

Research Competencies for CARL Librarians

Prepared by the 8Rs Research Team on behalf of
the CARL Library Education Working Group

May, 2007

CARL is the leadership organization for the Canadian research library community. The Association's members represent Canada's major academic research libraries plus Library and Archives Canada, the Library of Parliament and the Canada Institute for Scientific and Technical Information (CISTI).



Preface

In November 2006, the CARL Library Education Working Group was established with a mandate to create relationships with those interested in library education and research, to identify next steps for taking identified priorities forward, to identify actions arising from the recommendations of the 8Rs Canadian Library Human Resources Study and to make recommendations to the CARL Board by the Spring Meeting of 2008.

To complete its mandate the Working Group met regularly, gathered information from a variety of sources, held discussions with potential partners and conducted a survey of CARL Directors.

The Working Group also commissioned the 8R Research Team to prepare a 'Product Brief', based on the 8Rs research, which would overview the knowledge, skills and competencies required by Librarians undertaking research in CARL member institutions. Thus the product brief, *Research Competencies for CARL Librarians* (2007) came about.

The original intent behind its preparation was that it would inform the Education Group's discussions with Canadian MLIS programs and help identify possible courses/programs already available, which CARL might then consider offering as an endorsed CARL training program. The Product Brief was distributed through the Chair of Canadian Council of Information Studies / Conseil Canadien des sciences de l'information (CCIS-CCSI) to CCIS-CCSI members in mid-2007 and the Education Group's discussions and work continued, culminating in their final report (and recommendations) to CARL in May 2008.

Prior to completing its mandate, the Education Working Group determined that the quality of information available through the product brief was such, that it stood in its own right and was worthy of a wider distribution to CARL Directors and others interested in research training and skill development. In particular, it was felt that the product brief could help to inform decisions made by individual CARL Directors about research training programs, which they might source and conduct in their respective libraries.

Members of the Education Working Group therefore trust that those who consult and use *Research Competencies for CARL Librarians* will find it useful and informative. In

particular, it is issued as guidelines for CARL Directors wishing to source research training for their libraries.

The publication would not have come to realization without the initial work of the 8Rs Research Team. Thanks to Allison Sivak and the 8Rs Research Team, and those who provided feedback on the document: Liza Chan, Nancy Collins, Liz Dennett, Chuck Humphrey, Denise Koufogiannakis, Denis Lacroix, Katrine Mallan, Sarah Mead-Willis, Cari Merkeley, Tanya Rogoschewsky, and Pam Ryan.

Dr Vicki Williamson
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CARL Library Education Working Group 2006-2008

Research Competencies for CARL Librarians

Business Product Description: Professional Development Course Suite

May 3, 2007

Submitted to the CARL Library Education Working Group by: 8Rs Research Team

Introduction:

Librarians in academic libraries are increasingly required to conduct research in order to meet institutional service needs and to further their own careers. Several factors within the field of academic librarianship have contributed to this development, including the evidence-based librarianship movement as well as the emphasis on service assessment and meaningful measures of library impact.

However, it has frequently been noted that the majority of the professional literature is not research-based (Koufogiannakis and Crumley, 2006). All Canadian MLIS programs have a required introductory research methods course (Cultural Human Resources Council, 2006); however, an introductory course serves primarily as an orientation to research practice. A number of obstacles to librarians conducting research have been identified, including skills in conducting, disseminating, and interpreting research, as well as limited time, access to funding, access to previously-published research, and employer support (Booth and Brice, 2006; Koufogiannakis and Crumley, 2006). Additional training in specific methods would serve to provide librarians new to research the opportunity to develop their skills, knowledge, and confidence in this area.

The Canadian Association of Research Libraries (CARL) Library Education Working Group has prioritized the development of a series of professional development courses which focus on research methods for academic librarians. This document describes the recommended scope of this series, and will serve as the basis for the Request for Proposal in response.

