in information studies.
- To help students consider how to use research to serve clients better and to perform other organizational tasks.
- To acquaint students with some classic research papers in the field.
- To acquaint students with research programs of some members of the iSchool faculty.
- To consider and engage important problematics in research, e.g., research ethics.
- To help information professionals evaluate information services, products, and policies.
- To enable information professionals to act as journal and conference program reviewers, evaluate and write grant proposals, write scholarly research reports, and engage in other activities that demand research competencies.

As noted in the brief course description in the Graduate Catalog and on the iSchool Web site, INF 397C is intended to be a “broad survey of the goals, methods, processes, and products of systematic inquiry. Prepares students to critically evaluate information studies research.” The course makes no claim to comprehensiveness but rather looks at important forms of research used widely in the field, and the primary focus is on what we can term humanist, social science, and computational methods of inquiry.

In some contexts, categories of research important to our discipline are sometimes described as quantitative methods, qualitative methods, humanistic methods, computational methods, and design methods of inquiry. Further, concepts such as positivism, constructivism, empiricism, behavioral inquiry, natural science research, and the like are also useful ways to categorize research in our field and research important to our field from other disciplines. In sum, however, the course aims to enable students to be more discerning and informed readers of others’ research in important traditions of systematic inquiry in information studies, particularly to inform their professional practice and their service to their clients.

The course comprises three units that overlap to some extent:

1. Foundations, research ethics, and statistical fundamentals – classes 1-6
2. Selected methods of inquiry valuable to information studies – classes 7-11
3. Conclusions – class 12.
Because the class meets on Monday, because of the Labor Day holiday, and because of the ASIST annual conference, there are only 12 class meetings rather than the usual 14 or 15. As a result, students’ engagement with the material outside of class is even more important than is the norm in graduate school.

EXPECTATIONS OF STUDENTS’ PERFORMANCE

Students are expected to be involved, creative, and vigorous participants in class discussions and in the overall conduct of the class. In addition, students are expected to:

• Attend all class sessions. If a student misses a class, it is her responsibility to arrange with another student to obtain all notes, handouts, and assignment sheets.

• Read all material prior to class. Students are expected to use the course readings to inform their classroom participation and their writing. Students must integrate what they read with what they say and write. This imperative is essential to the development of professional expertise and to the development of a collegial professional persona.

• Educate themselves and their peers. Successful completion of graduate programs and participation in professional life depend upon a willingness to demonstrate initiative and creativity. Participation in the professional and personal growth of colleagues is essential to one’s own success as well as theirs. Such collegiality is at the heart of scholarship, so some assignments are designed to encourage collaboration.

• Spend 3-4 hours in preparation for each hour in the classroom; therefore, a 3-credit graduate hour course meeting once a week requires about 10-12 hours per week of work outside the classroom.

• Participate in all class discussions.

• Complete all assignments on time. Late assignments will not be accepted except in the limited circumstances noted below. Failure to complete any assignment on time will result in a failing grade for the course.

• Be responsible with collective property, especially books and other material on reserve.

• Ask for help from the instructor or the teaching assistant, either in class, during office hours, on the telephone, through email, or in any other appropriate way. Email is especially appropriate for information questions, but the instructor limits access to email outside the office. Unless there are compelling privacy concerns, it is always wise to send a copy of any email intended for the instructor to the TA who has access to email more regularly.

Academic dishonesty, such as plagiarism, cheating, or academic fraud, is intolerable and will incur severe penalties, including failure for the course. If there is concern about behavior that may be academically dishonest, consult the instructor. Students should refer to the UT General Information Bulletin, Appendix C, Sections 11-304 and 11-802 and Texas is the Best . . . HONESTLY! (1988) from the Cabinet of College Councils and the Office of the Dean of Students.
The instructor is happy to provide all appropriate accommodations for students with documented disabilities. The University’s Office of the Dean of Students at 471.6259, 471.4641 TTY, can provide further information and referrals as necessary.
STANDARDS FOR WRITTEN WORK

You will meet professional standards of clarity, grammar, spelling, and organization in writing for this class. Review these standards before and after writing; I use them to evaluate your work.

Every writer is faced with the problem of not knowing what her audience knows; therefore, effective communication depends upon maximizing clarity. Wolcott in *Writing Up Qualitative Research* (1990, p. 47) reminds us: "Address . . . the many who do not know, not the few who do." Remember that clarity of ideas, of language, and of syntax are mutually reinforcing.

Good writing makes for good thinking and vice versa. Recall that writing is a form of inquiry, a way to think, not a reflection of some supposed static thought “in” the mind. Theodore Dreiser’s *Sister Carrie* shows how the interplay of composition and thought can work (1994, p. 144):

Hurstwood surprised himself with his fluency. By the natural law which governs all effort, what he wrote reacted upon him. He began to feel those subtleties which he could find words to express. With every word came increased conception. Those inmost breathings which thus found words took hold upon him.

We need not adopt the breathless metaphysics or literary naturalism to understand his point.

All written work for the class must be done on a word-processor and double-spaced, with 1” margins all the way around and in either 10 or 12 pt. font, in one of three font styles: Times, Times New Roman, or Palatino. Please print on both sides of your paper.

Some writing assignments will demand the use of references, and some may require notes, either footnotes or endnotes. It is particularly important in professional schools such as the School of Information that notes and references are impeccably done. Please use APA (American Psychological Association) standards. There are other standard bibliographic and note formats, for example, in engineering and law, but social scientists and a growing number of humanists use APA. Familiarity with standard formats is essential for understanding others’ work and for preparing submissions to journals, funding agencies, professional conferences, and the like. You may also want to consult the *Publication Manual of the American Psychological Association* (2010, 6th ed.).

