

SCHOOL OF LIBRARY AND INFORMATION STUDIES
University of Alberta

LIS 505

RESEARCH METHODS FOR LIBRARY AND INFORMATION STUDIES
(Second term, 3-0-0)

Instructor: Dr. Alvin M. Schrader, Professor

Calendar Description: An introduction to the nature of research and to the methodologies and techniques used in library and information studies. Required course.

Objectives: Upon completion of the course, a student should be able to:

1. Describe the purposes, concepts and principles of research in library and information studies.
2. Formulate research problems about the theory and practice of library and information studies.
3. Compare and select alternate methods for investigating research problems.
4. Demonstrate an understanding of the research process, by preparing a research proposal to investigate a client-centred problem in library and information studies.
5. Evaluate the research literature of library and information studies.

Methods: Lectures, readings, study guides, practice exercises, class discussions.

Inclusive Language and Equity: The Faculty of Education is committed to providing an environment of equality and respect for all people within the university community. Accordingly, staff and students should adhere to the principles of inclusive language so that students' experiences and views are treated with equal respect and value in relation to their gender, racial background, sexual orientation, and ethnic background.

<u>Assignments:</u> Overview of research	10%
First mid-term examination	20
Research proposal summary	15
Second mid-term examination	20
Research proposal	<u>35</u>
	100

Assignments should be submitted in paper copy using either 10 or 11 pt. font, 1½ line spacing, and 1 inch margins.

Note: Marks are raw scores totalled at term-end and converted to the 9-point grade scale. A distribution of grades in the range of 6 to 9 will be expected with a mean in the range of 7.1-7.5; however, the distribution will not be the ultimate determining factor of grades. Written assignments are due by 4:00 p.m. Late assignments will not be accepted unless there are extenuating circumstances such as ill health.

Course Prerequisite: LIS 501

Relationships: Prerequisite to: LIS 597, LIS 599, THES 900

Required Texts:

LIS 505 Course Workbook (1998 edition). (available at cost from the SLIS office)

Hafner, Arthur W. (1997). Descriptive Statistical Techniques for Librarians. Chicago, Ill.: American Library Association, 2nd ed., 1997. (1st ed. 1989 - HSS)

Powell, Ronald (1991). Basic Research Methods for Librarians. Norwood, N.J.: Ablex, 2nd ed., 1991. (HSS) **Or:** Busha, Charles H. and S. Harter (1980). Research Methods in Librarianship: Techniques and Interpretation. New York: Academic Press, 1980. (HSS)

Recommended Readings:

Baker, Sharon L. and F.W. Lancaster (1991). The Measurement and Evaluation of Library Services. Washington, DC: Information Resources Press, 2nd ed., 1991. (HSS)

Bazerman, Charles (1981). "What Written Knowledge Does: Three Examples of Academic Discourse." Philosophy of the Social Sciences 11 (1981): 361-387. (HH)

Campbell, Donald T. and Julian C. Stanley (1966). Experimental and Quasi-Experimental Designs for Research. Chicago, ILL: Rand McNally, 1966. (HH)

Dimitroff, Alexandra (1996). "Research Knowledge and Activities of Special Librarians: Results of a Survey." Special Libraries 87 (Winter, 1996): 1-9. (HH)

Griffiths, Jose-Marie and Donald W. King (1991). A Manual on the Evaluation of Information Centers and Services. Loughton, Essex: NATO, 1991. (HH)

Krashen, Stephen (1993). The Power of Reading: Insights from the Research. Englewood, Col.: Libraries Unlimited, 1993. (Ed)

Lynch, Mary Jo, ed. (1990). Academic Libraries: Research Perspectives. Chicago, ILL: American Library Association, 1990. (HH)

McClure, Charles and Peter Herson, eds. (1991). Library and Information Science Research Perspectives and Strategies for Improvement. Norwood, NJ: Ablex, 1991. (HH)

McDonald, Joseph and Lynda Basney Micikas (1994). Academic Libraries: The Dimensions of Their Effectiveness. Westport, Conn.: Greenwood, 1994.

