

# LIS 2970 Special Topics: Research Methods in Library and Information Science

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Thursdays 12:00 PM – 2:50 PM, IS Building, Room 404

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## LIS 2970 Special Topics: Research Methods in Library and Information Science

### 1. Course Description

Introduction to quantitative and qualitative methodologies and techniques used to conduct scholarly inquiry and service evaluation in library and information science. The design, planning and execution of research studies, from conceptualization and proposal writing to reporting and dissemination of the findings. Topics covered include research problems and questions; critical appraisal of research literature; data sources and sampling; research ethics and integrity; and data collection, analysis and interpretation.

### 2. Course Rationale

Being able to understand and apply research in library and information science is one of the Goals for Graduates of the MLIS Program at Pitt, and reflects the formal statement by the American Library Association that all persons graduating from an ALA-accredited master's program in library and information studies should possess knowledge of research. Specifically, the ALA's (2009) **Core Competences of Librarianship**<sup>1</sup> state that a graduate should know and, where appropriate, be able to employ:

- 6A. The fundamentals of quantitative and qualitative research methods.
- 6B. The central research findings and research literature of the field.
- 6C. The principles and methods used to assess the actual and potential value of new research.

The majority of professional competency and educational policy statements in our field, both in the USA and other countries, similarly emphasize research methods among the key competency areas needed by librarians and other information specialists today.

For example, the Medical Library Association specifies the following as **Professional Competencies for Health Sciences Librarians**<sup>2</sup>

- 7. Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines including:
  - using quantitative and qualitative methodologies and techniques and their interpretation
  - locating, organizing, and critically evaluating the research literature
  - using principles of evidence-based practice to support decision making
  - conducting research and reporting and disseminating research findings either individually or in interdisciplinary research teams.

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<sup>1</sup> <http://www.ala.org/educationcareers/careers/corecomp/corecompetences>

<sup>2</sup> [http://www.mlanet.org/education/policy/executive\\_summary.html#7](http://www.mlanet.org/education/policy/executive_summary.html#7)

The Society of American Archivists includes Research Design and Execution as an area of **Complementary Knowledge** that forms part of “the body of knowledge that a student should master as part of a graduate archival education”<sup>3</sup>

An understanding of research design and execution is important for enabling graduates to provide effective service to a wide variety of researchers and to evaluate archival operations from the perspective of users. It also allows graduates to assess the status of research in their own discipline, to undertake new research, and to blend theoretical and empirical aspects of archival studies into scholarly investigations.

Other organizations that include research methods in their curriculum guidelines, include the **American Society for Information Science and Technology (ASIST)**<sup>4</sup> and the **International Federation of Library Associations and Institutions (IFLA)**<sup>5</sup>

As a library and information professional you will have the opportunity to support and assist the process of research and the work of researchers in academic, community and other practice settings, and an understanding of the principles and methods used to conduct research will help you to fulfill your professional responsibilities. In addition, library and information professionals in all sectors are generally expected to be **evidence-based practitioners**, which means integrating the best available research evidence into decisions made about library and information issues in the workplace.

Practitioners often have to design and conduct their own research studies to assess the quality of their services, measure the performance of their systems, and evaluate the impact of their libraries on the communities served. In academic libraries, professionals are frequently also expected to undertake and publish personal research as part of an ongoing program of scholarly work associated with tenured status.

This course provides the theoretical and practical knowledge needed to fill all of these roles, as well as preparing graduates for more advanced study, including research at doctoral level. There are no pre-requisites.

### **3. Course Goal**

The overarching goal of this course is to provide developing librarians and information professionals with an overview and understanding of social science research methods that are relevant to and necessary for scholarly inquiry and service evaluation in the field of library and information science.

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<sup>3</sup> <http://www2.archivists.org/gpas/curriculum>

<sup>4</sup> [http://www.asis.org/Board/educational\\_guidelines.html](http://www.asis.org/Board/educational_guidelines.html)

<sup>5</sup> <http://www.ifla.org/publications/guidelines-for-professional-libraryinformation-educational-programs-2012>

#### **4. Course Learning Objectives**

After completing the course, you will be able to:

- conduct a review of research literature on a specified topic
- critically appraise research studies in the field
- conceptualize and plan a small-scale empirical research project
- collect, analyze and interpret research data
- organize and communicate research findings
- evaluate and apply research in library and information science.