Considerations:

The proposed suite of research methods courses is intended to serve the needs of academic librarians currently working in research libraries, and whose jobs involve conducting research, or who have an interest in conducting research. The main purpose of courses is to develop or strengthen participants' abilities to apply concepts and skills learned to their own or their institutions' research projects. The following considerations will help to meet these objectives:

- Method of course delivery is assumed to be web-based or through another method of distance education

- Students' course projects should be anchored to real-workplace issues or research questions wherever possible; e.g., before class starts, ask that students bring a research question from their current workplace or position
- Hands-on / practical training with software should be part of the coursework (e.g., SPSS, Atlas.ti)
- Assignments should model the concrete steps of the research process (e.g., for research methods, etc.)
- The contents list below does not assume that each area should be its own separate course or module within a course; some subjects, such as evidence-based librarianship, may be defined at the beginning of the course suite, and then referred to throughout the course, for example.
- The proposed contents below are not listed in any suggested order for presentation
- Similarly, the Canadian Council of Information Studies (CCIS) and CARL may wish to prioritize certain areas, such as focusing more intensively on a smaller number of research methods, for example
- CCIS may consider other curricula that currently exist in online delivery by other MLIS programs or professional development groups, and whether this content could be "purchased" and modified for the purposes of the CARL library needs
- CARL directors may wish to consider further institutional commitments to the professional development of research competencies; for example, time for staff who conduct research to serve as mentors to those new to research
- CARL directors should discuss the final outcome of the course suite completion. Will completion of a certain number of courses result in a recognized credential? How is that recognized at the institution?
- Some type of communication / support mechanism should be created for those who seek further feedback or discussion of research problems beyond the courses; e.g., listserv, online forum, blog, etc.
 - o One example is that of the Data Interest Group for Reference Services (<http://blogs.library.ualberta.ca/digrs/>) where specific data reference questions are posted, and mentors respond with answers

Suggested Contents for Research Professional Development Curriculum:

- Setting a research program
 - o Methods of determining your research interests
 - o Self assessment of current competencies and competencies you need to develop
- Overview of research within the LIS field
 - o previous research
 - o noted gaps in LIS research
 - o research culture
 - o theory in research
 - o roles of stakeholders in supporting research (individuals, associations, employers)

- Formulating research question
 - o Basic vs. applied research
 - o Question sources: e.g., institutional mandate or strategic plan, individual job area or position, individual interest, etc.
- Library assessment and evidence-based librarianship
- Research design
 - o Ethics review
 - o Quantitative and qualitative methods, for example:
 - Analysis
 - Audit
 - Autobiography / Biography
 - Bibliographic
 - Bibliometric
 - Case Study
 - Cohort Design
 - Comparative Study
 - Content Analysis
 - Critical Incident
 - Data Mining
 - Delphi Method
 - Descriptive Survey
 - Discourse Analysis
 - Experimental and quasi-experimental
 - Focus Group
 - Gap Analysis
 - History
 - Life Histories
 - Meta-analysis
 - Modeling
 - Narrative Review
 - Participant Observation
 - Program Evaluation
 - Randomized Controlled Trial
 - Summing Up
 - Systematic Reviews
 - Textual Analysis
 - Unobtrusive Observations

- Evidence appraisal / critical appraisal
 - o critical appraisal of your own research?
- Statistical / quantitative analysis
- Qualitative analysis
- Data sources and analysis in academic libraries
 - o Regularly-generated statistics (inter-library loan, circulation, logs)
 - o Tools for data sources (e.g., Director's Station, OCLC Collections Analysis)
- Building research groups / partnerships
 - o Collaboration
 - o Project management
- Research support / funding
 - o Grantwriting
- Research outcomes
 - o Outline of a research paper: question, methods, analysis
 - o Moving from research to impact or action
 - o Research / conference presentation
 - o Publishing and access to research outcomes; choosing a publication venue, open access publications
- Soft skills for research
 - o Obstacles to conducting research and methods to overcome them
 - o Time management
 - o Research on little time and no money
 - o How to keep momentum
 - o Encouraging a research culture at your organization or in your community

Works Consulted:

Baker, L. M. Research Methods [Special issue]. *Library Trends* 55 .1 (2006): 1-215

Brice, A. and Booth, A. "Practical issues in creating an evidence base for library and information practice." *Library and Information Research News* 30.94 (2006): 52-60.