Schrader, Alvin M. (1993). "The 'R' Word: The Role of Research in Graduate Education for Library and Information Studies." Canadian Journal of Information and Library Science 18 (April, 1993): 44-63. (HH)

Shaughnessy, Thomas W., ed. (1996). "Perspectives on Quality in Libraries." Library Trends 44 (1996): whole issue. (HSS)

Van House, Nancy A. et al. (1987). Output Measures for Public Libraries. Chicago, ILL: American Library Association, 2nd ed., 1987. (HH)

Webb, Eugene et al. (1981). Nonreactive Measures in the Social Sciences. Boston, MASS: Houghton Mifflin, 2nd ed., 1981. (Ed)

Course Plan and Assignments, 1998

<u>Week</u>	<u>Topic</u>	<u>Text Readings</u>
Jan 12	Course introduction	Powell 1,2,8 [B&H 1,14]
	19 Overview of the research process	
	21 <i>Research seminar on historical method</i>	
	26 Formulating a problem	
Feb 2		Hafner 1*
	9 Investigating a problem	
	23 Collecting evidence	Powell 3-6 [B&H 2-4,6]
Mar 2	Research designs - I	
	6 <i>PD Day research project presentations</i>	
	9 Research designs - II Analyzing evidence	Hafner 2-4, Powell 7 [B&H 7-8]
	16 Research designs - III	Hafner 5-6
	23 Analyzing evidence	
	30 Disseminating results	Powell 9 [B&H 15]
Apr 6	Advanced concepts. Course review	

* references are to the 1st ed.

Assignment Due Dates

Feb 2	Overview of research
23	First mid-term exam**
Mar 9	Research proposal summary
30	Second mid-term exam**
Apr 10	Research proposal

** 9:00-10:00 a.m. - regular class will resume 10:45-noon

ASSIGNMENTS, 1997

First Mid-Term Examination **(20%)**

Short answer and multiple choice questions to help you assess your understanding of the role of problem formulation in the research process. Covers lectures, handouts, and assigned readings.

Second Mid-Term Examination **(20%)**

Short answer and multiple choice questions to help you assess your understanding of the role of problem investigation in the research process within the context of problem formulation issues and techniques. Covers lectures, handouts, and assigned readings.

Overview of Research **(10%)**

The objective of this assignment is to help you develop an overview of the variety and status of research in library and information studies. Select seven publications from "The State of Research: Required Introductory Readings" and for each item answer the following questions in one or two sentences each in your own words (no direct quotations at all please!):

- What general area of problems in library and information studies is addressed in the publication?
- What is the author's main objective?
- What is the author's main conclusion?
- What problems for further study, if any, does the author identify?
- What was one idea that you had not known before, and found interesting or surprising?
- What is your overall assessment of this publication, in terms of its quality and recommended audience?

Evaluation criteria: variety of topics covered; answers in your own words to all questions; quality of writing; complete and consistent bibliographic information about the selected items; submission on time.

Research Proposal Summary **(15%)**

The objective of this assignment is to help you clarify your research focus for the major course assignment, the Research Proposal. Your focus must be an empirical research problem in library and information studies that is client-centred (i.e., an empirical problem involving interaction between clients and staff, libraries, resources, or services), and falls within one or more of the following general problem areas associated with seeking and using information:

- information use and users
- literature use and users
- library use and users
- reference service use and users
- catalogue use and users
- database use and users.

Once you have selected a research problem, identify 3-5 empirical studies and review articles that are relevant ("relevant" means useful in some crucial way to your understanding of the research

problem - it does not mean "identical" or even "similar"). If you are unable to find such studies, consult with the course instructor - it may be preferable to choose another approach or problem for which there is a foundation of extant research.

In addition to source materials that can be identified through the professional indexing services, efficient ways of accessing relevant studies are to consult some of the following: review articles in professional journals, the literature review section of scholarly journal reports, monographs, dissertations, or other research reports, "suggestions for further research" in these or other publications, and annual review serials.

Required stylistic conventions are as follows:

- in referring to publications in your text, use the author (date) method of citation
- paraphrase rather than quote directly unless the author's own wording is somehow extraordinary, unique, elegantly expressed, etc.
- avoid all acronyms
- avoid excessive use of the personal "I"
- use inclusive language.

The Summary Document:

- title page - the title should succinctly convey the nature of the proposal in the following form: "A Proposal to...." Your name, the date, and course number should also appear here.

