

Release II

LONG ISLAND UNIVERSITY  
COLLEGE OF INFORMATION AND COMPUTER SCIENCE  
PALMER SCHOOL OF LIBRARY AND INFORMATION SCIENCE

SYLLABUS FOR LIS 514

INTRODUCTION TO RESEARCH IN LIBRARY AND INFORMATION  
SCIENCE

THURSDAY, 6:30 – 8:20

MANHATTAN CAMPUS (NYU)

SPRING 2014

*“When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely in your thoughts advanced to the state of Science, whatever the matter may be.”*

- Sir William Thomson, Lord Kelvin

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### ***Course Description***

The course focuses on theoretical and applied research design, research methodologies, and the evaluation of research in library and information science. In the process it reviews existing research in the field. It includes the preparation of a research proposal, and exposure to the statistical analysis of research data. In addition the course emphasizes tools and techniques for decision making.

### ***Course Objectives***

When you have completed this course, you will be able to:

- Understand and critically evaluate research proposals and research literature in library and information science.
- Understand and appreciate the various research methods commonly used in the field..
- Analyze research requirements and select appropriate data collection methodologies, and plan and undertake a research project.
- Use quantitative techniques for decision making.

### ***Textbooks:***

Powell, Ronald R., and Connaway, Lynn Silipigni. (2004). *Basic research methods for librarians*. 4th ed. Westport, CT: Libraries Unlimited. ISBN 9781591581123

Rowntree, Derek. (2004). *Statistics without tears: A primer for non-mathematicians*. New York: Allyn & Bacon. ISBN 9780205395095

### ***Course Requirements include:***

#### ***Research proposal:***

The major project for this course is the development of a research proposal. You will write a 10-15 page paper on the topic of interest to you. The main point is to design a research study. This will involve a literature review, and synthesizing what you will find in the literature. These proposals will be presented in the last two class sessions. This research proposal will be handed in in three pieces (see attached assignments).

#### ***Class participation:***

Each week you will be expected to have read assigned materials. Don't be surprised if the instructor asks you to comment.

#### ***Scouting Out Slanted Presentations***

For presentation in class, each student will be asked to have located and to demonstrate a slanted presentation of data selected from an article or an advertisement in the popular press, to show how it was slanted, and to show how it should be presented in an unbiased format. These will be presented in the next to last class session. Keep your eyes open for a good example during the course.

## *Course Grading*

The final grade of the course will be based on the course requirements as follows:

Research proposal and presentation	40%
Other assignments	40%
Class participation	20%

Note: Late proposals will receive a one-half grade deduction.

Note that the schedule is not graven in stone; it is likely to change somewhat due to snow days, possible guest speakers etc.

Note also the Rowntree readings run a bit ahead of the Powell and Connaway readings and ahead of the topics. That is deliberate so that you can get the Rowntree readings done without them all piling up at the end of the course.

Jan. 23 Introduction. Discussion, Goals of the course. About research in library and information science: the rationale, the tradition, nature of the research report, and the philosophical assumptions underlying research.

Jan. 30 Developing the Research Study. Formulating Hypotheses; Validity and Reliability  
Reading: Powell & Connaway, Chapter 1 and Chapter 2; Rowntree, Chapter 1 and Chapter 2..

Feb.6 Selecting the Research Method; Ethics. Reading: Powell & Connaway, Chapter 3.  
Rowntree, Chapter 3.

Feb. 13, Survey Research and Sampling. Reading: Powell & Connaway Chapter 4; Rowntree Chapter 4.

Feb. 20 Basic Quantitative Economic Foundations

Net Present value and all that. Net Present Value assignment. Reading: Koenig, Michael E. D. Budgeting Techniques for Libraries and Information Centers. New York: Special Libraries Association, 1981. (approx. 70 pages). This book is out of print; the instructor will distribute copies.

Research Proposal Assignment I due.

Feb. 27 Basic Quantitative Economic Foundations continued. Cost Benefit Analysis and Decision Making .

Assignment:

Read the two papers below: Bickner first, then Blick. Write a critical evaluation of the Blick paper. Your evaluation need not be long; one full page could do easily. However, your evaluation of the Blick paper should be critical in two of the many senses of the word 'critical' - "exercising or involving careful judgment or judicious evaluation" and "inclined to criticize severely and unfavorably". If your evaluation is not coming out that way, go back and reread Bickner.

