

## **Instruction Services Program of Information Literacy at Stetson University<sup>1</sup>**

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### **Preface**

A long list of professional documents underpin the plan for developing and implementing an Information Literacy Program at Stetson University's duPont-Ball Library. The Comprehensive Standards Section of its *Principles of Accreditation: Foundations for Quality Enhancement*, the Commission on Colleges of the Southern Association of Colleges and Schools (SACS) lists the following as one of its core requirements for accreditation: "The institution ensures that users have access to regular and timely instruction in the use of the library and other learning/information resources."<sup>2</sup>

Stetson University's Mission states that "we embrace diverse methodologies to foster effective communication, information and technological literacy, and aesthetic appreciation. We encourage the development of informed convictions, independent judgment, and lifelong commitments to learning that are characteristic features of the enlightened citizen."<sup>3</sup>

Likewise, the Library's Mission Statement affirms the educational mission of the Library:  
the mission of the duPont-Ball Library and library faculty and staff  
is to support the educational programs of the University and to  
collaborate with classroom faculty in the development and support  
of the curriculum through gathering and organizing information both  
physical and virtual, teaching library users how to access and evaluate  
information, and providing an environment conducive to research  
and study. [Reviewed and approved by Library faculty October 2000] <sup>4</sup>

In the Association of College & Research Libraries' (ACRL) Plan for Excellence,<sup>5</sup> one of the three five-year goals involves Student Learning, "Librarians transform student learning, pedagogy, and instructional practices through creative and innovative collaborations." ACRL has also outlined Information Literacy Competency Standards for Higher Education.<sup>6</sup> These competencies reiterate the need for individuals to become lifelong learners. In its Information Literacy Defined section of the Competency Standards, ACRL asserts that "Information literacy 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."<sup>7</sup> Expanding on the traditional definition of information literacy, the American Association of School Librarians' *Standards for the 21<sup>st</sup>-Century Learner* states that "The definition of information literacy has become more complex as resources and technologies have changed. Information literacy has progressed from the simple definition of using reference resources to find information. Multiple literacies, including digital, visual, textual, and technological, have now joined information literacy as crucial skills for this century."<sup>8</sup>

In the context of the above accreditation criteria, mission statements, and goals of the library's professional organizations, the mission statement for Instructional Services at the duPont-Ball Library is as follows:

The instructional mission of the Library is to initiate and support opportunities for faculty and students to develop technological, evaluative, and critical thinking skills in pursuit of lifelong information literacy. Using a variety of methodologies, we will provide these initiatives in support of and in conjunction with the curricular and

research needs of the University. We do this in the context of the Information Literacy Competency Standards of the Association of College and Research Libraries and the University's mission which embraces the value of "the centrality of knowledge, examined ideas, and independent judgment in the life of an educated person."<sup>9</sup>

### **A Learning Library**

"A paradigm shift is taking hold in American higher education. In its briefest form, the paradigm that has governed our colleges is this: A college is an institution that exists *to provide instruction*. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exists *to produce learning*. This shift changes everything. It is both needed and wanted."<sup>10</sup>

We seek to act on this shift, to restructure ourselves into a Learning Library "where we actively promote our services as [a] bridge to information empowerment."<sup>11</sup> The goal of the duPont-Ball Library's Information Literacy Program is to foster just such empowerment, to produce lifelong critical thinkers and learners.<sup>12</sup> We focus on educating the Stetson student to become information literate in the broadest and most lasting sense.

### **Information Literacy Defined**

In its simplest definition "information literacy is a set of abilities requiring individuals to 'recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.'"<sup>13</sup> But that definition is deceptively simple, which is evident when one begins to analyze what an information literate person is able to do:

- "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."<sup>14</sup>

Surely it is now cliché to say that in the Information Age it is a necessity for all students, staff, and faculty to be accomplished information users. In order to fulfill our mission of graduating information literate students, the Library envisions a flexible and multi-layered design for delivering library instruction to the University community.

### **Coordination of Information Literacy Efforts**

The Instruction Coordinator in conjunction with all research librarians will oversee the development and implementation of the University-wide Information Literacy Program. The Instruction Team will be charged with the following:

- Defining information literacy competencies for the University community
- Creating objectives for integrating the ACRL competencies into the University's curricula and action plans to implement the objectives
- Promoting the integration of information literacy competencies into the curricula of the University
- Assessing the progress of the University community towards these competencies
- Evaluating the overall Information Literacy Program
- Providing opportunities for instruction-related professional development and encouraging all those involved in instruction to take advantage of such opportunities.