Use **section headings** to provide the following information in 1 or 2 sentences as appropriate for each point:

- specific research problem

- state the specific research problem as a proposed examination of the relationship between two empirical concepts in the following parallel forms: first, as an objective ("The objective of the proposed study is to examine the relationship between"); and then, with a suitable grammatical linkage, as a "what" question
- state the values that make up each of these empirical concepts

- data collection procedures

- state the specific method that you propose to employ for collecting evidence (simply saying "survey," for example, is too broad because it encompasses several methods)
- state who or what will be studied and whether all or a sample of cases
- state how many cases will be studied

- anticipated contribution of the research

- indicate, in a tone of confident humility, what contribution you hope the project will make to the body of library and information studies knowledge ("It is hoped that this study will")

- related literature

- using the active author voice, past tense, and chronological ordering from oldest to most recent, describe the 3-5 studies and review articles that you have identified as relevant to your proposal, and make clear the relevance of each

- provide full bibliographic information for the cited works in a list at the end of the document (do not cite formal titles in the text itself)

Evaluation criteria: clarity of specific research problem, data collection procedures, and anticipated contribution; evidence that relevant literature has been identified; quality of organization and presentation of ideas; quality of writing; consistent bibliographic referencing; submission on time.

Research Proposal

(35%)

The objective of this assignment is to help you develop and apply your understanding of the research process. The focus is on the steps involved in planning and carrying out a study. Your completed product will be a formal proposal for investigating the client-centred empirical research problem that you selected earlier in the term.

The body of the proposal should be no longer than 12 pages plus additional pages for the title and abstract, table of contents, and references. **Submit 2 copies please.**

The Proposal Document:

- title and abstract on one page - for the abstract, in one sentence each, state the objective of the proposed research project, the proposed data collection method, and the anticipated contribution
- table of contents page - use section headings identical to those in the body of the proposal, and indicate the starting page number for each section and the references list
- references page - at the end of the proposal, provide full bibliographic information for all works cited

Use the following section headings in the body of the proposal:

1. General problem area

- state the specific objective of the proposed research project (use the same wording as in the "specific research problem" part of the proposal - see below)
- state the rationale (theoretical framework, logical structure) for your problem, that is, give your reader a background and context for understanding your research problem
- identify other major problems and issues related to your research problem

2. Related literature

- using the active author voice, past tense, and chronological ordering from oldest to most recent for your 3-5 relevant studies and review articles, state the following information for each publication: what the authors studied, how they studied it, and what they discovered about it; in other words: the research objective, the data collection method, for example, experimental, personal interviews, bibliometric, etc., the cases studied, and the 2 or 3 major findings
- identify one or two problems for further study as stated by the author or that you judge to be raised by their work

- provide an overall summary statement that links the cited studies to your specific problem focus, in other words, that shows the relevance of the cited studies to your own focus

3. Specific research problem

- as you did for the Research Proposal Summary assignment, state the specific research problem as a proposed examination of the relationship between two empirical concepts (variables) in the two parallel forms of an objective and a "what" question
- indicate what contribution you hope the project will make to the body of library and information studies knowledge ("confident humility")

4. Definitions

- identify in a sentence the primary or key terms in the specific research problem
- provide a definition of each key term and indicate the source, relying where possible on professional tools, e.g., a technical glossary of terms or an encyclopedia of library and information studies

5. Research hypothesis

- transform your specific research problem into a research hypothesis ("The research hypothesis is that there is a relationship between")
- list the variables in the hypothesis
- show their relationship as an antecedent-consequent directional graph (digraph)
- state the null form of the research hypothesis
- state the values that comprise each variable and the measurement level of each variable
- state which statistical test of the null hypothesis will be performed and which level of significance will be adopted
- discuss other factors that might explain the consequent variable
- consider the implications for your original rationale or theoretical framework if:
 - a) the data do not support the null hypothesis,
 - b) the data support the null hypothesis

