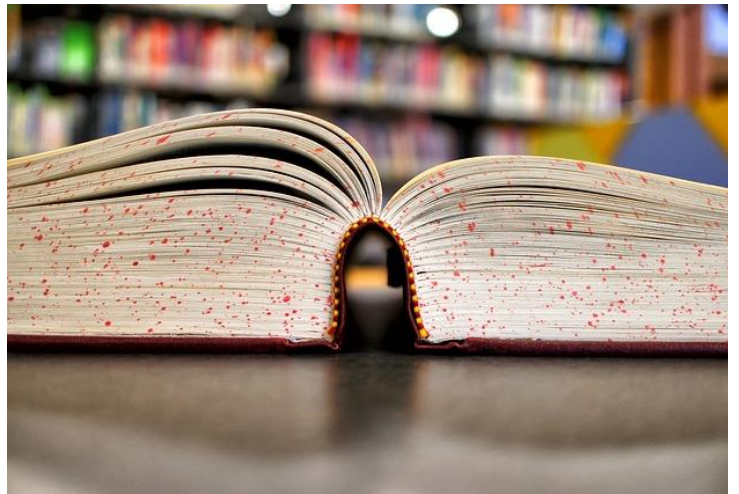


# INTRODUCTION TO LIBRARY RESEARCH

**Final Project: My E-Learning Program**

Crystal Mills  
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# E-LEARNING PROGRAM OVERVIEW

This e-learning program is intended for use in conjunction with first-year post-secondary classes, or to be administered to incoming university cohorts, to introduce students to library resources and services, as well as academic expectations in terms of scholarly research, citing, and writing. The expectation is that the e-learning program will improve the output of undergraduate students, familiarize them with the research process at an early stage, and enable them to feel prepared for coursework throughout their academic careers.

Undergraduate students are often arriving with significant diversity in their highschool experience with libraries and research, and very few have exposure to the vast collections of online and print materials housed in academic institutions, which in turn, have unique offerings of services and spaces. These students are of a generation of digital natives raised in an environment of ubiquitous computing, so while their fluency with technology and media is strong, they may overestimate their skills in an environment where expectations for scholarly research and critical thinking are high (Horton, 2012, p.13-14). The prerequisites to beginning the e-learning program are the same as the entry requirements to university. As an “introductory” e-learning program, students will be given basic skills which will be built upon as they develop subject expertise.

## CURRICULUM & INSTRUCTIONAL OBJECTIVES

The recommendations from Horton (2012), Mager (1984), and Kuhlmann (2008) have been used to develop instructional objectives mapped to each module and course within the Introduction to Library Research program. The instructional objectives are, in part, informed by the Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education (2014) which identifies six “threshold concepts”, which are defined as “passageways or portals to enlarged understanding or ways of thinking and practicing within that discipline” (p. 1). ACRL supplements each threshold concept with several instructional objectives and suggests topics for assignments or discussion. These competency standards are reflected in the e-learning program, and coupled with practical and skills-based content needed in the development of information literacy.

The Introduction to Library Research program will be organized into 4 courses with 3-4 modules each:

### Orientation

- a. Navigating the website
  - Be able to correctly identify important tools and navigation options in the library website
- b. Getting help
  - Decide at what point they need to seek outside support
  - Feel encouraged to seek help where needed
- c. Other services on campus
  - Feel supported by services through the library and other departments

## Planning Your Research

- a. Developing a research topic
  - Feel confident developing an idea into a thesis using brainstorming and concept mapping
- b. Boolean searching
  - Know how to construct effective search strategy including Boolean search strings
- c. Creating a search strategy
  - Understand that searching requires strategy, as well as serendipity and iterative process

## Searching for Resources

- a. Evaluating resources
  - Decide what the best resources are for a particular assignment
  - Know the difference between scholarly & popular resources
  - Understand that authority is contextual and constructed
- b. Searching for books
  - Know the best strategy for locating relevant books in the library
- c. Searching databases
  - Know multiple strategies for locating relevant databases and journal articles
- d. Other resource types (statistical data, GIS, newspapers, trade/industry reports)
  - Be familiar with other forms of information

## Citing & Writing

- a. Academic Integrity
  - Believe that accurate and conscientious citing of sources is integral to the ethical production of work and a non-optional requirement for post-secondary research
- b. Citing sources
  - Be able to generate bibliographic citations that conform to current standards
- c. Academic writing
  - Be able to write in a style appropriate to post-secondary education
  - Feel part of the conversation of academic research and writing

# PROJECT DEVELOPMENT MODEL

The Introduction to Library Research e-learning program will be developed using the successive approximation model (SAM), an adaptation of the ADDIE (analysis, design, development, implementation, evaluation) cycle. The successive approximation model codifies iterative design into the planning process, and is conducive to a collaborative workplace where many stakeholders may want to provide input to help improve the final product (McCormick, 2013).