Members of the Instruction Team will engage in ongoing professional development in all areas of the teaching/learning process so that all librarians involved in library instruction meet the Association of College and Research Libraries *Standards for Proficiencies for Instruction Librarians and Coordinators*.<sup>15</sup>

The Information Literacy Program will focus on undergraduate and graduate students as well as the teaching and research needs of the campus faculty.

### **The Information Literacy Program**

The Information Literacy Program seeks to establish a curricular-wide set of information competencies which will ensure that graduates and faculty are competent, knowledgeable information gatherers and users. The program will establish learning goals for each level and discipline of the undergraduate curriculum. It will also offer learning opportunities for graduate students and faculty. The program seeks to establish a formal college/school adoption of information literacy principles and competencies.

The Program will be implemented using a variety of delivery options. Likewise, various assessment and evaluation methods will be used to measure the efficacy of the program and to suggest needed changes. Assessment and evaluation will include yearly comparison of the Program against the Association of College and Research Libraries (ACRL) *Standards for Libraries in Higher Education*, Instruction Section<sup>16</sup> and ACRL's *Guidelines for Instruction Programs in Academic Libraries*.<sup>17</sup>

#### **Students**

The form the information literacy initiative takes for our students is an incremental approach. The program will address the competencies as outlined in the Association of College & Research Libraries' competency standards and refined by the Instruction Team in consultation with faculty and other University groups such as various curriculum committees.

The Information Literacy Program aspires to be successful by doing the following:

- "Providing opportunities for all students to achieve the competencies outlined by the program
- Developing measurable outcomes and a means for student accountability
- Coordinating with faculty of departments or colleges to address the information literacy needs of each discipline
- Integrating the concept of information literacy into the curriculum wherever possible
- Offering students a variety of ways to achieve the competencies in information literacy."<sup>18</sup>

#### **Faculty**

A bedrock principle of the Information Literacy Program at Stetson is collaboration with other faculty. We see the classroom faculty as essential and welcome partners in working toward the goal of graduating information literate students. Concomitantly, faculty have their own teaching and research needs. The Information Literacy Program will also provide opportunities for faculty to develop and enhance their information literacy skills.

To address the information literacy needs and awareness of Stetson faculty we offer the following:

- Provide new faculty with information on library services (including library instruction)
- Hold workshops for all faculty to introduce new and improved products and services, where appropriate. At the least, announce new or revised products and services to faculty

- Consult with other teaching faculty to develop models of collaborative instruction to build information literacy skills into the curriculum
- Promote currently existing library services and expertise to facilitate the research process.

### **Information Literacy Concepts**

The following chart<sup>19</sup> outlines information literacy concepts that may be covered throughout the program /curriculum. Not all concepts would be covered in any one class or even course. This chart is meant to be illustrative, not definitive.

