Librarians as Partners: Building Inquiry and Research Skills

Cory Laverty, Queens’ Centre for Teaching and Learning
Jackie Druery, Head Humanities & Social Sciences Librarian, Queen’s Library
Victoria Remenda, Associate Dean, Teaching & Learning, Faculty of Arts & Science
Elements of Inquiry

Across results analyzing
poster formats group skills organizing
process blog
develop discipline-specific presentation
Formulate developmental come
disciplines Independent
Dissemination essay
work interest questions holistic
explore evaluating
disseminating Iterative
inquiry information Build
many Iterative
finding
Inquiry Initiatives at Queen’s

Inquiry Working Group:
- Environmental scan across undergraduate courses
- Interpretations of inquiry across disciplines
- Study on supports needed (survey in progress)

Inquiry@Queen’s
- Annual conference to celebrate inquiry-based learning that showcases research projects from Queen's undergraduates
Inquiry@Queen’s Undergraduate Research Conference

- Interdisciplinary conference - started 2007 - now in its 11th year
- Opportunity for students to share the results of their inquiry
- Students submit abstract for an oral presentation or poster
- Present in themed sessions - same topic from different disciplinary perspectives
- One keynote session with faculty guest speaker and students
- Poster session - with pizza!
- Held in Queen’s Learning Commons in the library
Task #1: Identifying Inquiry Skills

What inquiry skills are needed? Record one idea per post-it.

Geography 101: People and the Environment
Describe and assess one of the environmental issues we have discussed in class (e.g. deforestation, water pollution) and its impact on a Central American country. Consider the physical, biological, and socio-economic aspects of the environmental problem. Be sure to include an evaluation of the policies or technologies that could be implemented to manage the environmental impact. This assignment should be double spaced, not exceed 12 pages, and include a list of references. It is worth 25% of your final grade.
**Table 1: Researcher Skill Development Framework**

A conceptual framework for the explicit, coherent, incremental and cyclical development of the skills associated with researching. ©William & O'Regan, August 2008/October 2015

<table>
<thead>
<tr>
<th>Prescribed Research Level</th>
<th>Bounded Research Level 2</th>
<th>Scaffolded Research Level 3</th>
<th>Self-initiated Research Level 4</th>
<th>Open Research Level 5</th>
<th>Adopted Research Level 6</th>
<th>Resourcing Research Level 7</th>
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</thead>
<tbody>
<tr>
<td>Highly structured directions and increasing from supervisor instigated to researcher instigated.</td>
<td>Boundaries set by and limited directions from supervisor channel the researcher to independence.</td>
<td>Scaffolded by supervisor enabling the researcher to experience some independence.</td>
<td>Self-initiated research; initiate and supervise guided.</td>
<td>Open-ended research; determine guided tasks that are in accordance with discipline or context.</td>
<td>Adopted research; informed by others' agencies.</td>
<td>Researcher-independent, clarify the field of inquiry.</td>
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**Essential Concepts**

- **Prescriptive Research**: Highly structured and directed by the supervisor.
- **Bounded Research**: Set boundaries with limited guidance.
- **Scaffolded Research**: Supervisor provides support, allowing some independence.
- **Self-initiated Research**: Researchers are self-motivated and guided.
- **Open Research**: Unlimited, guided by context or discipline.
- **Adopted Research**: Researchers adopt others’ agencies.
- **Resourcing Research**: Independent, clarifying the field of inquiry.

**Skills**

- **Collect and Record Information/Data Using an Appropriate Methodology**
- **Evaluate Sources/Information/Data Using Simple Procedures to Credibility and to Reflect on the Research Process**
- **Organise Information/Data and Identify Key Points**
- **Analyze and Synthesise Information/Data in a novel fashion**
- **Communicate and Apply Your Knowledge**

**Table Content**

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<th>Researcher Skill Development Framework</th>
<th><a href="http://www.rsdu.edu.au">www.rsdu.edu.au</a></th>
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www.rsd.edu.au
Task #3: Suggest Feedback Methods

Scenario: Applied Science

Engineering Design and Practice Sequence; first-year; two required assignments; 900 students; showcase projects

Librarian Role:
- Set information literacy (IL) outcomes collaboratively
- Build IL guide: [http://guides.library.queensu.ca/apsc](http://guides.library.queensu.ca/apsc)
- Contribute to assignment design: List of sources (week 1); Annotated bibliography (week 4); Final design report (week 11)
- Build section of rubric to assess IL
- Provide hands-on workshop for open-ended project in year 2
Scenario: Law

Introduction to Legal Research & Writing taught by librarian

Librarian Role:

- Develop outcomes based on accreditation requirements
- Design flipped classroom model using Camtasia videos in Moodle
- Apply best practices for online learning
- Develop legal research problems for in-class group work
- Use in-class time to reinforce and build on online content
Scenario: Sociology

Sociology 122; 650 students; one capstone project; First Year Coordinator trains 18 TAs

Librarian Role:
- Identifies learning outcomes with coordinator and course instructor
- Designs scaffolded assignments to prepare students for final assignment: value of background sources; Wikipedia reference analysis; annotated bibliography
- Tutorial based on learning outcomes: [http://guides.library.queensu.ca/socy122-tutorial](http://guides.library.queensu.ca/socy122-tutorial)
- Sets quiz for 5% of grade to assess tutorial outcomes
- Provides hands-on class based on quiz challenges
Scenario: OT/PT 897: Critical Inquiry

150 first-year students

Librarian Role:

- Sets learning outcomes collaboratively
- Creates multiple choice questions in mid-term (5%)
- Co-wrote chapter on literature searching in Evidence-Based Rehabilitation: A Guide to Practice, 3rd ed. (course text)
- Participates in assessment to review search strategies
- Co-designs assessment rubric: Journal Literature Search Strategy Rubric
Scenario: Medical Curriculum

Year 1: Critical Appraisal, Research & Learning  
Fundamentals of Therapeutics

Year 2: Critical Enquiry (CE)

Year 3: Introduction to clerkship (Mini-scholar exercises)

Librarian Role:
- Set learning outcomes
- Create online modules for viewing prior to class
- Teach alone or with faculty
- Set assignments for each course and mark using rubrics
Scenario: Education

120 students in intermediate senior history curriculum

Librarian Role:

- Set outcomes to enable use of primary and secondary sources in developing curriculum for high school students
- Provide hands-on workshop for comparing information tools
- Create online wiki to document and discuss resources
- Create online repository for open access projects
Scenario: Across Campuses

Student2Scholar: 10 collaborative modules from Western, Toronto, and Queen’s designed for social sciences graduate students; www.student2scholar.ca

Librarian Role:

- Set outcomes based on GDLEs and threshold concepts for IL
- Create content and assessments (quizzes, videos, concept maps, research workbook, search strategy analysis, research proposal evaluation)
- Include facilitator’s guide for faculty to use in class in conjunction with online modules
- Currently testing module on Grey Literature
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