**DO NOT USE A GENERAL DICTIONARY OR ENCYCLOPEDIA FOR DEFINING TERMS IN GRADUATE SCHOOL OR IN PROFESSIONAL WRITING.** If you want to use a reference source to define a term, use a specialized dictionary such as *The Cambridge Encyclopedia of Philosophy* or subject-specific encyclopedia, e.g., the *International Encyclopedia of the Social and Behavioral Sciences*. The best alternative, however, is having an understanding of the literature(s) related to the term sufficient to provide a definition in the context of the literature(s).

Use a standard spell checker, but be aware that spell checking dictionaries have systematic weaknesses: they exclude most proper nouns, e.g., personal and place names; they omit most technical terms; they omit most foreign words and phrases; and they cannot identify the error in using homophones, e.g., writing "there" instead of "their," or in writing "the" instead of "them."

**PROOFREAD YOUR WORK THOROUGHLY AND BE PRECISE IN EDITING IT.** It is often helpful to have someone else read your writing, to eliminate errors and to increase clarity. Finally, each assignment should have a title page with your full name, date, title of the assignment, and class number (INF 397C). If you have any questions about these standards, I will be pleased to discuss them with you at any time.
Remember, every assignment must include a title page with:

- The title of the assignment
- Your name
- The date
- The class number – INF 397C.
Since the production of professional-level written work is one of the aims of the class, I will read and edit your work as the editor of a professional journal or the moderator of a technical session at a professional conference would. The reminders below will help you prepare professional written work appropriate to any situation. Note the asterisked errors in #’s 3, 4, 9, 11, 12, 15, 16, 19, 21, and 25 (some have more than one error):

1. Staple all papers for this class in the upper left-hand corner. Do not use covers, binders, or other means of keeping the pages together.

2. Number all pages after the title page. Notes and references do not count against page limits.

3. Use formal, academic prose. Avoid colloquial language, “you know?” It is essential in graduate work and in professional communication to avoid failures in diction – be serious and academic when called for, be informal and relaxed when called for, and be everything in between as necessary. For this course, avoid words and phrases such as "agenda," "problem with," "deal with," "handle," "window of," "goes into," "broken down into," "viable," and "option."

4. Avoid clichés. They are vague, fail to "push the envelope," and do not provide "relevant input."

5. Avoid computer technospeak like "input," "feedback," or "processing information" except when using such terms in specific technical ways.

6. **Avoid using “content” as a noun.**

7. Do not use the term "relevant" except in its information retrieval sense. Ordinarily, it is a colloquial cliché, but it also has a strict technical meaning in information studies.

8. Do not use "quality" as an adjective; it is vague, cliché, and colloquial. Instead use "high-quality," "excellent," "superior," or whatever more formal phrase you deem appropriate.

9. Study the APA style convention for the proper use of ellipsis*. . . *

10. Avoid using the terms "objective" and "subjective" in their evidentiary senses; these terms entail major philosophical, epistemological controversy. Avoid terms such as "facts," "factual," "proven," and related constructions for similar reasons.

11. Avoid contractions. *Don’t* use them in formal writing.

12. Be circumspect in using the term "this," especially in the beginning of a sentence. *THIS* is often a problem because the referent is unclear. Pay strict attention to providing clear referents for all pronouns. Especially ensure that pronouns and their referents agree in number; e.g., "each person went to their home" is a poor construction because "each" is singular, as is the noun "person," while "their" is a plural form. Therefore, either the referent or the pronoun must change in number.

13. "If" ordinarily takes the subjunctive mood, e.g., "If he were [not "was"] only taller."

14. Put "only" in its appropriate place, near the word it modifies. For example, it is appropriate in spoken English to say that "he only goes to Antone's" when you mean that "the only place he frequents is Antone's." In written English, however, the sentence should read "he goes only to Antone's."
15. Do not confuse possessive, plural, or contracted forms, especially of pronouns. *Its* bad.

16. Do not confuse affect/effect, compliment/complement, or principle/principal. Readers will not *complement* your work or *it’s* *principle* *affect* on them.

17. Avoid misplaced modifiers; e.g., it is inappropriate to write the following sentence: As someone interested in the history of Mesoamerica, it was important for me to attend the lecture. The sentence is inappropriate because the phrase "As someone interested in the history of Mesoamerica" is meant to modify the next immediate word, which should then, obviously, be both a person and the subject of the sentence. It should modify the word "I" by preceding it immediately. One good alternative for the sentence is: As someone interested in the history of Mesoamerica, I was especially eager to attend the lecture.

18. Avoid use of "valid," "parameter," "bias," "reliability," and "paradigm," except in limited technical ways. These are important research terms and should be used with precision.

19. Remember that the words "data," "media," "criteria," "strata," and "phenomena" are all PLURAL forms. They *TAKES* plural verbs. If you use any of these plural forms in a singular construction, e.g., "the data is," you will make the instructor very unhappy :-(. 

20. "Number," "many," and "fewer" are used with plural nouns (a number of horses, many horses, and fewer horses). "Amount," "much," and "less" are used with singular nouns (an amount of hydrogen, much hydrogen, and less hydrogen). Another useful way to make this distinction is to recall that "many" is used for countable nouns, while "much" is used for uncountable nouns.

21. *The passive voice should generally not be used.*

22. "Between" is used with two alternatives, while "among" is used with three or more.

23. Generally avoid the use of honorifics such as Mister, Doctor, and Ms., and so on when referring to persons in your writing, especially when citing their written work. Use last names and dates as appropriate in APA.

24. There is no generally accepted standard for citing electronic resources. If you cite them, give an indication, as specifically as possible, of:

   - responsibility (who?)
   - title (what?)
   - date of creation (when?)
   - date viewed (when?)
   - place to find the source (where? how?).