### **Phase 1:** Needs analysis & information gathering

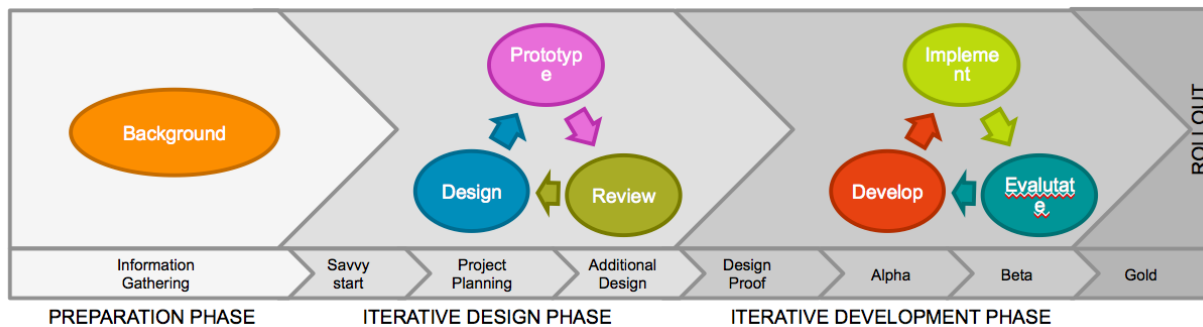
Library staff act as subject matter experts and liaise with faculty to determine common gaps in understanding with new entrants to university. The instructional objectives are refined to address practical needs of students for success in coursework, as well as fundamental understandings crucial to their participation in the scholarly community and in support of lifelong learning.

**Phase 2: Prototyping, review, & design**

Library staff develop content for deployment in the learning management system (LMS) to support the established instructional objectives. Librarians may consult with staff in the Instructional Technology Resource Centre for assistance with technical issues, design, and production. Additional library staff not working immediately on the program will be solicited for feedback during stages of the iterative review and design process.

**Phase 3: Implementation, evaluation, & revisions**

The program will be launched and usage measured. Assessment results will be cross-referenced with instructional objectives to determine program success. Students will be surveyed regarding their enjoyment and perceived knowledge gain from the program, and faculty will be informally surveyed as to perceived improvements in student performance. Revisions will be made to address areas found to have minimal influence on student performance to be implemented among new students during the next cycle.



(McCormick, 2013)

## AUTHORING & MEDIA TOOLS

Western University supports Sakai as its official learning management system (LMS), branded locally as OWL. All official credit courses have a course page established in Sakai on behalf of the instructor with enrollment uploaded from the registrar. Students are already familiar with the Sakai interface, and often use OWL extensively when faculty supplement in-class lectures with online content including syllabi, slides, required readings, quizzes, and gradebooks. For Western staff and students developing within Sakai, work is supported by an Instructional Technology Resource Centre with staff acting as technical helpdesk support as well as potential designers and developers of media content. Embedding an information literacy and library orientation program within the space they are already familiar will simplify access and, ideally, increase uptake.

Sakai is a robust LMS with all standard options for creating and delivering content. Much of the visual design of the Introduction to Library Research program will be established by the university branding of the LMS, in particular the appearance of the primary and secondary navigation. Within the body of the program, the appearance will be designed to harmonize with these predetermined styles, and create a consistent look in terms of fonts, colours, and arrangement of text and multimedia.

Additional software will be used for creating media content. Greenshot, Adobe Photoshop , and Microsoft Word will be combined to their strengths for editing screenshots and still images. Inclusion of images is important for visual appeal as well as simplifying demonstrations of online tools. Camtasia will be used for video authoring; however, a broad repository of video content has already been created to support learning on these fundamental concepts.

