Building Information Literacy into

A University's Undergraduate Curriculum

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Abstract

Walla Walla University Library restructured information literacy (IL) to (1) tie it to university learning goals; (2) provide a set curriculum based on specific information literacy standards; (3) reach all undergraduate students; (4) and build information literacy skills over time through varying entry points with assessment and remedial work at each stage.

The library and the university General Studies Committee built information literacy into the General Studies Learning Goals. To support these goals, the library IL program includes standards, objectives, course assignments, assessment and course web pages. Now reaching 1,500 students yearly, it:

1. Begins with an interactive library tour where students learn basic library skills.

2. Continues in English Writing with basic search strategies.

3. Continues in Research Writing, covering how to determine information needs, advanced search techniques, and evaluation of sources.

4. Finalizes in capstone research courses with discipline-specific literature (this stage is still under development).

Keywords: Information literacy, information literacy curriculum, embedded instruction, higher education.

Building Information Literacy (IL) into a

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Background

Bibliographic Instruction, and later, Information Literacy (IL), has been part of the Walla Walla University Library services for many years. Based on pedagogical theory, the library established an embedded approach to IL, building it within the undergraduate curriculum. A list of those classes entered by librarians from the 1994-95 academic year shows that librarians were engaged in English Writing and subject-level courses. Data also shows, however, that the effort was not consistent and probably depended, in large part, to the efforts of individual librarians to establish personal relationships with teachers.

As part of its 2007 Strategic Plan, the WWU Library identified Information Literacy as a core feature of its strategy to become the ‑crossroads of the university". This paper is a case study that outlines the IL curriculum that has been developed at Walla Walla University.

Related Literature Review

For decades, beginning in the late 1960's, libraries have been engaged in bibliographic instruction (BI), teaching students how to find resources in the library. Rader (1999, p. 220), for example, recalls librarians in the 70's providing ‑bibliographic instruction…by bringing in book trucks of reference materials about which they lectured to students."

Throughout the 80's, BI changed. With the introduction of computers in society and schools, access to information became more widespread and educators and librarians alike began to realize that the use and management of information was a new area of learning that needed to be incorporated into the world of education. In 1989, the National Forum on Information

Literacy (NFIL) was founded (NFIL, 2010, What is the Forum?). This forum included a number of professional associations from the fields of industry, education and libraries. Throughout the 90's, information experts defined IL and identified and enumerated its various competencies. A variety of professional groups established various information literacy standards. In 2000, the Association of College and Research Libraries (ACRL) approved the Information Literacy Competency Standards for Higher Education (ACRL, 2010, Information Literacy Competency Standards for Higher Education), which have become the ―de facto‖ standard for colleges and universities in the United States and beyond.

According to the American Library Association (ALA) Presidential Committee on Information Literacy (1989, Para. 3), an information literate person, ―must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.‖ IL, unlike BI, includes but goes beyond libraries in that the competencies include critical thinking skills often taught by the course lecturer. IL competency standards, in a way that was never achieved by BI, can be used to link the library to the learning goals and outcomes of higher education.

Information literacy, in its true form, is foundational to all education and necessary for lifelong learning. According to ALA (2000, p. 2), IL ―….forms the basis for lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning.‖ ALA (2000, pp. 2-3) states that an information literate person will be able to:

- Determine the extent of information needed
- Access the needed information effectively and efficiently

- Evaluate information and its sources critically

- Incorporate selected information into one's knowledge base

- Use information effectively to accomplish a specific purpose

- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally

One common way that contextualized learning and practice of lifelong IL skills occurs is by embedding them within undergraduate subject classes. Grafstein (2002, p. 197) points out that information literacy instruction involves ‒broader, process-based principles of research and information retrieval that apply generally across disciplines" as well as ‒knowledge about the subject-specific content and research practices of particular disciplines." By embedding information literacy within a subject-level class, IL skills can be broken up into process-based learning (which might occur in lower-level courses) and subject-specific IL strategies which would naturally occur in higher-level courses. Embedding IL also allows the course lecturer and the librarian to jointly address different standards of IL based on their areas of expertise.

Using a progressive, embedded curriculum allows individual librarians to be paired with undergraduate, research-level courses where they serve as library mentors for these new researchers. For more information about the possible way that something like this might work, see Stamatoplos (2009).