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Koufogiannakis, Denise, and Ellen Crumley. *Research in Librarianship: Issues to Consider*. *Library Hi Tech* 24(3); 2006: 324-40.

Lowry, C. B. *Research and Scholarship Defined for "portal: Libraries and the Academy"*. *Portal* 4.4. (2004): 449-53

Appendix : Description and Course Objectives of Required Research Methods Courses at Canadian MLIS Programs

University of Alberta

Course description:

- Describe the purposes, concepts and principles of research in library & information studies;
- Develop research questions about the theory and practice of library & information studies;
- Compare and select methods for answering research questions;
- Demonstrate an understanding of the research process by preparing a research proposal to study a user-centred problem in library & information studies;
- Evaluate the research literature of library & information studies.

University of British Columbia

Course description:

- Discuss the roles that research plays in our profession in general
- Discuss the importance of research method knowledge for today's practicing information specialists
- Describe the basic elements of social science research methods and their applications in information-based environments
- Critique a published research study
- Prepare a detailed research plan including problem identification and selection, research questions/hypotheses, relevant variables, literature review, methodological design, sampling design, development of data gathering instruments, design of codebook, and data collection techniques
- Discuss the various ethical issues relevant to certain research topics and research methodologies

University of Toronto

Course description:

Focuses on developing an understanding of appropriate quantitative and qualitative research methodologies and relevant descriptive and inferential statistics for the investigation of both practical and theoretical problems in the information professions. By considering the nature, concepts, and logic of the research enterprise, permits a critically informed assessment of published research, including data gathering and data analysis procedures.

Dalhousie

Course description:

Introduces concepts, methods (both quantitative and qualitative), and the practices of research that are appropriate to library and information studies. Addresses the nature and uses of research, tools for research, handling of evidence, analysis and interpretation

of findings, reporting of results, evaluation of published reports, and the management of research.

Course Goals

1. To provide an understanding of the principles and methodologies of research appropriate to issues in library and information studies. This understanding will enable students to comprehend the role of research in adding to knowledge, advancing the discipline and profession, and providing information essential for planning and decision-making.
2. To enable students to become intelligent consumers of research, which involves the ability to read and critically analyse relevant research literature.
3. To enable students to understand the steps involved in research and to apply concepts central to the research process, e.g., to formulate a research question about an information studies problem, and to apply appropriate research methodologies to that problem.
4. To enable students to become familiar with the entire research process in order to assist clients who are themselves engaged in research.

Course/Learning Objectives

By the conclusion of the course students should be able to:

1. Demonstrate an understanding and appreciation of the research process.
2. Critically evaluate published research.
3. Develop a proposal for investigating a researchable problem in information studies.
4. Demonstrate an understanding of selected research methodologies.

University of Western Ontario

Course description:

This course provides an introduction to qualitative and quantitative research methods. Topics covered include: the research process from finding a researchable question through data gathering and analysis to dissemination of results; qualities of well-designed research; ethical considerations in research; and basic concepts and techniques in qualitative and quantitative data analysis.

Course Objectives:

1. To introduce students to the range of research methods, both quantitative and qualitative, that are used to investigate questions in library and information science in order to give students the conceptual tools to evaluate examples of LIS research in terms of reliability, validity and significance;
2. To help students understand the process of undertaking research from finding a researchable question to choosing an appropriate method to investigate the problem, satisfying ethical concerns related to research, gathering data, analysing the data, and communicating the results;

3. To illustrate the research process with selected examples of LIS research, including examples of applied research used in professional settings, such as needs assessment and program evaluation;
4. To introduce students to some basic concepts and techniques in the analysis of quantitative and qualitative data, including descriptive statistics and coding, measures of central tendency, measures of variability, frequency distributions and correlation as well as the concept of significance testing in inferential statistics and approaches to coding qualitative data.

Université de Montréal

Course description:

Méthodes de recherche sc. de l'information

Problématiques de recherche en sciences de l'information. Théorie et hypothèse.

Variation et échantillonnage. Méthodes principales de recherche. Analyse des données.

Statistiques descriptives. Régression linéaire. Corrélation. Tests d'hypothèse, etc.

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