6. Data collection procedures

- identify the unit of analysis for the proposed research
- indicate whether evidence will be collected from the population or from a sample of cases, when, and where
- if from a sample, indicate how the cases will be selected (sampling plan or procedure)
- indicate how many cases will be studied
- describe the research design and instrumentation that will be used for collecting evidence (e.g., telephone interview design with a semi-structured interview schedule; 4-group experimental design with a pre- and post-test self-administered questionnaire), and why this approach is better than others
- indicate whether the predicted relationship between variables is correlational or causal
- if data are collected about people, indicate whether the collection method is obtrusive or unobtrusive
- if obtrusive, describe what steps will be taken to avoid participant reactivity, otherwise known as the "Hawthorne effect," the accidental effects of knowing that one is being studied
- if data are collected about people, discuss the standard ethical considerations and identify any institutional permissions that will be needed
- if the data collection method involves the use of an instrument, such as a questionnaire or

interview schedule, indicate how the instrument will be obtained or created, and how it will be field tested (pretested)

- consider and discuss ceteris paribus conditions, that is, factors that might undermine the reliability of the data collection method or obscure the results of the research hypothesis, if left uncontrolled
- state assumptions and limitations that affect the generalizability of the research findings

7. Implementation plan

- prepare a timeline (timetable) listing all tasks and activities involved in carrying out the proposed project, and estimate the amount of time required to complete each (weeks or months)
- prepare a planning chart (flowchart) with a generic time frame corresponding to that used in your timeline
- identify the 2 or 3 most important research tasks for the success of the project, and why
- indicate how research findings will be disseminated (identify at least one conference or workshop and one journal) and your reasons

8. Project budget

- prepare a budget for the proposed project, including the unit basis for each line item estimate

Evaluation criteria: clarity of research rationale and problem definition; evidence that important concepts have been identified; evidence that relevant literature is discussed and synthesized; quality of organization and presentation of ideas; overall professionalism of proposal document; submission on time.

The State of Research: Required Introductory Readings

(1+ copies available in Henderson Hall unless otherwise indicated)

Baker, Sharon L. and F.W. Lancaster (1991). "Collection Evaluation: Use-Centered Approaches." In The Measurement and Evaluation of Library Services (Washington: Information Resources Press, 2nd ed., 1991), 79-120. (HSS)

_____ "Evaluation of Catalog Use." In The Measurement and Evaluation of Library Services (Washington: Information Resources Press, 2nd ed., 1991), 181-227. (HSS)

_____ "Evaluation of Reference Services: Question Answering." In The Measurement and Evaluation of Library Services (Washington: Information Resources Press, 2nd ed., 1991), 229-271. (HSS)

_____ "Evaluation of Reference Services: Database Searching." In The Measurement and Evaluation of Library Services (Washington: Information Resources Press, 2nd ed., 1991), 273-320. (HSS)

Broadus, R. (1987). "Toward a Definition of Bibliometrics." Scientometrics 12 (1987): 373-379.

Bunge, Charles A. (1984). "Interpersonal Dimensions of the Reference Interview: A Historical Review of the Literature." Drexel Library Quarterly 20 (Spring, 1984): 4-23.

Childers, Thomas (1991). "Scouting the Perimeters of Unobtrusive Study of Reference." In Evaluation of Public Services and Public Services Personnel, ed. Bryce Allen (Urbana-Champaign, Ill.: University of Illinois, 1991): 27-42.

Childers, Thomas and Nancy A. Van House (1989). "Dimensions of Public Library Effectiveness." Library and Information Science Research 11 (July-September, 1989): 273-301.

Christiansen, Dorothy E. et al. (1983). "Guide to Collection Evaluation through Use and User Studies." Library Resources and Technical Services 27 (October/December, 1983): 432-440.

Crews, K.D. (1988). "The Accuracy of Reference Service: Variables for Research and Implementation." Library and Information Science Research 10 (July-September, 1988): 331-355.

Dimitroff, Alexandra (1995). "Research for Special Libraries: A Quantitative Analysis of the Literature." Special Libraries 86 (Fall, 1995): 256-264.

Durrance, Joan C. (1991). "Research Needs in Public Librarianship." In Charles R. McClure and Peter Herson, eds., Library and Information Science Research: Perspectives and Strategies for Improvement (Norwood, New Jersey: Ablex, 1991), 279-295. (HSS)

Edmonds, M. Leslie (1987). "From Superstition to Science: The Role of Research in Strengthening Public Library Service to Children." Library Trends 35 (Winter, 1987): 509-520.