Case Study

As Information Literacy became more and more a part of the Walla Walla University Library strategic thinking, a review of the program became necessary. This review led to defining the parameters of the new IL program as follows:

- The curriculum would be tied to academic standards and based on learning theory.

- It would be tied to the university's curriculum through documentation and an embedded curriculum.

- Because IL encompasses a series of learning goals that most successfully happen over time as students grow in their knowledge of their discipline, the IL curriculum would span the various stages of the undergraduate study program as a cohesive whole.

- The program should reach *all* students at consistent points in the students' learning.

- The IL program would be sustainable and designed to fit within the university's academic strategy, recognizing financial and personnel limitations.

Learning Theory

The instruction librarian, with background in learning theories and instructional design methodologies took the lead in this part of the planning. The cognitive-constructivist theory was selected because it most fit the program's learning goals. Cognitive-constructivism asserts that ―knowledge is actively constructed by learners and… comprises active systems of intentional mental representations derived from past learning experiences." (University of California at Berkley, 2009, Theories of Learning: Cognitive Constructivism). Because students build mental representations based on past learning experiences, the program would be designed to build upon prior knowledge throughout its various stages. Further, students who are actively engaged in constructing their own knowledge would be more likely to incorporate IL into their disciplinary knowledge if it formed part of a ―real" class and ―authentic" class assignments.

Academic Standards

The ACRL Information Literacy Competency Standards were chosen as the standard for the Walla Walla University Library Information Literacy program. These standards have been developed specifically for higher education institutions and are widely acknowledged as the

standards to which universities should strive. ACRL IL standards are easy to incorporate into a curriculum because they are broken down into performance indicators, objectives and outcomes.

Curriculum Development and Integration into the University Curriculum

A committee of teaching librarians worked together to build the IL curriculum. The work began with what was currently being done by the library and expanded beyond it according to the parameters listed earlier. At the same time, the library established a relationship with the university General Studies Committee, where IL was added to the General Studies Goals and Objectives in the 2009-2010 academic year. The revised Goals and Objectives will appear in the 2010-11 Walla Walla University Bulletin (see Appendix A for a complete transcript).

Description of Entry Points within the Academic Program

The committee designed four entry points within the university program where most if not all students could be reached and where IL naturally fit within class learning goals. These four entry points are described briefly below:

1. Jumpstart: This week-long freshman orientation program is attended by the vast majority of incoming freshmen because credit is earned. The week consists of a variety of optional and mandatory activities of which the 45-minute library session is mandatory. Jumpstart is the first entry point for the IL program. Here the library helps students build an informed mental schema of what constitutes an academic library.

2. ENGL 122—English Writing II: As part of the General Studies program, all students are required to take the English Writing sequence which consists of three quarters of English writing. In ENGL 122, the second quarter of this sequence, students begin to write argumentatively. Their last essay assignment requires them to find outside sources to support their argument. This is the second entry point for the IL curriculum.

3. ENGL223—Research Writing (or ENGL 323 for engineering students) is the third quarter of the English writing sequence and is usually taken in the sophomore year. Here students work through the research process to write a research paper on a topic within their discipline. This is the third entry point of the IL curriculum and is the ideal place to learn more about various available resources as well as explore concepts such as search strategies and how to evaluate one's sources and body of knowledge.

4. Subject research (or capstone) course: These courses vary but each college major tends to have a research-level course where students engage in a senior project. An example of this would be ENGL 497 English Seminar, where senior English majors develop an extended research project on some aspect of a specified topic. This is the fourth IL entry point, when students are better prepared to learn about their discipline-specific resources.

Matching IL Competency Standards, Performance Indicators and Learning Goals to IL Entry Points

Once the entry points were identified, the committee set about assigning information literacy competency standards to each entry point. Competencies were assigned so that students would learn them in a sequential fashion. Competencies were also assigned on the basis of the overall class requirements (not necessarily library requirements) in order to match them to an authentic learning process. See Appendix B for an example of how competencies have been assigned to the various entry points of the Walla Walla University IL curriculum. Appendices C and D provide examples of learning goals/tasks for two of the entry points.