25. *PROFREAD! PROOFREAD! PROOFREAD!*

26. Citation, quotation, and reference are nouns; cite, quote, and refer to are verbs.

27. Use double quotation marks (“abc.”), not single quotation marks (‘xyz.’), as a matter of course. Single quotation marks are to be used to indicate quotations within quotations.
28. Provide a specific page number for all direct quotations. If the quotation is from a Web page or other digital source, provide at least the paragraph number and/or other directional cues, e.g., “(Davis, 1993, section II, ¶ 4).”

29. In ordinary American English, as ≠ because.

30. Use "about" instead of the tortured locution "as to."

31. In much of social science and humanistic study, the term "issue" is used in a technical way to identify sources of public controversy or dissensus. Please use the term to refer to topics about which there is substantial public disagreement, NOT synonymously with general terms such as "area," "topic," or the like.

32. On a related note, avoid the locution of “public debate.” Such a locution makes a series of faulty assumptions:
   - It presumes that a public policy issue has only two “sides.” There are usually three or four or more perspectives on any topic of public dissensus that merit consideration. “Debate” hides this complexity.
   - “Debate” implies that one “side” and only one “side” can be correct; that presumption ignores the fact that the many perspectives on a public policy issue have contributions to make to its resolution.
   - “Debate” implies that there can be and will be one and only one “winner.” This presumption naively ignores the fact that some public policy issues are intractable, that these issues are often emergent as are their resolutions, and that compromise is oftentimes a mark of success rather than of failure or “surrender.”

33. Please do not start a sentence or any independent clause with “however.”

34. Avoid the use of “etc.” – it is awkward, colloquial, and vague.

35. Do not use the term “subjects” to describe research participants. “Respondents,” “participants,” and “informants” are preferred terms and have been for decades.

36. Do not use notes unless absolutely necessary, but, if you must use them, use endnotes not footnotes.

37. Please adhere to these orthographic (spelling) conventions:
   - Web with a capital “W.”
   - Web site, two words, with a capital “W.”
   - Internet with a capital “I” to indicate the TCP/IP-compliant computer network with a shared address convention. Otherwise, internet with a lower-case “i” simply means any of the many millions of networks of networks.
## SOME EDITING CONVENTIONS FOR STUDENTS’ PAPERS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>number OR insert a space; the context will help you decipher its meaning</td>
</tr>
<tr>
<td>AWK</td>
<td>awkward and usually compromises clarity as well</td>
</tr>
<tr>
<td>BLOCK</td>
<td>make into a block quotation without external quotation marks; do so with quotations ≥ 4 lines</td>
</tr>
<tr>
<td>caps</td>
<td>capitalize</td>
</tr>
<tr>
<td>COLLOQ</td>
<td>colloquial and to be avoided</td>
</tr>
<tr>
<td>dB</td>
<td>database</td>
</tr>
<tr>
<td>FRAG</td>
<td>sentence fragment; often means that the verb or subject of the sentence is missing</td>
</tr>
<tr>
<td>ITAL</td>
<td>italicize</td>
</tr>
<tr>
<td>j</td>
<td>journal</td>
</tr>
<tr>
<td>lc</td>
<td>make into lower case</td>
</tr>
<tr>
<td>lib'ship</td>
<td>librarianship</td>
</tr>
<tr>
<td>org, org’l</td>
<td>organization, organizational</td>
</tr>
<tr>
<td>PL</td>
<td>plural</td>
</tr>
<tr>
<td>Q</td>
<td>question</td>
</tr>
<tr>
<td>Q’nai re</td>
<td>questionnaire</td>
</tr>
<tr>
<td>REF?</td>
<td>what is the referent of this pronoun? to what or whom does it refer?</td>
</tr>
<tr>
<td>RQ</td>
<td>research question</td>
</tr>
<tr>
<td>sp</td>
<td>spelling</td>
</tr>
<tr>
<td>SING</td>
<td>singular</td>
</tr>
<tr>
<td>w/</td>
<td>with</td>
</tr>
<tr>
<td>w.c.?</td>
<td>word choice?</td>
</tr>
</tbody>
</table>

The instructor also uses **check marks** to indicate that the writer has made an especially good point. **Wavy lines** indicate that usage or reasoning is suspect.
Grading

Grades for this class include:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>Extraordinarily high achievement</td>
<td>not recognized by the University</td>
</tr>
<tr>
<td>A</td>
<td>Superior</td>
<td>4.00</td>
</tr>
<tr>
<td>A-</td>
<td>Excellent</td>
<td>3.67</td>
</tr>
<tr>
<td>B+</td>
<td>Good</td>
<td>3.33</td>
</tr>
<tr>
<td>B</td>
<td>Satisfactory</td>
<td>3.00</td>
</tr>
<tr>
<td>B-</td>
<td>Barely satisfactory</td>
<td>2.67</td>
</tr>
<tr>
<td>C+</td>
<td>Unsatisfactory</td>
<td>2.33</td>
</tr>
<tr>
<td>C</td>
<td>Unsatisfactory</td>
<td>2.00</td>
</tr>
<tr>
<td>C-</td>
<td>Unsatisfactory</td>
<td>1.67</td>
</tr>
<tr>
<td>F</td>
<td>Unacceptable and failing.</td>
<td>0.00</td>
</tr>
</tbody>
</table>

See the memorandum from former Dean Brooke Sheldon dated August 13, 1991, and the notice in the School of Information student orientation packet for explanations of this system. Consult the iSchool Web site (http://www.ischool.utexas.edu/programs/general_info.php) and the Graduate School Catalog (e.g., http://registrar.utexas.edu/catalogs/grad09-11/ch01/grad09.ch01a.html and http://registrar.utexas.edu/catalogs/grad09-11/ch01/grad09.ch01b.html#Student-Responsibility) for more on standards of work. While the University does not accept the grade of A+, the instructor may assign the grade to students whose work is extraordinary.

The grade of B signals acceptable, satisfactory performance in graduate school. The instructor reserves the grade of A for students who demonstrate not only a command of the concepts and techniques discussed but also an ability to synthesize and integrate them in a professional manner and communicate them effectively, successfully informing the work of other students.