#### **5. Diversity and Inclusion Statement**

An important aim of the course is to promote an inclusive learning and research community that encourages the dynamic open exchange of ideas and affirms the diversity and dignity of participants and perspectives within a safe and mutually respectful environment.

#### **6. Teaching and Assessment Philosophy**

The teaching methods used in this class include lecture presentations, guided reading, individual reflection, group discussion and practical activities related to critically evaluating research, designing a study, collecting data and analyzing data. The course assignments will give students experience of carrying out tasks that are central to planning and executing a research project.

Key concepts, principles and techniques will typically be introduced in a simplified form, then revisited in more depth and detail, and examined or explored with examples representing different contexts and perspectives. The course has been designed as an introduction to the subject, specifically to meet the needs of students who have little or no prior knowledge of research methodology, but the content also recognizes that other class members (e.g. doctoral students), may be ready for more advanced treatment of the topics covered, by providing readings and exercises suitable for different levels of knowledge and ability.

Instructors in this class will determine grades by using **criterion-referenced assessment** (also known as task-referenced assessment or absolute-scale grading). In contrast to norm-based assessment (relative-scale grading), which measures how well each student performs by comparing their performance to the performance of others in the class, criterion-based grading assesses student work against an objective standard reflecting the level of attainment expected by the instructor on the basis of his or her knowledge and experience of the relevant discipline.

Criterion-referenced assessment is “mastery-oriented” and generally regarded as more appropriate for professional education programs where the aim is to prepare students to become competent practitioners in the discipline.

Criterion-referenced assessment is a more inclusive approach that facilitates collaborative learning, because your grade will not be affected by how well or badly others perform, so it is possible, in principle, for everyone in the class to attain a superior A-grade, because “superior” here means a higher level of performance than the standard generally expected for students taking a similar course, instead of performing better than other students in your particular class. Norm-referenced grading assumes a particular distribution of grades from A to F (following a normal distribution or bell curve), which is regarded as unfair for students taking small or mid-sized classes.

Assessments will be based on specified **evaluation criteria**, which are defined separately for each assignment. The **holistic grading** method will be used at the assignment level, i.e. all the criteria will be taken into account, but one overall grade will be assigned for each assignment, with no specific weightings attached to particular aspects or elements of your work. The final grade for the course will be calculated by aggregating the grades for each individual assignment, based on the weightings indicated.

## 7. Required Materials:

There is no required textbook for this course. The following three books are strongly recommended as texts that together provide a very good introduction to the design and conduct of social science research, and to research in library and information science.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.) London: Sage. [New edition due March 2013]

Denscombe, M. (2010). *The good research guide for small-scale social research projects* (4th ed.). Maidenhead: Open University Press. [Available as Full Text Online from ULS]

Pickard, A. J. (2007). *Research methods in information*. London: Facet. [New edition due January 2013]

Additional reading material, including recommendations of books and articles, will be provided for each weekly session and uploaded to CourseWeb. Students will be directed toward both methodology texts and primary literature, as examples of research in LIS.

## 8. Course Web Site

This course is supported by a CourseWeb site using the Blackboard course management system, which you can access via My Pitt (<https://my.pitt.edu/portal/server.pt>) or directly via <http://courseweb.pitt.edu>. In both cases, you will need to log in with your University Computer Account.

**Course resources** will be organized in folders that will enable you to locate, access and download copies of the syllabus, reading list, assignment instructions and week-by-week learning resources. Weekly folders will be provided that will contain links to copies of the lecture slides, reading lists for the topics covered that week, website resources and any handouts provided that week (e.g. in-class and preparatory exercises, supplements to lecture material).

**Course assignments** will each have a designated PDF file with instructions and requirements, which will be accessible via the Assignments content area of the CourseWeb site.

**Course-related email** will be sent from the CourseWeb system to your Pitt university email account. If you do not use your Pitt account to send and receive email, you must set up mail forwarding, which you can do via the Manage My Account Web site (<https://accounts.pitt.edu/>).