Bickner, R.E. "Concepts of Economic Cost" in Keys Papers in the Design and Evaluation of Information Systems, Ed. Donald W. King, White Plains: New York, Knowledge Industry Publications, 1978. (pp. 107-146). This article is also reprinted in King, Donald W.; Roderer, Nancy K.; Olsen, Harold A., Eds. 1983. Key papers in the Economics of Information. White Plains: NY: Knowledge Industry Publications, Inc. for the American Society for Information Science; 1983. Keep this paper, and when you get involved in doing a cost analysis of any complexity, reread it.

Blick, Alan R. "Evaluating an in-house or bought-in service", ASLIB Proceedings 29(9) : 310 – 319, September 1977.

(Note, In general collaboration is a good thing, but I would rather that you don't collaborate on this assignment.)

March 6 Cost Benefit Analysis and Decision Making continued. Readings: Rowntree Chapter 5. Net present value assignment due.

### **March 13 – Vacation, No class**

March 20 Data Collection Techniques. Reading: Powell & Connaway Chapter 5; Rowntree, Chapter 6. Bickner/Blick assignment due.

March 27 Experimental Research. Powell & Connaway Reading: Chapter 6; Rowntree, Chapter 7. Research Proposal Assignment II due.

April 3 Qualitative Research Techniques and Historical Research; Analysis of Data. Reading: Powell & Connaway, Chapters 7 and 8; Rowntree, Chapter 8.

April 10 Analysis of Data, continued. Reading: Powell & Connaway Chapter 9. Also see Statsoft at <http://www.statsoft.com/textbook/stathome.html>; see "Elementary Concepts" and "Basic Statistics," and anything else that interests you there.

April 17 Analysis of Data, continued; Philosophical underpinnings reconsidered; Getting Published. Powell & Connaway, Appendices A & B. Research Proposal Assignment III due.

April 24, Wrap Up. Student reports – I : Present and explain someone's misuse of numerical data.

May 1 Start Student reports – II : Present your research proposal.

May 8, Final Session, Student reports - II, continued.

Research Proposal Assignment:

**Research Methods for Librarians (LIS 514)**  
**College of Education, Information and Technology**  
**Palmer School of Library and Information Science**  
**Spring, 2014**

## **Research Proposal - Assignment I: Beginnings of a research plan**

### **Identifying a research problem and reviewing the literature**

**Due: February 25, in class**

**Reading:** Powell, pp. 1-53.

**Assignment:** Identify a sample research topic for which quantitative methodology in general, and a survey approach in particular, are suitable. The most convenient and practical topic generally is one rooted in your personal experience, and **in a specific institution known to you but not where you work**. For this assignment, small or medium-sized units work better than very large institutions. You may choose a branch or a unit of a larger (but not a huge) organization. The problem you investigate should be of general interest to the library/information science community. See the literature for examples. Don't feel too limited by this advice. Feel free to blue sky something else. Also feel free to email or phone me to discuss a topic.

**Prepare at least a two page (double-spaced) description of your research proposal.**

**Include identification of the setting (library or other information-oriented agency, with name, address, etc.), some statistical data or other "hard" information about that library (if available) that is pertinent to your inquiry or generally helpful in defining the setting, description of the place of the library in the governance structure of its institution (branch, subunit, etc.), the "felt difficulty," your main research problem (in sentence form), necessary and/or related sub-problems, your main hypothesis, and identification and definition of the variables. Use subtitles to separate sections.**

(Place your name and the title of the study at the top of the first page; do not use a separate sheet for this information.)

Include citations to **three or four research** articles and/or books that deal specifically with or are at least closely related to the area addressed by your research topic. (If you come up with something of interest that is so original that there is nothing closely related, kudos to you, but find several related articles anyway.) You will find these materials online via LIU (or NYU) through Library Literature... or some other information-oriented database. Be sure to look for the "full text" feature when you search.

Include a brief review of the articles with the citations, relating them specifically to your study. (A cut-and-paste of the abstract will not suffice.) Use the MLA format for citations.