The grade of incomplete (X) is reserved for students in extraordinary circumstances and must be negotiated with the instructor before the end of the semester. See the former Dean's memorandum of August 13, 1991, available from the main iSchool office.

The instructor uses points to evaluate assignments, not letter grades. He uses an arithmetic – not a proportional – algorithm to determine points on any assignment. For example, 14/20 points on an assignment does NOT translate to 70% of the credit, or a D. Instead 14/20 points is roughly equivalent to a B. If any student's semester point total ≥ 90 (is equal to or greater than 90), then s/he will have earned an A of some kind. If the semester point total ≥ 80, then s/he will have earned at least a B of some kind. Whether these are A+, A, A-, B+, B, or B- depends upon the comparison of point totals for all students. For example, if a student earns a total of 90 points and the highest point total in the class is 98, the student would earn an A-. If, on the other hand, a student earns 90 points and the highest point total in the class is 91, then the student would earn an A. The instructor will explain this system throughout the semester.
TEXTS

There are two required texts for this class and six recommended texts. All should be available at the Co-op (http://www.universitycoop.com/), although they will order enough copies of the required books for only about 2/3 of students in the class and only a few copies of the recommended texts. Please notify the instructor if you have trouble getting copies of any of these books. As many of the readings as possible will be on reserve at PCL; these readings, naturally, should be supplemented by material in print and online as a student’s interests dictate.

The REQUIRED texts are:


The RECOMMENDED texts are:


Copies of as many of these materials as possible are on two-hour reserve at PCL. Students should be aware of their classmates' needs to see the reserve material.

Please remember that some of the terms, definitions, procedures, and epistemological and other assumptions discussed in the class, in the textbooks, and elsewhere are contentious. There are important differences between the instructor’s conventions and those of any particular source, as well as among the sources themselves.

LEARNING TO NAVIGATE THIS SEA OF UNCERTAINTY, BUT STILL ADHERE TO RIGOROUS STANDARDS FOR READING, EVALUATING, AND DOING RESEARCH, SHOULD BE ONE OF YOUR AIMS IN THE COURSE.
ASSIGNMENTS

The instructor will provide additional information about each assignment. All assignments must be completed to pass the course. Written assignments are done individually (IND), are to be double-spaced, are to be printed on both sides of the paper, and must be submitted in class unless otherwise indicated.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Date Due</th>
<th>% of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation and participation</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>In-class evaluation of Lamb &amp; Kling (2003) GRP</td>
<td>SEP 26, in class</td>
<td>----</td>
</tr>
<tr>
<td>In-class evaluation of Cole (2010) GRP</td>
<td>OCT 24, in class</td>
<td>----</td>
</tr>
<tr>
<td>In-class evaluation of Thelwall &amp; Sud (2011) GRP</td>
<td>NOV 14, in class</td>
<td>----</td>
</tr>
<tr>
<td>Evaluation of research paper #1 (5 pp.) IND</td>
<td>OCT 3, in class</td>
<td>20</td>
</tr>
<tr>
<td>Evaluation of research paper #2 (6 pp.) IND</td>
<td>OCT 31, in class</td>
<td>20</td>
</tr>
<tr>
<td>Annotated bibliography IND</td>
<td>NOV 21, in class</td>
<td>20</td>
</tr>
<tr>
<td>Take-home exam IND</td>
<td>WED, DEC 7, 1:00 PM</td>
<td>30</td>
</tr>
</tbody>
</table>

in Doty’s UTA mailbox

All assignments must be handed in on time. The instructor reserves the right to issue a course grade of F if ANY assignment is not completed and will not accept late assignments unless three criteria are met:

1. At least 24 hours before the date due, the instructor gives explicit permission to the student to hand the assignment in late. This criterion can be met only in the most serious of health, family, or personal situations.

2. At the same time, a specific date and time are agreed upon for the late submission.

3. The assignment is submitted on or before the agreed-upon date and time.
OUTLINE OF COURSE

Class  Date  Topics and assignments

Unit 1: Foundations, research ethics, and statistical fundamentals

1  AUG 29  Introduction to the course -- Review of the syllabus
The research process -- What it is and what it aims to do
And just what is information studies, anyway?

SEP 5  NO CLASS -- LABOR DAY

2  SEP 12  Science: (1) Traditional positivism and (2) more constructivist views
Epistemology, ontology, and the research process
Some research literatures and sources important to information studies

3  SEP 19  Error model of research -- bias and noise
Reliability and (construct) validity of measures
Qualitative alternatives to reliability and validity of measures
An end to criteria?

4  SEP 26  Variables and levels of measurement
Introduction to univariate descriptive statistics -- Major measures of central tendency and variability
Statistics as a rhetorical act

• In-class exercise -- Evaluation of Lamb & Kling (2003) -- GRP

5  OCT 3  Descriptive statistics continued -- Graphic displays, frequency distributions, symmetric and skewed distributions, resistant and non-resistant measures, stem plots, the six-figure summary, and box plots
Inferential statistics -- where does variability come from?