<b>Universal Concepts</b>	<b>Introductory Concepts in Scholarly Inquiry</b>	<b>More Advanced Concepts in Scholarly Inquiry</b>	<b>Subject Specific Concepts and Resources</b>
<ol style="list-style-type: none"> <li>1. What is information?</li> <li>2. Why is information produced? Why is information sought?</li> <li>3. Evaluating quality of information <ul style="list-style-type: none"> <li>• Authority</li> <li>• Currency</li> <li>• Purpose</li> <li>• Appropriateness</li> </ul> </li> <li>4. Values and issues regarding information <ul style="list-style-type: none"> <li>• Privacy</li> <li>• Ethical/unethical uses of information</li> <li>• Citing—acknowledging others' work</li> </ul> </li> <li>5. Applications of Information <ul style="list-style-type: none"> <li>• Personal</li> <li>• Professional</li> <li>• Civic</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Who produces information?</li> <li>2. What formats does it come in?</li> <li>3. What are the timelines for the various forms of publications?</li> <li>4. How is information organized <ul style="list-style-type: none"> <li>• Classification systems</li> <li>• Indexes</li> <li>• Format</li> <li>• Web/Internet</li> </ul> </li> <li>5. Basic scholarly tools <ul style="list-style-type: none"> <li>• Catalogs</li> <li>• Bibliographies</li> <li>• Indexes</li> <li>• Web/Internet</li> <li>• Primary/Secondary Sources</li> <li>• Library Services</li> </ul> </li> <li>6. Evaluating quality of information <ul style="list-style-type: none"> <li>• Authority</li> <li>• Currency</li> <li>• Purpose</li> <li>• Appropriateness</li> <li>• Web/Internet (special situations)</li> </ul> </li> <li>7. Citing—acknowledging others' work</li> </ol>	<ol style="list-style-type: none"> <li>1. Recognize and articulate information need</li> <li>2. Define research question</li> <li>3. Identify key words and concepts</li> <li>4. Formulate a search strategy <ul style="list-style-type: none"> <li>• Where is information most likely to be found? (books, newspapers, journal articles, Internet, etc.)</li> <li>• What catalogs/indexes/databases are most likely to have the information?</li> <li>• What words should be searched? Subject Headings / Subject Descriptors/ Keywords</li> <li>• How should electronic search statements be constructed using Boolean operators and other electronic options?</li> </ul> </li> <li>5. Evaluating quality of information <ul style="list-style-type: none"> <li>• Authority</li> <li>• Currency</li> <li>• Purpose</li> <li>• Appropriateness</li> <li>• Web/Internet (special situations)</li> </ul> </li> <li>6. Evaluate results and refocus search if necessary</li> </ol>	<ol style="list-style-type: none"> <li>1. Concepts related to individual subject areas: <ul style="list-style-type: none"> <li>• Who produces the information in this discipline?</li> <li>• What forms of information are most often used in this discipline (monograph, trade publications, academic journal articles, pre-publications)?</li> <li>• What are the major associations or groups of this discipline?</li> <li>• What are the major or standard publications of this discipline?</li> </ul> </li> <li>2. Subject-specific resources: <ul style="list-style-type: none"> <li>• Print</li> <li>• Electronic</li> <li>• Importance of Primary/Secondary Literature</li> <li>• Subject Headings / Subject Descriptors</li> <li>• Importance of Original Research</li> <li>• Style Guide(s)</li> </ul> </li> </ol>

## Methods

There are a number of methods through which these concepts can be taught at Stetson. Some of these options already exist, while others would need to be developed if it is decided to pursue them:

- Subject-specific, course-related or course-integrated, in-the-classroom instruction (which may include a range of teaching methods)
- Web-based or mobile downloadable instructional materials / tutorials
- Individual transactions with a research librarian, in person, over the phone, or via email
- Handbook/Workbook
- Assignment-specific worksheets
- Consultation with faculty / Assignment design
- Stand-alone, for credit, course(s).

## Stages of the Information Literacy Program

### First Year

Ideally, by the end of their first year, all students should have mastered the Universal and Introductory Concepts (see above). Many also will have become familiar with some of the Advanced Concepts and will have worked with Subject-Specific Concepts and resources.

### English 101 and First-Year Seminars

English 101 and First-Year Seminars will introduce students to the library and to information seeking skills and theory as the first step to information literacy. The skills and concepts listed below are not listed in any particular order. In English 101 and First-Year Seminars, students will master most of the following:

- Become familiar with Library building locations and service points
- Become familiar with Library services, especially circulation, information desk, and reserves
- Become familiar with using the Library catalog to locate books and other cataloged materials
- Understand Library of Congress call number sequence
- Understand appropriate uses of the Internet in research and how the Internet differs from searching a subscription database or catalog
- Understand how content may appear different when presented in different formats (fiche, film, print, electronic text, electronic pdf, etc.)
- Understand that some sources (whether print or electronic) provide citations only; other sources provide citation and summary (abstracts); some sources provide citation and full text
- Understand the difference between a catalog and an index
- Understand what a periodical is and learn the difference between a newspaper, a popular magazine, a trade publication, and a scholarly journal
- Understand the structure of electronic records and their use in the process of searching the Library's general, interdisciplinary periodical databases
- Become familiar with techniques for evaluating information, in all formats whether print or electronic, including considering such concepts as authority, currency, purpose, and appropriateness
- Understand the distinction between primary and secondary sources
- Understand the format(s) for citing materials of various types
- Know the definition of plagiarism and can effectively judge when materials must be cited
- Understand the concepts of academic honesty and intellectual property rights.