Teaching Information Literacy

IL competencies, performance indicators and outcomes as well as certain structural standards have been agreed upon and are now implemented across all sections of each entry

point. An example of the types of structural standards being implemented is provided from the
ENG 223 Research Writing IL curriculum entry point:

- All ENGL223 sections have an information literacy component consisting of 4 class
  sessions and four library assignments that count towards the final grade. Students work
  through the literature search and evaluation process for their research paper.

- A library pre-quiz is administered that tests students on the knowledge gained from
  Jumpstart and ENGL 122. Those who do not pass must complete a remedial assignment.

- An electronic IL class guide is prepared for each section and may be specifically tailored
  to the essay topic of the class. Examples of class guides and assignments may be found
  at: http://wallawalla.libguides.com/browse.php.

Apart from these mandatory components, instruction librarians have the freedom to
design their teaching methodology in line with their teaching styles and class themes or topics.

Conclusions

Several important conclusions can be drawn for the program:

1. Results from the pre-quizzes show that the program is achieving very good coverage of
   the student population. Where in the past, several students in a class of 20 or 25 would
   fail the pre-quiz, now you often have classes where no students fail.

2. Making library assignments part of the final grade is a vital part of the success of the
   program. Students often express appreciation for the assignments after they have
   completed them. But without a graded component, many students would not participate.

3. Now that IL is part of the General Studies Goals and Objectives, it is even more
   important to continue educating the faculty about information literacy.

4. Alternatives to face-to-face teaching must be explored if the program is to continue to

   develop. This is necessary for sustainability.

Recommendations

For those contemplating a similar information literacy program, a few important things

can be gleaned from this case study:

- *Find someone on your staff with a pedagogical background who can lead the planning.*

  If you do not have a librarian with such a background, select one who is interested and

  facilitate training (e.g. a few curriculum and instruction classes or seminars).

- *Utilize the instructional relationships that the library has already established.* Include

  the department chairs of key academic departments with which the library is already

  engaged. They can help to inspire ―buy-in‖ across the university.

- *Engage all or most librarians in teaching.* Each librarian comes with his or her own

  subject expertise background, which can strengthen the IL program. Plan to provide

  teaching methodology seminars to those without a background in education.

- *Work through university channels to get information literacy included in the university*

  academic program. This may mean listing Information Literacy in the university

  learning goals. It may, on the other hand, mean ensuring that IL concepts, even if not

  explicitly labeled as IL, are included in academic goals and objectives.

- *Build the program, level by level.* Do not try to accomplish too much all at once. It is

  better to build the program slowly and competently, adding to it as political and academic

  climate allows.

Appendix A

Information Literacy as Incorporated into
the Walla Walla University General Studies Program

Note: The General Studies Program objectives were changed in order to include missing components of information literacy. These changes are shown **emboldened** and in *italics*

General Studies Mission
        In keeping with the mission of the University, the educational program at Walla Walla University assists students in becoming responsible, contributing participants in church and society. As part of the educational program, the general studies requirements provide a balanced education through course offerings that encourage students to develop a breadth of knowledge covering many disciplines. General studies courses have few, if any, prerequisites and thus are readily available to all students.
        The following specific objectives have been determined for the general studies program at Walla Walla University and will provide opportunities for students to achieve the broader general studies' goals through a diversity of experience:

Students will enhance their understanding of:
God
   • Students will develop an understanding of God, as revealed in Jesus Christ, His Word and His Creation.
Human Beings
   • Students will gain exposure to various cultures in a social, historical, and geographical context.
   • Students will become familiar with the behavior and responsibilities of individuals and societies.
   • Students will explore the world of artistic and literary expression and integrate it into personal experience.
The Natural World
   • Students will develop an integrated understanding of science and technology and their roles in society.

Students will improve their skills in:
Critical and Creative Thinking
   • Students will develop the skills for reflection, analysis, criticism synthesis, and the openness conducive for philosophical thinking.
   • ***Students will learn to obtain and evaluate information***.
Mathematical Reasoning
   • Students will develop problem solving skills and gain an appreciation for the beauty and utility of mathematics.
Communication
   • Students will learn to formulate, organize, and communicate ideas and information ***effectively and responsibly***.
Collaboration
   • Students will learn to engage in collaborative endeavors.

Students will deepen their commitment to:
God, Humanity, and the Earth
   • Students will come to know and trust God and to value human beings.
   • Students will develop an attitude of stewardship and ethical responsibility toward humanity and the environment.