• ASSIGNMENT DUE: Evaluation of a research paper #1 (5 pp.) (20%) -- IND

OCT 10  NO CLASS -- ASIST ANNUAL CONFERENCE

6  OCT 17  Research ethics and axiology (value theory)
Institutional Review Board training and documentation
Questioning the variables sex, gender, and race

Unit 2: Selected methods of inquiry valuable to information studies

7  OCT 24  Methods of inquiry in the humanities (1)
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
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<tbody>
<tr>
<td>OCT 31</td>
<td>Methods of inquiry in the humanities (2)</td>
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<tr>
<td></td>
<td>Methods of inquiry in the social and behavioral sciences (1)</td>
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<tr>
<td>8 OCT 31</td>
<td>In-class exercise -- Evaluation of Cole (2010) - GRP</td>
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<tr>
<td>NOV 7</td>
<td>Methods of inquiry in the social and behavioral sciences (2)</td>
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<tr>
<td>NOV 14</td>
<td>Computational methods of inquiry (1)</td>
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<td>10 NOV 14</td>
<td>In-class exercise -- Evaluation of Thelwall &amp; Sud (2011) - GRP</td>
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<tr>
<td>NOV 21</td>
<td>Computational methods of inquiry (2)</td>
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<td>11 NOV 21</td>
<td>ASSIGNMENT DUE: Annotated bibliography (20%) - IND</td>
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<tr>
<td>12 NOV 28</td>
<td>Course evaluation</td>
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<td>Conclusions and summary</td>
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<td></td>
<td>Can we justify calling research methods “quantitative,” “qualitative,”</td>
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<td>and “mixed”?</td>
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<td>Plato's Republic, &quot;Allegory of the Cave&quot;</td>
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<tr>
<td>WED DEC 7</td>
<td>No class – take-home exam due at 1:00 PM in Doty’s UTA mailbox</td>
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<td></td>
<td>ASSIGNMENT DUE: Final examination (30%)</td>
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</tbody>
</table>
This schedule may be adjusted as the class progresses. **GRP** indicates a group assignment, **AS** additional sources, and **CD** a source in Course Documents in Blackboard. Please recall that the additional sources (**AS**) are only suggested.

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPICS, ASSIGNMENTS, AND REQUIRED READINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit 1: Foundations, research ethics, and statistical fundamentals</strong></td>
<td></td>
</tr>
</tbody>
</table>

**AUG 29**  
Introduction to the course -- Review of the syllabus  
The research process -- What it is and what it aims to do  
And just what is information studies, anyway?  

READ: Katzer et al., Preface and Chapters 1, 2, and 5  
Wildemuth (ed., 2009), 1 (“Introduction”)  
Babbie (2007), 1 CD  
Buckland (1996) [online]  
Ortega y Gassett (1961) [online]  
Shera (1968, 1972)/Heilprin (1972) [CD]  

AS: Hernon (1991b) [CD]  
Koufogiannakis & Crumley (2006)  
Trochim & Donnelly (2007), Preface, 1 (pp. 3-13), 3 (pp. 95-97)  

**SEP 5**  
**NO CLASS – LABOR DAY**  

**SEP 12**  
Science: (1) Traditional positivism and (2) more constructivist views  
Epistemology, ontology, and the research process  
Some research literatures and sources important to information studies  

READ: Katzer et al., 3-5  
Wildemuth (ed., 2009), 2 (“Developing a Research Question”)  
Cronin (1992) [CD]  
Dervin (1977) [CD]  
Harris (1986) [CD]  
Hernon & Schwartz (2007) [online]  

AS: Babbie (2007), 2 (pp. 30-43)  

**SEP 19**  
Error model of research – bias and noise  
Reliability and (construct) validity of measures  
Qualitative alternatives to reliability and validity of measures  
An end to criteria?  

READ: Katzer et al., 6, 7, and 9
SEP 26
Variables and levels of measurement
Introduction to univariate descriptive statistics – Major measures of central tendency and variability
Statistics as a rhetorical act

READ: Katzer, 10
Babbie (2007), 5 (pp. 136-140)
Babbie (2007), 16 (pp. 409-416 and 449-459) CD
Bazerman (1987) CD
Best (2001a) CD
Lamb & Kling (2003) online
Trochim & Donnelly (2007), 3 (pp. 95-97)

AS: Creswell, 5 and 6
Paulos (1992), "Mean, Median, and Mode," 141-143; "Gödel and His Theorem," 95-97; "Impossibilities -- Three Old, Three New," 118-120
Trochim & Donnelly (2007), 1 (pp. 13-23, 24-30), 11 (pp. 244-248)

• In-class exercise -- Evaluation of Lamb & Kling (2003) – GRP

OCT 3
Descriptive statistics continued -- Graphic displays, frequency distributions, symmetric and skewed distributions, resistant and non-resistant measures, stem plots, the six-figure summary, and box plots
Inferential statistics – where does variability come from?

READ: Katzer et al., 8, 11, and 15-18
Wildemuth (ed., 2009), 37 (“Comparing Means . . .”)
Babbie (2007), 16 (pp. 459-470 and 476-478) CD

AS: Babbie (2007), 16 (pp. 470-476 and 479-483)
Spatz, 2 (pp. 34-39 and 47-52) and 4 (pp. 73-76)
Trochim & Donnelly (2007), 12 (pp. 277-279)

• ASSIGNMENT DUE: Evaluation of a research paper #1 (5 pp.) (20%) – IND

OCT 10
NO CLASS – ASIST ANNUAL CONFERENCE
OCT 17  Research ethics and axiology (value theory)
Institutional Review Board training and documentation
Questioning the variables sex, gender, and race

READ: Babbie (2007), 3 CD
Christians (2011) CD
Milgram (1963) CD

AS: Creswell, 4 (pp. 87-94)
Oakley (2000a), passim
Oakley (2000b)

Unit 2: Selected methods of inquiry valuable to information studies

OCT 24  Methods of inquiry in the humanities (1)

READ: Wildemuth (ed., 2009), 16 (“Historical Research”)
Clement (2008) online
Clifford (1991) CD
Cole (2010) online

• In-class exercise -- Evaluation of Cole (2010) – GRP

OCT 31  Methods of inquiry in the humanities (2)
Methods of inquiry in the social and behavioral sciences (1): Surveys and sampling – 1936 Literary Digest poll, response bias, non-response bias

READ: Wildemuth (ed., 2009), 12 (“Experimental Studies”)
Wildemuth (ed., 2009), 24 (“Semistructured Interviews”)
Wildemuth (ed., 2009), 26 (“Survey Research”)
Leonardi & Bailey (2008) online
McClure (1991) CD
Robbins (1992) CD