English 101 (ENGL 101) and First-Year Seminars (FSEM) information literacy instruction will consist of the recommendation of reading the *Research Process Guide* (<http://www2.stetson.edu/library/researchguide.pdf>) in all ENGL 101 and FSEM sections, in-library instruction, a brief tour of the library building, and a follow-up assignment facilitated by the course instructor.

### **First-Year Evaluation and Assessment<sup>20</sup>**

Possible forms of evaluation and assessment include the following:

- A class evaluation form in every class taught
- A class-specific evaluation and/or assessment form to measure attainment of goals for a specific class or assignment
- Assess random first-year research papers on the basis of an established assessment rubric and analyze those results to measure learning outcomes established by the University Gen Ed Assessment Committee<sup>21</sup>
- A section on student reaction to research in any journals or diaries required by instructors in ENGL 101 or FSEM classes
- Focus groups of first-year students to solicit more in-depth reactions to their library instruction experiences during their first year
- Survey or form focus groups of transfer and international students to learn of their first-year library experiences
- Evaluation by other Stetson Library faculty and/or librarians from other colleges or universities (peer review), possibly including classroom visitation(s)
- A separate class evaluation done by ENGL 101 or FSEM classroom instructors to be sent to the teaching librarian's supervisor.

### **Sophomore Year**

During their sophomore year, students most likely will take general education courses and a course or courses designed to introduce the student to their major discipline. During their sophomore year they will have the continued opportunity to master Introductory and the More Advanced Information Literacy Concepts and will have worked with Subject-Specific Concepts and Resources.

Library faculty will need to work closely with the General Education Program as well as with individual departments and programs to incorporate information literacy modules into the classrooms of general education and the "introduction to the discipline" courses.

### **Sophomore-Year Evaluation and Assessment**

Possible forms of evaluation and assessment include the following:

- A class evaluation form for every class taught
- A separate evaluation completed by the classroom instructor to be sent to the teaching librarian's supervisor
- A survey of those students in an introduction to the discipline class, asking what they found most/least helpful and asking for suggestions for improvement
- A survey the faculty member (or members) evaluating the students in an introduction to the discipline course asking them to rate student research and to suggest changes to the information literacy portion of the course
- A class-specific evaluation and/or assessment form to measure attainment of goals for a specific class or assignment
- Evaluation by other Stetson Library faculty and/or librarians from other colleges or universities (peer review). This may include classroom visitation(s).

### **Junior Year**

In their junior year, students' course work becomes more subject-specific since most of the courses they take are in their major area of study and students will be taking Junior Seminars as part of the University's General Education requirements. By the end of their junior year, students will have strengthened their mastery of Introductory and More Advanced Concepts and will have had experience working with Subject Concepts and Resources.

Information literacy in the junior year will be delivered primarily through the use of course-integrated or course-related instruction. Library faculty will collaborate with faculty members teaching courses in the students' major areas of study to design assignments, exercises, and instruction that emphasize subject-specific concepts and resources.

### **Junior-Year Outcomes/Assessment**

Possible forms of evaluation and assessment include the following:

- A class evaluation form for every class taught
- A separate evaluation filled out by the classroom instructor to be sent to the teaching librarian's supervisor
- A survey of those students in an introduction to the discipline class, asking what they found most/least helpful and asking for suggestions for improvement
- A survey of the faculty member (or members) evaluating the students in an introduction to the discipline course asking them to rate student research and to suggest changes to the information literacy portion of the course
- A class-specific evaluation and/or assessment form to measure attainment of goals for a specific class or assignment
- An evaluation by other Stetson Library faculty and/or librarians from other colleges or universities (peer review). This may include classroom visitation(s).

### **Senior Year**

By the time students have completed their senior year of study, they should have mastered Basic Concepts and More Advanced Concepts. They should have worked extensively with Subject-Specific Concepts and Resources in their fields. Ideally, individual consultations with librarians on individual research projects would supplant class instruction at the senior level, but class instruction is always an option.

### **Senior-Year Evaluation and Assessment**

Possible forms of evaluation and assessment include the following:

- An evaluation form for every class taught
- A separate evaluation, filled out by the classroom instructor, to be sent to the teaching librarian's supervisor
- An information literacy component as part of the Senior/Capstone Project—this could be a part of the project itself, such as a bibliography or work with primary sources, or it could be a separate entity, such as a log of the research process for the project
- A nationally normed, comprehensive examination--development and administration of a comprehensive examination in information literacy such as Project SAILS or the iCriticalThinking test administered through ETS
- A class-specific evaluation and/or assessment form to measure attainment of goals for a specific class or assignment
- An evaluation or comment by the classroom instructor on the quality of the students' research
- Questions about the adequacy of the preparation to do research in the graduating seniors' exit survey administered by the University
- Evaluation by other Stetson Library faculty and/or librarians from other colleges or universities (peer review). This may include classroom visitation(s).