## **9. Office Hours – By Appointment**

Office hours for this course are optional for students. If you have any questions or concerns about your understanding of the course material or assignments, you may request an appointment for a meeting with either of the instructors via email.

You may also email your questions to the instructors, including any queries you have about work in progress on your assignments.

## **10. Course Expectations and Requirements:**

- **Assignments and Projects:**

There are three assessed assignments for the course, weighted as follows:

1. Review of research literature on a topic of your choice (1,000-1,500 words, 20 percent of the final grade)
2. Critical appraisal of a research report of your choice, subject to approval by the instructor (1,000-1,500 words, 20 percent of the final grade)
3. Proposal for a small-scale research project, in the same research area as the literature review (3,000-3,500 words, 60 percent of the final grade).

Detailed instructions and evaluation criteria will be provided for each assignment as separate handouts. Students must read and meet all instructions and requirements for each assignment.

Assignments may be modified by the instructor as necessary.

- **Deadlines:**

1. Assignment 1, Review of research literature (1,000-1,500 words):  
submit by 11:59 PM on **Friday, February 22, 2013**
2. Assignment 2, Critical appraisal of a research report (1,000-1,500 words):  
submit by 11:59 PM on **Friday, March 22, 2013**
3. Assignment 3, Proposal for a small research project (3,000-3,500 words):  
submit by 11:59 PM on **Friday, April 19, 2013**

Assignments should be submitted via the Assignment Tool in CourseWeb.

- **Attendance:**  
As stated in the School of Information Sciences Graduate Student Handbook, students are expected to participate fully in the course by attending class and completing in-class and pre-class assignments as advised. Students are also expected to inform the instructor, in a timely fashion, whenever a serious problem interferes with ability to attend classes or to complete assignments. Attendance will not be assessed, i.e. it will not directly impact on the final grade.
- **Class Participation:**  
Students are expected to participate fully in class by asking questions and taking part in discussions and activities. Participation will not be assessed.

## 11. Grading:

Assignments will be given letter grades in accordance with the University Grading Policy for Graduate Courses (see <http://www.pitt.edu/~graduate/reggrades.html>), using the Grading System Definitions and Grade Points shown below.

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A+	4.00	
A	4.00	Superior attainment
A-	3.75	

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B+	3.25	
B	3.00	Adequate graduate level attainment
B-	2.75	

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C+	2.25	
C	2.00	Minimal graduate level attainment
C-	1.75	

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D+	1.25	
D	1.00	
D-	0.75	

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F	0.00	Failure
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G		Course work unfinished because of extenuating personal circumstances
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The final grade for the course will be based on the evaluation of the three assignments. The literature review is worth 20 percent of the final grade, the critical appraisal is worth 20 percent of the final grade, and the research proposal is worth 50 percent.

- **Penalties for Late Submission:**  
Late submission without the prior agreement of the instructor will result in a **deduction of half of a letter grade per day** (i.e. 0.5 grade points, e.g. from A- to B+) for each day, or part of a day, after the assignment. Extensions to deadlines will normally only be available for extenuating circumstances in respect of which documented evidence is provided (e.g. serious illness, personal bereavement). Students who need to request an extension should contact the instructor to discuss the matter as soon as the circumstances arise.

Students should assume that extensions will generally NOT be granted in the following circumstances: forgetting the due date of an assignment; recording the wrong due date for an assignment in your calendar; forgetting to complete or submit an assignment; submitting an assignment to the wrong place; doing the wrong assignment; having a heavy workload for other courses or employment; or being away for a conference, job interview, family event, or vacation.

**Students are expected to take responsibility for ensuring that they understand what they are required to do by what date and for raising any queries about assignments with the instructor in a timely fashion.**

If an extension to a deadline is granted, the work must be submitted within the period agreed to avoid penalty for late submission.

## 12. University and School Policies:

- **Academic Integrity:**

Students in this course are required and expected to comply with the University of Pittsburgh *Guidelines on Academic Integrity: Student and Faculty Obligations and Hearing Procedures* (see

<http://www.provost.pitt.edu/info/acguidelinespdf.pdf>) and the School of Information Sciences supplementary statement on *Academic Integrity: Student Obligations* (see <http://www.ischool.pitt.edu/about/academic-integrity.php>).