AS: Babbie (2007), 6 (pp. 170-171), 7, 8 (pp. 225-228 and 230-237), 9, 12, and Appendix G (pp. A24-29)
Creswell, 8 (pp. 145-154 and 169-171)
Spatz, 4 (pp. 70-73)
Trochim & Donnelly (2007), 2 (pp. 42-52), 4 (pp. 99-112, 118-124)

• ASSIGNMENT DUE: Evaluation of research paper #2 (6 pp.) (20%) – IND

NOV 7  Methods of inquiry in the social and behavioral sciences (2): Qualitative research in information-based organizations – Recording observations, analyzing qualitative data, and writing the qualitative report

READ: Wildemuth (ed., 2009), 8 (“Naturalistic Research”)
Wildemuth (ed., 2009), 17 (“Existing Documents and Artifacts as Data”)
Rice-Lively (1997b) CD
Rice-Lively (1997a) CD
Berg (1998) CD
Gorman & Clayton (1997) CD
Peräkylä & Ruusuvuori (2011) CD

AS
Babbie (2007), 13 and 14
Krueger (1994a, b, c, and d)
Spatz, 6

NOV 14
Computational methods of inquiry (1)

READ: Chua & Yang (2008) online
Davidson & di Gregorio (2011) CD
Thelwall & Sud (2011) online

• In-class exercise -- Evaluation of Thelwall & Sud (2011) – GRP
NOV 21  Computational methods of inquiry (2)

READ:  Wildemuth (ed., 2009), 18 (“Transaction Logs”)
       Kline (1985b) CD
       Nicholson (2006) online
       Porter (1999) CD

AS:  Tufted (1997a)

Unit 3: Conclusions

NOV 28  Course evaluation
        Conclusions and summary
        Can we justify calling research methods “quantitative,” “qualitative,” and “mixed”?
        Plato’s Republic, "Allegory of the Cave"

READ:  Babbie (2007), 17 (pp. 489-496 and 498-503) CD
       Bergman (2008b) CD
       Bergman (2008c) CD
       Fidel (2008) online
       Medawar (1990) CD
       Plato (1945) CD

• ASSIGNMENT DUE: Annotated bibliography (20%) – IND

WED DEC 7  No class – take-home exam due at 1:00 PM in Doty’s UTA mailbox

• ASSIGNMENT DUE: Final examination (30%)
CRITICAL ASSESSMENT OF RESEARCH PAPER #1

Due Monday, October 3, 2011 (20%)
• An Introduction of 1 page identifying the importance of the phenomenon of interest to the field and explicitly identifying the major criteria used to assess the paper. Be sure that these are **evaluative criteria**, not simply a list of topics or sections of the paper.
• An Analysis of 3 pages comparing the paper to the evaluation criteria identified in your Introduction. It may be helpful to organize the analysis by Conceptualization, Operationalization and Methods of Data Collection and Data Analysis, Results, Conclusions, and Supporting Material, e.g., figures, graphs, charts, notes, tables, and appendices. This particular format is not required.
• A Conclusion of 1 page giving your overall assessment of the research paper and your specific recommendations to improve the study and/or the paper
• An Appendix containing the complete text of the research paper, including appendices and other supporting material. Please submit all material in 8 1/2" x 11" format.

You may find it helpful to review a model student paper from previous semesters in the Course Documents section of Blackboard. This paper is entitled “Research Critique,” and, while longer than your assignment, is a good example of a very good evaluation. Do not copy this model paper’s approach to evaluation; instead, use it to help you understand what the instructor regards as good work and a successful analysis.

If the paper you choose to evaluate uses statistical or other analytic methods with which you are not familiar, do your best to examine their use as carefully as possible given your current state of knowledge. Add a sentence or two to your evaluation that says, in effect, that the author uses some analytic techniques which you are presently unable to evaluate fully, but, e.g., the numbers add up, their use is not clear, their use is clearly explained with a full rationale for use given, the author fails to explain his/her purposes in doing the analysis, and so on. Please be formal in your description of such methods, and remember the strategies for being a skeptical, critical reader of statistics as discussed in Best (2001a) inter alia.

Please hand in two copies of your full paper, printed on both sides of the paper. The instructor will grade and return one and keep the other for his files. This assignment is worth 20% of your semester grade.

Late assignments will not be accepted.
CRITICAL ASSESSMENT OF RESEARCH PAPER #2

Due Monday, October 24, 2011 (20%)

Because the major goal of this course is to enable students to evaluate the results of research of interest to our discipline, students will have another opportunity to practice the explicit and specific evaluation of a research paper. In contrast to the first evaluation, however, the research paper evaluated should be in our discipline and should have appeared in one of these journals from 2006 to the present:

American Archivist
Canadian Journal of Information and Library Science
College & Research Libraries
Information Processing and Management
Journal of the American Society for Information Science and Technology
Journal of Documentation
Journal of Information Science
Library Quarterly
Library Trends.

The paper does NOT have to involve empirical observations, i.e., the paper need NOT report on research that involved direct observation of the phenomenon of interest. The paper being evaluated, however, must involve systematic inquiry of some kind. As before, students should feel free to ask the instructor about any paper’s suitability for this assignment and should:

- Scan through a number of RESEARCH papers in these journals.
- Choose a study on any topic that the student finds of interest. As before, should the paper involve the analysis of empirical data, the data need not be quantitative nor be quantitatively analyzed. Please consult the instructor if there is any doubt about any paper’s suitability for this assignment.
- Use criteria discussed in class and in the readings to evaluate the research paper.

The product of this evaluation will be a formal academic paper of six (6) double-spaced pages. Please refer to appropriate style manuals and to the Standards for Written Work while writing.