Edwards, Sherri (1994). "Bibliographic Instruction Research: An Analysis of the Journal Literature from 1977 to 1991." Research Strategies 12 (Spring, 1994): 68-78.

Enger, Kathy B., Georgia Quirk, and J. Andrew Stewart (1989). "Statistical Methods Used by Authors of Library and Information Science Journal Articles." Library and Information Science Research 11 (July-September, 1989): 37-46.

Fine, Sara (1984). "Research and the Psychology of Information Use." Library Trends 32 (Spring, 1984): 441-460.

Fisher, Edith Maureen (1983). "Minority Librarianship Research: A State-of-the-Art Review." Library Research 5 (1983): 5-65.

- Fitzgibbons, Shirley and Daniel Callison (1991). "Research Needs and Issues in School Librarianship." In Charles R. McClure and Peter Herson, eds., Library and Information Science Research: Perspectives and Strategies for Improvement (Norwood, New Jersey: Ablex, 1991), 296-315. (HSS)
- George, Mary W. (1990). "Instructional Services." In Mary Jo Lynch, ed., Academic Libraries: Research Perspectives (Chicago: American Library Association, 1990), 106-142. (HSS)
- Hewins, Elizabeth T. (1990). "Information Need and Use Studies." Annual Review of Information Science and Technology 25 (1990): 145-172.
- Hufford, Jon R. (1991). "Use Studies and OPACs." Technical Services Quarterly 9 (1991): 57-70.
- Jarvelin, Kalervo and Pertti Vakkari (1990). "Content Analysis of Research Articles in Library and Information Science." Library and Information Science Research 12 (1990): 395-421.
- Jarvelin, Kalervo and Pertti Vakkari (1993). "The Evolution of Library and Information Science 1965-1985: A Content Analysis of Journal Articles." Information Processing and Management 29 (1993): 129-144.
- Julien, Heidi (1996). "A Content Analysis of the Recent Information Needs and Uses Literature." Library and Information Science Research 18 (1996): 53-65.
- Julien, Heidi and Gloria J. Leckie (1997). "Bibliographic Instruction Trends in Canadian Academic Libraries." Canadian Journal of Information and Library Science 22 (1997): 1-15.
- Knightly, John J. (1979). "Overcoming the Criterion Problem in the Evaluation of Library Performance." Special Libraries 70 (April, 1979): 173-178.
- Lancaster, F.W. (1982). "Evaluating Collections by Their Use." Collection Management 4 (Spring/Summer, 1982): 15-43.
- Large, Andrew and Jamshid Beheshti (1997). "OPACs: A Research Review." Library and Information Science Research 19 (Spring, 1997): 111-133.
- Lewis, David W. (1987). "Research on the Use of Online Catalogs and Its Implications for Library Practice." Journal of Academic Librarianship 13 (July, 1987): 152-157.
- Line, Maurice B. (1982). "Problems and Uses of Bibliometric Studies." T. Dokument 38 (1982): 25-33.
- Lynch, Mary Jo (1993). "Measurement of Library Output: How Is It Related to Research?" In Library Performance, Accountability and Responsiveness: Essays in Honor of Ernest R. DeProspero, eds. Charles Curran and F. William Summers (Norwood, N.J.: Ablex, 1993), 1-8.
- Magrill, Rose Mary (1980). "Conducting Library Research." College and Research Libraries 4 (May, 1980): 200-206.
- Mansbridge, John (1986). "Availability Studies in Libraries." Library and Information Science Research 8 (October-December, 1986): 299-314.
- Markey, Karen (1984). "Interindexer Consistency Tests: A Literature Review and Report of a Test of Consistency in Indexing Visual Materials." Library and Information Science Research 6 (1984): 155-177.
- Matarazzo, James M. and Laurence Prusak (1990). "Valuing Corporate Libraries: A Senior Management Survey." Special Libraries 81 (Spring, 1990): 102-110.