Any student suspected of violating these obligations for any reason during the term will be required to participate in the procedural process, initiated at the instructor level, as outlined in the Pitt Guidelines on Academic Integrity, and in the SIS Hearing Procedures. If it is determined that a student has violated the policy on academic integrity, he or she will fail the course.

- **Disability Services:**

If you have a disability that might require special testing accommodations or other classroom modifications, you need to notify both the instructor and Disability Resources and Services (DRS) no later than the second week of term (i.e. by Friday, January 18, 2013). You may be asked to provide documentation of your disability to determine the appropriateness of accommodations.

To notify DRS, contact the office on (412) 648-7890 (Voice/TTD) or 536-5568 (VP) to schedule an appointment. The DRS office is located in 140 William Pitt Union on the Oakland campus. DRS will verify your disability and determine whether reasonable accommodation(s) for this course are warranted.

See <http://www.studentaffairs.pitt.edu/drsacademicrequest> for further details.

- **Copyright Notice:**

Course materials may be protected by copyright. United States copyright law, 17 USC section 101, et seq., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials.



For additional information, see the University of Pittsburgh Policy on copyright at <http://www.cfo.pitt.edu/policies/policy/11/11-02-02.pdf>.

### **13. Classroom Recording**

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use.

### **14. Class Cancellations**

Occasionally severe weather conditions (e.g. icy, snowy, or blizzard conditions, rainstorms, flooding, landslides) and other "Acts of God" (i.e. force majeure), as well as unusual circumstances such as state and national emergencies, city-wide special events, exigent circumstances, anticipated or unanticipated traffic stoppages or road closures, etc., may necessitate class cancellation(s). In such events, the instructor will make every effort to communicate such cancellations to students. However, depending on the type of situation, communication may not always be possible. Such events may also require adjustments to class schedules, assignments, readings, etc., and the instructor reserves the right to make such changes as necessary.

### **15. Emergency Notification**

Students should ensure that they are registered with the University of Pittsburgh's Emergency Notification Service to facilitate their expedient awareness of urgent situations that may impact their welfare and schedules. All students can subscribe to receive text, voice and email notifications in the event of campus emergencies. Each subscriber can designate up to three contact numbers and specify text and/or voice messages. The Quick Test features enable you to send a test message to your wireless device after you subscribe. This service is designed for use with portable devices and is part of a layered approach to notifying the University community of emergencies. See <http://www.technology.pitt.edu/portal/emergency/emergency-notification.html> for details of how to subscribe.

### **16. Important Dates:**

- Friday, February 22** Assignment 1 due by 11:59 PM
- Thursday, March 14** Spring recess – no class
- Friday, March 1** Email details of proposed report for critique to SC by 11:59 PM
- Friday, March 22** Assignment 2 due by 11:59 PM
- Friday, April 19** Assignment 3 due by 11:59 PM

**17. Course Schedule:**

Week	Date	Topic
1	Jan 10	<p><b><i>Introduction to research in library and information science</i></b></p> <p>Class introductions, course overview, syllabus review. In Week 1, we discuss what we mean by “scholarly inquiry” and “scientific research”, and look at how some institutions define and categorize different types of investigation. We also examine some examples of research undertaken in archives, library and information science, including the subjects studied, methods used and structure of published reports.</p>
2	Jan 17	<p><b><i>The use of literature in research</i></b></p> <p>We discuss the different ways that literature can be used in research, both to frame an investigation and to interpret its findings. We look at the multiple functions served by a review of research literature; different types of review and their use in different methodologies; how to plan, execute and document the literature search process; and what categories of material and tools to use for research assignments.</p>
3	Jan 24	<p><b><i>The use of theory in research</i></b></p> <p>Following on from Week 2, we discuss what we mean by the terms “theory”, “theoretical framework”, and “conceptual framework”, and then explore the different roles that theory can play in orientating, informing, or forming the main purpose of, a research study. We look at models developed to analyze the use of theory in LIS research and examine some more examples of LIS research papers in that context.</p>
4	Jan 31	<p><b><i>Elements of research design</i></b></p> <p>Building on week 3, we look at the several theoretical, methodological, ethical and other dimensions of research that need to be considered in designing a study and planning a project, including the influence of different research paradigms or worldviews on the research process. We discuss some models and features of quantitative and qualitative studies and how they can be combined in mixed methods research.</p>
5	Feb 7	<p><b><i>Defining a research project</i></b></p> <p>In Week 5, we look at three foundational elements of a study design: the problem statement, research questions/hypotheses and purpose. We consider their relationship to each other and the overall design, and look at some models, frameworks and guidelines for formulating and evaluating such statements and their application to LIS research.</p>