Your assessment should have the following components:

- An Introduction of 1 page identifying the importance of the phenomenon to the field and explicitly identifying the major criteria used to assess the paper. As before, ensure that these are evaluative criteria.
- An Analysis of 3 pages comparing the paper to the evaluation criteria identified in your Introduction and referring to specific elements in the paper.
- A Conclusion of 2 pages giving your specific recommendations about how to use McClure (1991) and Robbins (1992) to communicate the findings from the study more widely and effectively. Be very specific in these recommendations.
- An Appendix containing the complete text of the research paper, including appendices and other supporting material in 8 1/2 x 11" format.

As with the first evaluation, feel free to use the model student paper in Blackboard and use the instructor’s comments on your first paper as appropriate. As before, if the paper you choose to evaluate uses methods with which you are not familiar, do your best to examine their use.
carefully. Be formal in your description of such methods, and be a skeptical reader of statistical arguments as discussed in Best (2001a) among others.

Please hand in two copies of your full paper, printed on both sides of the paper. This assignment is worth 20% of your semester grade, and late assignments will not be accepted.
ANOTATED BIBLIOGRAPHY

Due Monday, November 21, 2011 (20%)

To complete the assignment, each student must produce a double-spaced, double-sided annotated bibliography of six (6) items we have not read in class that treat a topic of interest to the student. These items should be research papers in information studies or in cognate disciplines, and none of them should be among the ones used for the two critical evaluation assessment assignments.

The sources should have been published between 1980 and the present. The papers can address any topic of interest to the field of information studies that a student finds engaging, and:

1. There should be two (2) papers that rely largely on humanistic methods.
2. There should be two (2) papers that rely largely on social scientific methods.
3. There should be two (2) papers that rely largely on computational methods.

The bibliography should begin with a one-paragraph introduction clarifying how the student has operationalized the topic of interest discussed in the annotations and, to the extent it is appropriate, make clear why the student defined the topic that way.

Each annotation should:

1. Be about 100 words long, i.e., a bit less than half a double-spaced page, NOT counting the citation itself.
2. Be in APA format.
3. Specify the phenomenon(a) investigated, the particular research method(s) used, and why you identified the paper as largely humanist, social scientific, or computational.

The annotated bibliography is worth 20% of the course grade. Please give the instructor two double-spaced and double-sided print copies of your bibliography and post it to the appropriate discussion forum in Blackboard by 12:00 N on Monday, November 21, 2011. The digital version should be single-spaced. Late assignments will not be accepted.
REFERENCES

I. Readings from the class schedule and assignments

CD means that a document is in the Course Documents section in Blackboard.


Bookstein, Abraham. (1985). Questionnaire research in a library setting. *Journal of Academic Librarianship*, 11(1), 24-28. Also available at http://weblinks3.epnet.com/authhjafdetail.asp?tb=1&_ua=bo+B%5F+shn+1+db+aphjnh+bt+ID++%22ALN%22%5C&D5C7&_ug=sid+845F53BC%2D7E93%2D4BD8%2DACE61%2D7B839459CF%40sessionmgr2+db+aph+cp+1+5255&us=dstb+ES+sm+ES+mdbs+aph+69C8&_uh=btn+&+6C9C&+_uso=st%5B0+2DID+++ALN+tg%5B0+2D+db+5B0+%2D+ph+hd+False+op%5B0+2D+mdb%5B0+2Dimh+77AA&vw=&st=Journal+of+Academic+Librarianship&rn=1&vm=open&ths=0&vs=22#22 CD


Cronin, Blaise. (1992). When is a problem a research problem? In Leigh Stewart Estabrook (Ed.), *Applying research to practice: How to use data collection and research to improve library management decision making* (pp. 117-132). Urbana-Champaign, IL: University of Illinois, Graduate School of Library and Information Science. CD


Hernon, Peter, & Schwartz, Candy. (2007). What is a problem statement? *Library & Information Science Research, 29*(3), 307-309. Also available at http://www.sciencedirect.com.ezproxy.lib.utexas.edu/science?_ob=PublicationURL&_tockey=%23TOC%2326577%2323007%23999709996%23668822%23FLA%2323&_cdi=6577&_pubType=J&_auth=y&_acct=C000059713&_version=1&_urlVersion=0&_userid=108429&md5=d28ef13201e6d9bf7d06e9c04736acbf4


Lamb, Roberta, & Kling, Rob. (2003). Reconceptualizing users as social actors in information systems research. *MIS Quarterly*, 27(2), 197-235. Also available at http://web.ebscohost.com.ezproxy.lib.utexas.edu/ehost/results?sid=8cd840f8-4e13-4342-91e6-963ad94cb70%40sessionmgr112&vid=2&hid=113&bquery=%28JN+%26amp%3bquot%3bMIS%26amp%3bquot%3bQuarterly%26amp%3bquot%3b%3b+AND+DT%3b%3b+2003%3b%3b06%3b01%3b29%3b%3b+bdata%3dJmRiPWJ0aCZ0eXB1PTEmc2l0ZT1iaG9zdC1saXZl

Leonardi, Paul M., & Bailey, Diane E. (2008). Transformational technologies and the creation of new work practices: Making implicit knowledge explicit in task-based offshoring. *MIS quarterly*, 32(2), 411-436. Also available at http://web.ebscohost.com.ezproxy.lib.utexas.edu/ehost/results?sid=8cd840f8-4e13-4342-91e6-963ad94cb70%40sessionmgr112&vid=2&hid=113&bquery=%28JN+%26amp%3bquot%3bMIS%26amp%3bquot%3b%3b+AND+DT%3b%3b+2008%3b%3b06%3b01%3b29%3b%3b+bdata%3dJmRiPWJ0aCZ0eXB1PTEmc2l0ZT1iaG9zdC1saXZl


II. Research and research methods in information studies


Hernon, Peter. (1991a). The elusive nature of research in LIS. In Charles R. McClure and Peter Hernon (Eds.), *Library and information science research: Perspectives and strategies for improvement* (pp. 3-14). Norwood, NJ: Ablex.