Appendix B

Example of an Information Literacy Standard and Performance Indicators and Outcomes
from Walla Walla University Information Literacy Curriculum

Information Literacy Competencies and Performance Indicators	Teacher-Led Instruction	Library-led Instruction			*Subject Capstone Course*
		Jumpstart	*ENGL 122*	*ENGL 223*	
Standard 1: The information literate student determines the nature and extent of the information needed.					
Performance Indicators	**Outcomes**	**Outcomes**	**Outcomes**	**Outcomes**	**Outcomes**
3. The information literate student considers costs and benefits of acquiring needed information	b. Considers feasibility of acquiring new language/ skill to gather information	a. Determines availability of information - (Understands how to check out and renew materials)	a. Determines availability of information - (Correctly uses library resources)	a. Determines information availability, searches beyond local sources – (Correctly uses library/out-side sources) c. Defines realistic plan /timeline to acquire information.	(Under development)

Note: This table shows how ACRL Standards, performance indicators and outcomes are matched to entry points at WWU.

Appendix C

Example of Learning Goals and Outcomes
from Entry Point 1: Jumpstart Library Tour

Study Areas Tour—*Learning Goal: Student selects a learning space where she would feel comfortable.*
> Students complete the self-guided tour, stopping at various seating areas. At each stop there is a brief description of the seating area and its amenities (quiet, noisy, comfy, desk-like, electrical outlets, lamps etc). Throughout the tour, students are analyzing each area in terms of their own study styles, marking their selections on a sheet.

Collections—*Learning Goal: Student learns to decipher Library of Congress Classification and learns how to find a book in the collection. Student becomes familiar with the area where collections are housed.*
> Students participate in a three-step process at the Collections stop. First, they read a one-page web page that explains how Library of Congress Classification works. A library staff member then reviews the information with them. Next, they are given a set of 6-8 books that are out of shelf order and asked to put them into order as quickly as possible. A prize is given to the winner. Any mistakes are corrected by a library staff member. Then each student is given a title/call number. The student goes into the stacks and finds that particular book. Inside the book is a bookmark that has the contact information for the library.

Computer Laboratory—*Learning Goal: Student becomes familiar with the library web site and is able to do basic navigation to find information.*
> Students sit down in the computer lab and find the library web site. They complete a crossword puzzle, which helps them to identify the major areas of the web site and where they can find information. They also learn about key library web services such as the catalog, article databases and their library online account.

Circulation—*Learning Goal: Student learns about the services available at Circulation.*
> Students meet a library staff member at Circulation who explains the basic services they can expect to get at Circulation (checkout, renewal, reserves, Summit pickup/drop-off, check out and renewal periods, placing holds, ability to renew and check their account from anywhere)

Periodicals—*Learning Goal: Student learns about periodicals and their various formats.*
> A library staff member explains the term —periodicals" and the various formats. Students visit the different areas of the periodicals collection. Students then must find a current, bound and fiche copy of one journal.

Reference—*Learning Goal: Student learns about various Reference sources.*
> Students are introduced to various types of reference sources (encyclopedia, concordance, maps, dictionary, etc). They must find the answers to questions in several different sources.

Meet a Librarian—*Learning Goal: Student meets a librarian and learns about Reference Desk services.*
> Students meet the librarian who explains what the Reference Desk is and how they can get help from a librarian.

Appendix D

Example of Learning Goals and Outcomes
from Entry Point 2: ENGL 122

Identifying Types of Sources and Retrieval Systems

<u>Students will be able to</u>:
1. Identify WWU library information sources useful to them for their essay.
2. Identify the appropriate retrieval systems for books and articles.
3. Use appropriate source(s) to find relevant information for their essay.

Developing Keyword Search

<u>Students will be able to</u>:
1. Create a list of key concepts that describe various aspects of their topic.
2. Perform keyword searching on their topic in appropriate information retrieval systems.

Accessing Resources

<u>Students will be able to</u>:
1. Access library tools and systems using appropriate passwords and IDs.
2. Retrieve information from appropriate retrieval systems.
3. Identify the location, LC call number, and status for an item.
4. Locate the item in the library.
5. Print, photocopy or email (save) information to use later as they write their essay.

Gathering Information from Sources

<u>Students will be able to</u>:
1. Correctly identify and record citation information for the sources they use.
2. Identify and note the main ideas from a text.

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