## **Graduate Students**

All graduate students, whether coming directly from an undergraduate experience or returning after an extended absence from higher education, are beginning a new level of research that is more sophisticated than they have previously experienced.

To prepare these students instruction librarians should offer the following:

- Individual appointments with graduate students to discuss research needs
- Course-integrated instruction in subject specific research processes
- Half-day programs, possibly during Graduate School Orientation in the beginning of each academic year or semester.

## **Graduate Student Evaluation and Assessment**

Possible forms of evaluation and assessment include the following:

- An evaluation form for every class taught
- A pre-/post-test
- A class-specific evaluation and/or assessment form to measure attainment of goals for a specific class or assignment
- An evaluation or comment by the classroom instructor on the quality of the students' research
- Evaluation by other Stetson Library faculty and/or librarians from other colleges or universities (peer review). This may include classroom visitation(s).

## **Online or Hybrid Classes**

Although with classes taught totally online no face-to-face instruction is feasible, librarians can still offer instruction through course-specific, software-based (e.g., Elluminate) online presentations with individual follow-up via phone, email, or interaction through the software. With hybrid classes, all the channels available with online classes and face-to-face meetings would, presumably, be available.

## **Online or Hybrid Class Evaluation and Assessment**

Possible forms of evaluation and assessment include the following:

- A class evaluation form for every class taught
- A separate evaluation, done by the classroom instructor, to be sent to the teaching librarian's supervisor
- Survey those students in an introduction to the discipline course, asking what they found most/least helpful and asking for suggestions for improvement
- Survey the faculty member (or members) in an introduction to the discipline class asking him/her/them to evaluate student research and suggest changes to the information literacy portion of the course
- A class-specific evaluation and/or assessment form to measure attainment of goals for a specific class or assignment
- An evaluation by other Stetson Library faculty and/or librarians from other colleges or universities (peer review). This may include classroom visitation(s).

## **Followup on Assessment by Instruction Team—Closing the Loop**

Each calendar year, instruction librarians will include instruction as part of their annual self evaluation, including goals for instruction improvement for the coming year.

Each summer, members of the Instruction Team will meet to analyze the evaluations and assessments done the previous academic year. In light of those results, Instruction Team members will propose changes to the instruction program which will become effective the next fall term.

## **Support for the Information Literacy Program**

In order to succeed, the Information Literacy Program must enjoy Library and institutional support in the following ways.

### **Faculty**

- Library faculty, particularly those doing instruction and the research librarians, must work together to insure that the program runs smoothly and that high standards of instruction are being met.
- Instruction librarians must work with technical services librarians in a variety of ways to assure that access to the Library's many resources (regardless of format) for our students and faculty is as comprehensive and easy as possible.
- Instruction librarians must be enthusiastic collaborators with classroom faculty, initiating and/or capitalizing on opportunities for instruction collaboration

### **Administration**

- The Library administration must be solidly behind efforts to bring information literacy into all parts of the University's curricula and into the professional work of the faculty.
- The University's administration, particularly the Provost and academic deans, must support and encourage work to bring information literacy concepts and skills into all classrooms and into the professional work of the faculty.
- Sufficient equipment, software, or other resources must be made available, where appropriate, to carry out the instruction mission and training in the use of new equipment, software, or other electronic resources must be made available to instruction librarians.

### **Budget**

- The Information Literacy Program must have sufficient budgetary means to support the librarians teaching in the program and additional personnel such as student help and secretarial services. This would include possible additional professional development funds for the teaching librarians such as Hand Grants.
- Funding must also be available to cover the costs of producing and reproducing written instructional materials, including materials for promotion, evaluation, and assessment of the program.
- Likewise, monies must be made available to support on-going training.