**III. Selected ARIST chapters 1966 – 2010**


IV. Useful serial sources

The numbers in parentheses before some of the titles indicate positions in the 2010 ISI citation rankings, a useful if flawed metric of publications’ importance. Not all of the 76 publications in the ISI rankings appear here. For the full list, see the ISI Web site for journals in Information and Library Science

Advances in Librarianship

(12) Annual Review of Information Science and Technology (ARIST)

http://www.asis.org/Publications/ARIST/volumes.php

Journals

Those journals available online are available for only part of their publication run; further, UT often has more than one arrangement to make these journals available online, so there may be more than one URL for each journal, especially those from the ISI list.

Administrative Science Quarterly

http://www.johnson.cornell.edu/publications/asq/

American Anthropologist

http://www.aaanet.org/publications/ameranthro.cfm
American Archivist

http://archivists.metapress.com/home/main.mpx

Bulletin of the American Society for Information Science

http://www.asis.org/Bulletin/index.html

(74) Canadian Journal of Information and Library Science

http://www.cais-acsi.ca/journal/journal.htm

Canadian Journal of Information Science/Revue canadienne des sciences de l’information

http://www.cais-acsi.ca/journal.htm

(42) College & Research Libraries (C&RL)

http://www.ala.org/ala/acrl/acrlpubs/crljournal/collegeresearch.cfm

Communication Yearbook

http://www.sagepub.com/booksSeries.nav?series=Series77&seriesDesc=Communication%20Yearbook&_requestid=101669

Communications of the ACM

http://www.acm.org/pubs/cacm/

Computer-supported Cooperative Work (CSCW)

http://www.springerlink.com/content/100250/

Educause Review

http://connect.educause.edu/er?time=1219289381

(15) Government Information Quarterly (GIQ)

http://www.elsevier.com/wps/find/journaldescription.cws_home/620202/description

(8) Information and Management

http://www.elsevier.com/wps/find/journaldescription.cws_home/505553/description

Information, Communication, and Society

http://www.tandf.co.uk/journals/titles/1369118x.asp

(17) Information Processing & Management (IP&M)

http://www.sciencedirect.com/science/journal/03064573
(26) *The Information Society*

http://www.tandf.co.uk/journals/titles/01972243.asp

(2) *Information Systems Research* (ISR)

http://isr.journal.informs.org/

(50) *Information Technology and Libraries*

http://www.alanet.org/Template.cfm?Section=periodicals&template=/ContentManagement/ContentDisplay.cfm&ContentID=78982

(34) *Journal of Academic Librarianship* (JAL)

http://www.elsevier.com/wps/find/journaldescription.cws_home/620207/description#description

*Journal of Communication*

http://www.blackwellpublishing.com/journal.asp?ref=0021-9916&site=1

(23) *Journal of Documentation* (JDoC)

http://www.emeraldinsight.com/Insight/viewContainer.do?containerType=JOURNAL&containerId=1298

*Journal of Education for Library and Information Science* (JELIS)

http://www.alise.org/mc/page.do?sitePageId=55627


http://www.lib.auburn.edu/madd/docs/jgi/contents.html

Now merged with *Government Information Quarterly*

*Journal of Information Ethics*


(24) *Journal of Information Science*

http://jis.sagepub.com/

(4) *Journal of the American Medical Informatics Association* (JAMIA)


(11) *Journal of the American Society for Information Science and Technology* (JASIST)

Formerly the Journal of the American Society for Information Science (JASIS)

Knowledge, Technology & Policy (formerly Knowledge in Society)

http://www.springer.com/social+sciences/social+sciences,+general/journal/12130

(72) Library and Information Science

http://www.soc.nii.ac.jp/mlis/journal-e.html

(25) Library & Information Science Research (LISR)

http://www.sciencedirect.com/science/journal/07408188

(44) Library Quarterly (LQ)

http://www.journals.uchicago.edu/toc/lq/current

(63) Library Resources & Technical Services (LRTS)

http://www.alal.org/ala/alcts/pubs/librestechsvc/lrts_home.cfm

(43) Library Trends

http://www.press.jhu.edu/journals/library_trends/

(58) Libri

http://www.librijournal.org/

Minerva: A Review of Science, Learning and Policy

http://www.springerlink.com/content/102961/

(1) MIS Quarterly (MISQ)

http://www.misq.org/

Organization Science

http://orgsci.journal.informs.org/

(56) Restaurator

http://www.degruyter.de/journals/restaur/detailEn.cfm

Science

http://www.jstor.org/journals/00368075.html
http://www.science.org/current.dtl
Scientific American

http://www.sciam.com/

(14) Scientometrics

http://www.springerlink.com/content/101080/

Science, Technology, & Human Values

http://www.jstor.org/journals/01622439.html

Social Epistemology

http://www.tandf.co.uk/journals/titles/02691728.asp

(48) Social Science Information

http://www.sagepub.com/journalsProdDesc.nav?prodId=Journal200955&

technology

http://www.techreview.com/

(30) Telecommunications Policy

http://www.elsevier.com/wps/find/journaldescription.cws_home/30471/description#description

Wired

http://www.wired.com/wired/index.html

Electronic journals

D-Lib Magazine – http://www.dlib.org/

First Monday – http://www.firstmonday.dk/


Journal of Information Technology and Politics – http://www.jitp.net/

Proceedings of important meetings

CoLIS – International Conference on Conceptions of Library and Information Science

CoLIS 7 (2010) http://colis.soi.city.ac.uk/
V. Research methods


**VI. Nature of science and systematic inquiry**


Garman, Noreen. (1996). Qualitative inquiry: Meaning and menace for educational researchers. In Peter Willis & Bernie Neville (Eds.), Qualitative research practice in adult education (pp. 11-29). Ringwood, Victoria, Australia: David Lovell.