## PROGRAM HOME PAGE

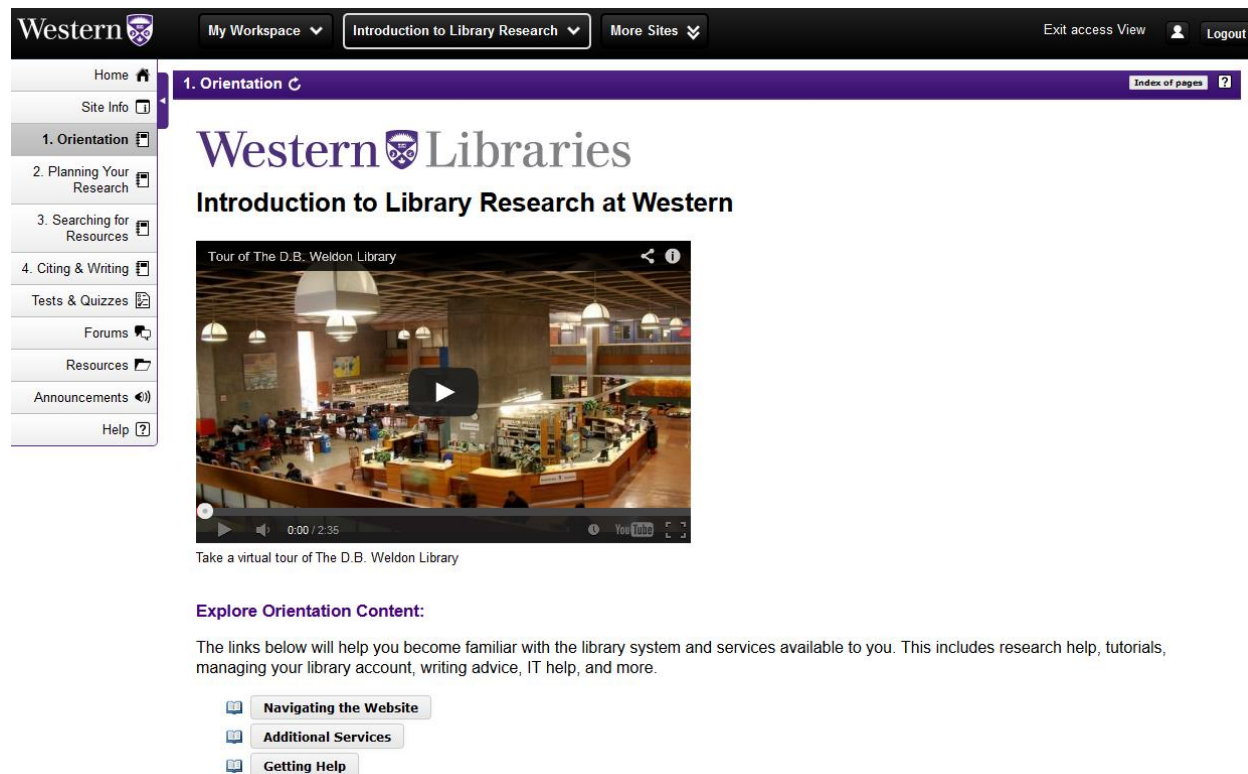
The screenshot shows the program's home page. At the top, there is a navigation bar with 'Western' and 'Introduction to Library Research'. Below this is a sidebar menu with options like 'Home', 'Site Info', and '1. Orientation'. The main content area is titled 'Introduction to Library Research at Western' and includes a list of topics: '1. Orientation', '2. Planning Your Research', '3. Searching for Resources', and '4. Citing & Writing'. Below the list, there are four icons representing each topic: a globe for 'Orientation', a chalkboard for 'Planning Your Research', a stack of books for 'Searching for Resources', and a dictionary for 'Citing & Writing'.

## DELIVERY METHOD

The program will be administered to students as part of the Student Seminar Initiative, required training for incoming cohorts of undergraduates on important topics such as Academic Integrity and Academic Success. The completion of the program will be added to their co-curricular record as an additional incentive for participation and completion, reflecting development of personal and professional skills attained and formally assessed without academic credit.

The full program, including assessment and self-assessment should take approximately 2 hours to complete; however, supplementary research and collaboration activities may extend this estimate. The Introduction to Library Research program is designed to be completed asynchronously, and students may determine the pacing, with the expectation that the final quiz will be completed prior to the end of their first semester. Students will be divided into course sections according to their department in order to better facilitate collaborative learning and targeted examples. The program will remain available to students during their study through the LMS, to allow them to reference program content or utilize contact information.