### **Facilities**

- The Library must be afforded sufficient space and equipment to give students and faculty hands-on opportunities to use both print and electronic resources.
- At the moment the Library instruction program has access to a general-access computer lab located in the Library building. This lab is maintained by Stetson's Information Technology (IT) Department. This arrangement works well except in those relatively rare instances where a larger lab is required or a professor has booked the lab for another class.
- As instruction materials/tutorials move more and more to downloadable mobile formats, the library must support docking and recharge stations, or other necessary support for electronic equipment.

## Notes

1. Thanks to the library of the University of Rhode Island for use of their "Plan for Information Literacy" as the initial model for the structure of this plan, 2002. Used with permission. [http://www.uri.edu/library/instruction\\_services/infolitplan.html](http://www.uri.edu/library/instruction_services/infolitplan.html)
2. Commission on Colleges, Southern Association of Colleges and Schools. *Principles of Accreditation: Foundations for Quality Enhancement*, January 2010, Core Requirement 3.8.2, p. 29. <http://www.sacscoc.org/pdf/2010principlesofaccreditation.pdf>
3. Stetson University's Mission Statement. <http://www.stetson.edu/other/about/mission.php>
4. Mission Statement of the duPont-Ball Library. <http://www2.stetson.edu/library/mission.php>
5. Association of College and Research Libraries, "Plan for Excellence," [http://www.ala.org/ala/mgrps/divs/acrl/about/whatisacrl/strategicplan/ACRL\\_draft\\_SP\\_Dec10.pdf](http://www.ala.org/ala/mgrps/divs/acrl/about/whatisacrl/strategicplan/ACRL_draft_SP_Dec10.pdf)
6. Association of College and Research Libraries. "Information Literacy Competency Standards for Higher Education," 2000. Appendix A attached at the end of this document and at <http://ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm>
7. Association of College and Research Libraries. "Information Literacy Competency Standards for Higher Education, Information Literacy Defined" 2000. Appendix A below and <http://ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm>
8. American Association of School Librarians. *Standards for the 21<sup>st</sup>-Century Learner*, [http://www.ala.org/ala/mgrps/divs/aasl/guidelinesandstandards/learningstandards/AASL\\_LearningStandards.pdf](http://www.ala.org/ala/mgrps/divs/aasl/guidelinesandstandards/learningstandards/AASL_LearningStandards.pdf)
9. Instructional Services Mission Statement [http://www2.stetson.edu/library/mission\\_instruction.php](http://www2.stetson.edu/library/mission_instruction.php). Quote from Stetson University. "Values and Vision," 2010-2011 University *Bulletin*, p. 5. <http://www.stetson.edu/bulletin/media/intro.pdf>
10. Barr, R. B. and Tagg, J. (1995) "From Teaching to Learning: A New Paradigm for Undergraduate Education." *Change*, 27, 12-25 (November/December) as quoted in Snively, Loanne (2000) "The Learning Library." *Research Strategies*, 17, 79 (Special Issue).
11. University of Rhode Island, *Plan for Information Literacy*, II. B. 4, "A Teaching Library." [http://www.uri.edu/library/instruction\\_services/infolitplan.html#ii](http://www.uri.edu/library/instruction_services/infolitplan.html#ii)
12. Barry K. Beyer defines critical thinking in his article "Critical Thinking: What Is It?" *Social Education*, 49 (1985): 270-276 as the "ability to assess authenticity, accuracy and/or worth of knowledge, claims and arguments." A definition of critical thinking provided by the Center for Critical Thinking is given as "Critical thinking is that mode of thinking — about any subject, content, or problem — in which the thinker improves the quality of his or her thinking by skillfully analyzing, assessing, and reconstructing it. Critical thinking is self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem-solving abilities, as well as a commitment to overcome our native egocentrism and sociocentrism." <http://www.criticalthinking.org/page.cfm?PageID=411&CategoryID=51>
13. Association of College and Research Libraries. "Information Literacy Competency Standards for Higher Education, Information Literacy Defined" 2000. Appendix A below and