For statistical data, see Library Statistics Cooperative Program, at <http://www.nces.ed.gov/surveys/libraries/>. Look for the feature listed across the top that deals with comparing academic, or public, or school libraries (note the lack of information pertaining to special or corporate libraries). The source should be credited. You will find similar information in the *American Library Directory*, available at almost all library reference counters. If you do not know this work already, you should become acquainted with it. You may find some of the information you need on the libraries' websites. (Even if you find it easily that way, you should work with the Library Statistics Database for future reference, as this is something you should know a bit about).

Use standard, formal prose. Brevity and simplicity are virtues in this rhetorical form. Write as if you were submitting this material to a journal or to a funding agency. (Please do not add decorative covers or unnecessary frou-frou.)

The purpose of this assignment is to give you practice in constructing a research plan or proposal and to provide me with a sample, early in the term, of your professional writing. Please keep in mind that a research proposal is structured according to a distinct tradition. It is important to follow these directions in order that your proposal meet professional norms and standards. This assignment will be most useful to you if you chose an institution in which you might actually like to work in a professional capacity.

Please note that we will not actually conduct a study. That would require a round of permissions and is not necessary for our work. This is a plan for a study, but it will not result in a report of an actual study. Please pay attention to the need to respect the privacy of individuals and institutions.

The purpose of this assignment is, among other things, to ensure that you get underway with our proposal, and to give the instructor something to react to and contribute comments to. Your idea can still be fairly rough at this stage, and you are not committed to the topic that you hand in. There is still plenty of time to change, but do inform the instructor if you are changing your topic.

## **Research Proposal - Assignment II: Further development of your research plan**

**Due: March 27 in class.**

**Rewrite the parts covered in Assignment I and add the following sections:**

- 1. more specific information about the nature of your data and the source of data (e.g, number of books circulated derived from the OPAC records)**
- 2. definition of your sample(s)**
- 3. the size of your sample (justify your choice, using info. from Powell – see graphic displays for recommended))**
- 4. how you will gain access to your sample(s) and how you will select the sample from the population – consider using a random number table if appropriate**
- 5. information about the obtaining of permissions -- from whom, for what, etc. (Remember – if you were doing a real study you would probably have to submit it to an IRB, Institutional Review Board, and they would demand all that sort of information.)**

6. a sample of part of your survey instrument (e.g., questionnaire, or interview schedule, etc.) Note: do not talk about the instrument; provide examples of questions in it. Be specific. Choose the instrument format that makes the most sense in terms of time, cost, rapport, etc., and justify your choice. Consider various kinds of scales.

The new sections should be two or three pages in length. Do not use an extra sheet for your name. Please do not use decorative covers. Submit the paper in hard copy and **APPEND THE FIRST VERSION OF ASSIGNMENT I.**

Remember that we are using a quantitative methodology for a descriptive/survey study. (Note that “survey” does not mean that we are necessarily using a questionnaire for data collection. A survey is a snapshot at a particular point or points in time. We are looking for correlations/comparisons, and not causes.)

Double-space your prose. (The survey sample can use other formatting.) Use topic sentences and subtitles. **Keep the prose tight and careful. Try to use the vocabulary and concepts introduced in the reading and in class.**

**Due: March 14 in class**

**Reading:** Powell, through Chapter V.

## **Research Proposal - Assignment III: The last parts of the research plan and report**

**Due: May 1, in class.**

The basic idea here is that you simulate having done the study, and you “gundeck” (that is create or invent) some data and some results.

Submit these documents

1. A timetable or decision chart [Gantt chart, Pert chart, or schedule] for conducting your study.
2. Analysis of "dummy" data. Assume that you have actually conducted the study and have some results. Include some graphics with appropriate labels and brief discussion/explanation of the data. Specifically, include one question from your survey instrument that calls for interval data and include these terms and/or concepts in your analysis of resulting data for that question: mean, mode, median, histogram or line chart [as appropriate], and frequency display. Include a pie chart, tying it to any question you wish. Excel will help you with these charts.
3. An abstract for the completed study. (Assume that you actually conducted it and that you got some useful data.) This should not exceed about five sentences. See the attached sheet called "Typical Research Report Format" for a list of what should be included there.

Note: I would be glad to meet with you individually to work out these elements. Please email if you want to meet.