## ORIENTATION COURSE HOME PAGE



Western Libraries  
Introduction to Library Research at Western

Take a virtual tour of The D.B. Weldon Library

**Explore Orientation Content:**

The links below will help you become familiar with the library system and services available to you. This includes research help, tutorials, managing your library account, writing advice, IT help, and more.

- Navigating the Website
- Additional Services
- Getting Help

## ACTIVITIES

### Absorb-Type Activities

- **Readings:** Complex information will be presented to students who are accustomed to receiving new material in textual format. Readings will establish groundwork for **do** and **connect** activities.
- **Videos:** Video tutorials will deliver the information in an alternate format to accommodate different learning styles. In some cases, students will be directed to explore videos as additional content for those interested in learning more on a topic.

- **Online Library:** An online library will be available through the “Resources” menu. Students can explore online reference sources, style guides, recommended websites, and other materials which supplement the program.

### Do-Type Activities

- **Practice Activities:**
  - Log in to “My Library Account”
  - Create a Boolean search string
  - Interpret a catalogue record
  - Write a citation in APA format
- **Discovery Activities:**
  - Create a concept map for a research topic
  - Conduct a search

### Connect-Type Activities

- **Ponder Activities:** Questions will be posed strategically throughout the content prompting students to reflect on what they’ve learned, think more deeply about ideas, and “trigger conceptual breakthroughs by getting learners to integrate separate ideas in new ways” (Horton, 2011, p. 166).
- **Questioning Activities:** Questioning activities will be integrated into collaborative learning areas, where students have the opportunity to respond to questions, and ask further questions of subject matter experts via the discussion forums.
- **Job-aids:** Links to useful tools such as citation managers, dictionaries, and style guides.

## COLLABORATION TOOLS

- **Discussion Forum:** The discussion forum built into Sakai will provide a venue for students to reflect on related issues to information literacy. A subject matter expert will facilitate conversations, and encourage collegial participation. Topics of conversation will promote connections between theoretical concepts and real life experience.
  - e.g. “Consider a time when you took steps to research a major purchase or event such as buying a car, taking a vacation, or selecting a college. Identify the steps involved in the research behind your decision, and discuss the importance of employing a similar strategy in academic research.” (ACRL, 2014, p. 15)
  - e.g. “Given two different articles, one scholarly, one popular (provided), discuss perceptions of the authority of the author.” (ACRL, 2014, p. 15)
- **Twitter:** The library Twitter account and a #libintro hashtag will be promoted for questions about the library, library service, and research help. This communication tool will help students feel part of the Western community and supported by a responsive and encouraging staff.

- **Blackboard Collaborate:** Live consultations by video calling will be made available to students if there is substantial interest and enrollment in set meeting times. During this video call, a subject matter expert will provide more in-depth demonstrations of databases and resources specific to the department represented, and will field questions asked by chat or voice. These consultations are considered supplementary to the course content, and serve primarily to help students who identify as wanting additional support.

## ASSESSMENT & TESTING

Learning assessment will be comprised of a 15-question summative test, which is only accessible after enrolled students have viewed each module. The questions will be multiple choice, with 3-4 questions drawn randomly from pools representative of each module topic. This ensures each learning objective has related questions, but also that there is enough randomness to prohibit cheating.

Multiple choice testing is used for the convenience of both the course administrators and the students. The “Tests & Quizzes” feature of Sakai allows students to receive immediate feedback on responses in order to correct their misunderstanding with timely, positive reinforcement. The grades will be recorded automatically and synched with the student gradebook without the need for instructor intervention. This delivery method allows subject matter experts to provide point-of-need assistance and facilitate discussion through the communication tools, rather than dedicate time to grading tests.

During initial cycles of iterative design, the program will be reviewed with formative pre-testing and evaluation. The pre-test will consist of the same summative post-test, administered prior to access of the program. Because the test is comprised of random pools of questions, students may or may not find repeated questions. The pre-test will not display immediate feedback with the exception of a composite score, to ensure students are learning the correct answers from the lessons themselves, rather than the pre-test answers. The data collected from the pre-test in relation to the post-test will assist the course designers in determining the skills of students upon enrollment, as well as areas which need emphasis or clarification. An optional evaluation of the Introduction to Library Research program will be accessible to participants following submission of the post-test. This questionnaire will be adapted from Waterhouse’s “Form for Student Survey for Course Effectiveness” (2005, p. 246), which inquires about the value of various aspects of the course, and will include a free-text question prompt for students to provide additional suggestions or commentary.