6	Feb 14	<p><b>Quality assurance in research</b></p> <p>In Week 6, we consider other important elements of a study design and their impact on how the quality and value of research is assessed. We look at the different types and purposes of methods used for selecting a sample for study in quantitative and qualitative research; the concepts of validity and reliability for different methodologies; and the principles and procedures that enable ethical conduct of research.</p>
7	Feb 21	<p><b>Writing the research proposal</b></p> <p>In week 7, we review the different elements of research design in the specific context of the formal requirements for the proposal of a small-scale study that constitutes the third assignment for the course. We discuss the content and focus of different sections of the proposal, and the practicalities of turning a design into a workable project plan.</p> <p><b>Assignment 1, Literature review, due by February 22</b></p>
8	Feb 28	<p><b>Qualitative methodologies: Phenomenology, Ethnography, Phenomenography, and Grounded theory</b></p> <p>We look at four examples of qualitative research design, including their distinguishing features and common variants where applicable, with reference to published examples of their use in LIS research.</p> <p><b>Notification of proposed focus for Assignment 2 due by March 1</b></p>
9	Mar 7	<p><b>Qualitative methodologies: Case studies, Historical research, Delphi studies, and Action research</b></p> <p>We look at another four qualitative/mixed methods designs, including their distinguishing features and common variants where applicable, with reference to published examples of their use in LIS research.</p>
10	Mar 14	<p><b>Spring recess – No class</b></p>
11	Mar 21	<p><b>Quantitative methodologies: Survey research, Experimental research, and Bibliometric studies</b></p> <p>We look at three examples of quantitative research design, including the distinguishing features and common variants for each strategy, with reference to published examples of their use in LIS research.</p> <p><b>Assignment 2, Critical appraisal, due by March 22</b></p>

12	Mar 28	<p><b>Methods of data collection: Questionnaires, Interviews, Observation, and Documents</b></p> <p>We look at these four key sources of data in social science research, and common variants within each method (including Internet-based), with reference to published examples of their use in LIS research. We consider the strengths and weaknesses of each method, the abilities needed by the researcher, and guidelines for good practice.</p>
13	Apr 4	<p><b>Quantitative data analysis</b></p> <p>We introduce a general set of procedures for data analysis and examine specific steps for analyzing quantitative data. We discuss different types of data and how they affect the techniques available. We then look at the most commonly used techniques, including descriptive statistics, frequency distributions, multivariate analysis, inferential statistics, and measures of central tendency and dispersion.</p>
14	Apr 11	<p><b>Qualitative data analysis</b></p> <p>We review the general procedures introduced in Week 13 and look at how they apply to the analysis of qualitative data. We examine some models of the qualitative analysis process, guidelines for transcription, strategies for data analysis, and common features of analytic methods. We then explore an approach to thematic analysis of qualitative data and discuss the use of computer software in qualitative data analysis.</p>
15	Apr 18	<p><b>Writing-up, reporting and disseminating research</b></p> <p>Building on Weeks 13 and 14, we look at processes and methods for interpreting and presenting research to different audiences, including both traditional and contemporary forms of scholarly communication. We discuss alternative structures for journal articles and other types of research report, and formats for conferences and other venues.</p> <p><b>Assignment 3, Research proposal, due by April 19</b></p>
16	Apr 25	<p><b>Practitioner research and service evaluation</b></p> <p>In the final session, we focus on the types of research conducted by practitioners in their workplaces, including methods used in library and information service evaluation, performance measurement and impact assessment. We discuss trends and developments in the field, including the adoption of tools and techniques from other arenas, such as ROI, SERVQUAL, the balanced scorecard and story-telling.</p>