- McClure, Charles R. (1989). "Increasing the Usefulness of Research for Library Managers: Propositions, Issues, and Strategies." Library Trends 35 (Fall 1989): 280-294.
- McClure, Charles R. and Ann Bishop (1989). "The Status of Research in Library/Information Science: Guarded Optimism." College and Research Libraries 13 (March, 1989): 127-143.
- McClure, Charles R. et al. (1986). "Output Measures: Myths, Realities, and Prospects." Public Libraries 25 (Summer, 1986): 49-52.
- Metoyer-Duran, Cheryl (1991). "Information-Seeking Behavior of Gatekeepers in Ethnolinguistic Communities: Overview of a Taxonomy." Library and Information Science Research 13 (1991): 319-346.
- Metoyer-Duran, Cheryl (1993). "Information Gatekeepers." Annual Review of Information Science and Technology 28 (1993): 111-150.
- Metz, Paul (1990). "Bibliometrics: Library Use and Citation Studies." In Mary Jo Lynch, ed., Academic Libraries: Research Perspectives (Chicago: American Library Association, 1990), 143-164. (HSS)
- Millson-Martula, Christopher A. and Vanaja Menon (1995). "Customer Expectations: Concepts and Reality for Academic Libraries." College and Research Libraries 56 (January, 1995): 33-47.
- Molyneux, Robert E. (1986). "Patterns, Processes of Growth, and the Projection of Library Size: A Critical Review of the Literature on Academic Library Growth." Library and Information Science Research 8 (1986): 5-28.
- Olson, Hope (1995). "Quantitative 'Versus' Qualitative Research: The Wrong Question." Connectedness: Information, Systems, People, Organizations. Proceedings of the 23rd annual conference, Canadian Association for Information Science. Edmonton: School of Library and Information Studies, University of Alberta, 1995, 40-49.
- Peters, Thomas A. (1993). "The History and Development of Transaction Log Analysis." Library Hi Tech 11 (1993): 41-66.
- Powell, Ronald R. (1984). "Reference Effectiveness: A Review of Research." Library and Information Science Research 6 (1984): 3-19.
- Roberts, N. and T.D. Wilson (1988). "The Development of User Studies at Sheffield University, 1963-88." Journal of Librarianship 20 (October, 1988): 270-290.
- Sandore, Beth (1990). "Online Searching: What Measure Satisfaction?" Library and Information Science Research 12 (January-March, 1990): 33-54.
- Savard, Réjean (1996). "Librarians and Marketing: An Ambiguous Relationship." The New Review of Information and Library Research 2 (1996): 41-55.
- Seymour, Sharon (1991). "Online Public Access Catalog User Studies: A Review of Research Methodologies, March 1986 - November 1989." Library and Information Science Research 13 (April-June, 1991): 89-102.
- Shearer, Kenneth (1979). "The Impact of Research on Librarianship." Journal of Education for Librarianship 20 (Fall, 1979): 114-128.
- Smith, Linda (1981). "Citation Analysis." Library Trends 30 (Summer, 1981): 83-106.
- Swigger, Keith (1985). "Questions in Library and Information Science." Library and Information Science Research 7 (1985): 369-383.

- Thorne, Rosemary and Jo Bell Whitlatch (1994). "Patron Online Catalog Success." College and Research Libraries 55 (November, 1994): 479-497.
- Van House, Nancy A. (1989). "Output Measures in Libraries." Library Trends 38 (Fall, 1989): 268-279.
- Wallace, Danny P. (1987). "A Solution in Search of a Problem: Bibliometrics and Libraries." Library Journal 112 (May 1, 1987): 43-47.
- Westbrook, Lynn (1993). "User Needs: A Synthesis and Analysis of Current Theories for the Practitioner." RQ 32 (Summer, 1993): 541-549.
- Westbrook, Lynn (1994). "Qualitative Research Methods: A Review of Major Stages, Data Analysis Techniques, and Quality Controls." Library and Information Science Research 16 (Summer, 1994): 241-254.
- White, Emilie C. (1985). "Bibliometrics: From Curiosity to Convention." Special Libraries 35 (Winter, 1985): 35-42.
- White, Marilyn Domas and Eileen G. Abels (1995). "Measuring Service Quality in Special Libraries: Lessons from Service Marketing." Special Libraries 45 (Winter, 1995): 36-45.
- Whitlatch, Jo Bell (1990). "Access Services." In Mary Jo Lynch, ed., Academic Libraries: Research Perspectives (Chicago: American Library Association, 1990), 67-105. (HSS)