## CONCLUSIONS

The Introduction to Library Research e-learning module is intended to be a low-cost, high-efficiency means of delivering basic library orientation and instruction to a large incoming body of undergraduate students. Based on strong pedagogical foundations and web design principles, the result should be a navigable, engaging, and informative learning experience.



# MODULE PAGE (PARTIAL)

Western My Workspace Introduction to Library Research More Sites

Home 2. Planning Your Research > Developing a Search Strategy

Site Info Developing a Search Strategy Back Next

1. Orientation

2. Planning Your Research

3. Searching for Resources

4. Citing & Writing

Tests & Quizzes

Forums

Resources

Announcements

Help

## Developing a Search Strategy

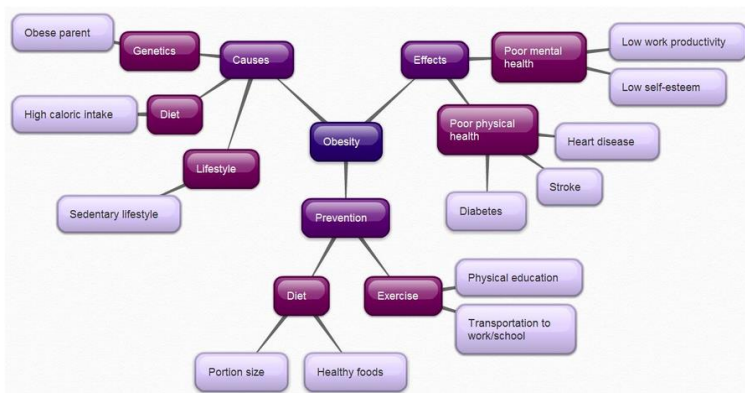
### Concept Mapping

Searching for resources involves thinking about a **description of your topic**:

- Break down your topic into several concepts as appropriate
- Identify synonyms for your terms, e.g. when discussing violence among youth, "juvenile delinquency" is a commonly used synonym

To help brainstorm ideas and how they relate, consider drawing a **concept map**:

- Write your topic in the middle of a piece of paper and circle it
- Around your topic, write down all the related concepts associated with it. Group concepts according to themes. Draw lines between concepts to show how they are related
- Edit your concept map quickly and keep the flow of ideas moving
- Save your concept map so that you can refer to it and edit it as you go through your literature search



### Connecting Search Terms with Boolean Operators

To develop an effective search strategy from your concept map, take the main concepts from your topic and think of synonyms or alternate terms for each concept. Use **Boolean operators** (AND, OR, NOT) to combine your search terms and concepts:

AND	<b>Narrow</b> search results, retrieving only items which contain <b>both</b> terms joined by "AND"
OR	<b>Broaden</b> search results, retrieving items which contain <b>any</b> terms joined by "OR"
NOT	<b>Narrow</b> results, excluding items which contain terms following "NOT"
" "	<b>Group words in a phrase</b> to search for the exact phrase in the order specified, e.g. "knowledge management"
*	<b>Truncate</b> a word to search all possible suffixes, e.g. <b>child*</b> will return results on children, childhood, childbirth, etc.
( )	<b>Group Boolean phrases</b> to show the order in which relationships should be considered, e.g. (teenagers OR "young adults" OR youth) AND (suicide OR "self harm")

### Examples

- (privacy OR freedom OR "free speech") AND (surveillance OR wiretap) AND (government OR NSA)

The results of this search will contain at least one term from inside each set of parentheses, representing a major aspect of the research topic. The term "free speech" will be searched in that exact form, rather than finding results which might contain "free" in one paragraph and "speech" in another.

- Brecht AND polit\* AND (theat\* OR perform\*)

The results of this search will contain the name "Brecht" as well as any word containing the prefix "polit\*" (e.g. politics, political, politician) and any word containing the prefix "theat\*" (e.g. theatre, theatricality) OR "perform\*" (e.g. performance, perform, performers).

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