<http://ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm>

14. Association of College and Research Libraries. "Information Literacy Competency Standards for Higher Education, Information Literacy Defined," 2000.  
<http://ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm#ildef>
15. Association of College and Research Libraries Standards for Proficiencies for Instruction Librarians and Coordinators, 2007.  
<http://www.ala.org/ala/mgrps/divs/acrl/standards/profstandards.pdf>
16. Association of College and Research Libraries. *Standards for Libraries in Higher Education, 2004 Edition*, Instruction Section. Available at  
<http://ala.org/ala/mgrps/divs/acrl/standards/standardslibraries.cfm>.
17. Association of College and Research Libraries. *Guidelines for Instruction Programs in Academic Libraries*, 2003. Available at <http://ala.org/ala/mgrps/divs/acrl/standards/guidelinesinstruction.cfm>.
18. University of Rhode Island, *Plan for Information Literacy*, III.C. Students.  
[http://www.uri.edu/library/instruction\\_services/infolitplan.html](http://www.uri.edu/library/instruction_services/infolitplan.html)
19. Adapted from Otterbein University's chart:  
[http://library.otterbein.edu/Information\\_literacy/infotools.htm](http://library.otterbein.edu/Information_literacy/infotools.htm). Used with permission.
20. Not all methods of evaluation or assessment will be used with every course or every term.
21. Information Fluency is an official learning outcome of the University's General Education curriculum. As such it will be assessed every four years as part of the University's Gen Ed assessment plan.

## Appendix A

### Association of College and Research Libraries Information Literacy Competency Standards for Higher Education Standards, Performance Indicators, and Outcomes

Approved by: ACRL Board, January 18, 2000.

#### Standard One

**The information literate student determines the nature and extent of the information needed.**

Performance Indicators:

1. The information literate student defines and articulates the need for information.

Outcomes Include:

- a. Confers with instructors and participates in class discussions, peer workgroups, and electronic discussions to identify a research topic, or other information need
- b. Develops a thesis statement and formulates questions based on the information need
- c. Explores general information sources to increase familiarity with the topic
- d. Defines or modifies the information need to achieve a manageable focus
- e. Identifies key concepts and terms that describe the information need
- f. Recognizes that existing information can be combined with original thought, experimentation, and/or analysis to produce new information

2. The information literate student identifies a variety of types and formats of potential sources for information.

Outcomes Include:

- a. Knows how information is formally and informally produced, organized, and disseminated
- b. Recognizes that knowledge can be organized into disciplines that influence the way information is accessed
- c. Identifies the value and differences of potential resources in a variety of formats (e.g., multimedia, database, website, data set, audio/visual, book)
- d. Identifies the purpose and audience of potential resources (e.g., popular vs. scholarly, current vs. historical)
- e. Differentiates between primary and secondary sources, recognizing how their use and importance vary with each discipline
- f. Realizes that information may need to be constructed with raw data from primary sources

3. The information literate student considers the costs and benefits of acquiring the needed information.

Outcomes Include:

- a. Determines the availability of needed information and makes decisions on broadening the information seeking process beyond local resources (e.g., interlibrary loan; using resources at other locations; obtaining images, videos, text, or sound)
- b. Considers the feasibility of acquiring a new language or skill (e.g., foreign or discipline-based) in order to gather needed information and to understand its context
- c. Defines a realistic overall plan and timeline to acquire the needed information

4. The information literate student reevaluates the nature and extent of the information need.

Outcomes Include:

- a. Reviews the initial information need to clarify, revise, or refine the question
- b. Describes criteria used to make information decisions and choices

## **Standard Two**

**The information literate student accesses needed information effectively and efficiently.**

Performance Indicators:

1. The information literate student selects the most appropriate investigative methods or information retrieval systems for accessing the needed information.

Outcomes Include:

- a. Identifies appropriate investigative methods (e.g., laboratory experiment, simulation, fieldwork)
- b. Investigates benefits and applicability of various investigative methods
- c. Investigates the scope, content, and organization of information retrieval systems
- d. Selects efficient and effective approaches for accessing the information needed from the investigative method or information retrieval system

2. The information literate student constructs and implements effectively-designed search strategies.

Outcomes Include:

- a. Develops a research plan appropriate to the investigative method
- b. Identifies keywords, synonyms and related terms for the information needed
- c. Selects controlled vocabulary specific to the discipline or information retrieval source
- d. Constructs a search strategy using appropriate commands for the information retrieval system selected (e.g., Boolean operators, truncation, and proximity for search engines; internal organizers such as indexes for books)
- e. Implements the search strategy in various information retrieval systems using different user interfaces and search engines, with different command languages, protocols, and search parameters
- f. Implements the search using investigative protocols appropriate to the discipline

3. The information literate student retrieves information online or in person using a variety of methods.

Outcomes Include:

- a. Uses various search systems to retrieve information in a variety of formats
- b. Uses various classification schemes and other systems (e.g., call number systems or indexes) to locate information resources within the library or to identify specific sites for physical exploration
- c. Uses specialized online or in person services available at the institution to retrieve information needed (e.g., interlibrary loan/document delivery, professional associations, institutional research offices, community resources, experts and practitioners)
- d. Uses surveys, letters, interviews, and other forms of inquiry to retrieve primary information

4. The information literate student refines the search strategy if necessary.

Outcomes Include:

- a. Assesses the quantity, quality, and relevance of the search results to determine whether alternative information retrieval systems or investigative methods should be utilized
  - b. Identifies gaps in the information retrieved and determines if the search strategy should be revised
  - c. Repeats the search using the revised strategy as necessary
5. The information literate student extracts, records, and manages the information and its sources.

Outcomes Include:

- a. Selects among various technologies the most appropriate one for the task of extracting the needed information (e.g., copy/paste software functions, photocopier, scanner, audio/visual equipment, or exploratory instruments)
- b. Creates a system for organizing the information
- c. Differentiates between the types of sources cited and understands the elements and correct syntax of a citation for a wide range of resources
- d. Records all pertinent citation information for future reference
- e. Uses various technologies to manage the information selected and organized

### Standard Three

**The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.**

Performance Indicators:

1. The information literate student summarizes the main ideas to be extracted from the information gathered.

Outcomes Include:

- a. Reads the text and selects main ideas
  - b. Restates textual concepts in his/her own words and selects data accurately
  - c. Identifies verbatim material that can be then appropriately quoted
2. The information literate student articulates and applies initial criteria for evaluating both the information and its sources.

Outcomes Include:

- a. Examines and compares information from various sources in order to evaluate reliability, validity, accuracy, authority, timeliness, and point of view or bias
  - b. Analyzes the structure and logic of supporting arguments or methods
  - c. Recognizes prejudice, deception, or manipulation
  - d. Recognizes the cultural, physical, or other context within which the information was created and understands the impact of context on interpreting the information
3. The information literate student synthesizes main ideas to construct new concepts.

Outcomes Include:

- a. Recognizes interrelationships among concepts and combines them into potentially useful primary statements with supporting evidence
- b. Extends initial synthesis, when possible, at a higher level of abstraction to construct new hypotheses that may require additional information

- c. Utilizes computer and other technologies (e.g. spreadsheets, databases, multimedia, and audio or visual equipment) for studying the interaction of ideas and other phenomena
4. The information literate student compares new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information.

Outcomes Include:

- a. Determines whether information satisfies the research or other information need
  - b. Uses consciously selected criteria to determine whether the information contradicts or verifies information used from other sources
  - c. Draws conclusions based upon information gathered
  - d. Tests theories with discipline-appropriate techniques (e.g., simulators, experiments)
  - e. Determines probable accuracy by questioning the source of the data, the limitations of the information gathering tools or strategies, and the reasonableness of the conclusions
  - f. Integrates new information with previous information or knowledge
  - g. Selects information that provides evidence for the topic
5. The information literate student determines whether the new knowledge has an impact on the individual's value system and takes steps to reconcile differences.

Outcomes Include:

- a. Investigates differing viewpoints encountered in the literature
  - b. Determines whether to incorporate or reject viewpoints encountered
6. The information literate student validates understanding and interpretation of the information through discourse with other individuals, subject-area experts, and/or practitioners.

Outcomes Include:

- a. Participates in classroom and other discussions
  - b. Participates in class-sponsored electronic communication forums designed to encourage discourse on the topic (e.g., email, bulletin boards, chat rooms)
  - c. Seeks expert opinion through a variety of mechanisms (e.g., interviews, email, listservs)
7. The information literate student determines whether the initial query should be revised.

Outcomes Include:

- a. Determines if original information need has been satisfied or if additional information is needed
- b. Reviews search strategy and incorporates additional concepts as necessary
- c. Reviews information retrieval sources used and expands to include others as needed

#### **Standard Four**

**The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.**

Performance Indicators:

1. The information literate student applies new and prior information to the planning and creation of a particular product or performance.

Outcomes Include:

- a. Organizes the content in a manner that supports the purposes and format of the

- product or performance (e.g. outlines, drafts, storyboards)
- b. Articulates knowledge and skills transferred from prior experiences to planning and creating the product or performance
- c. Integrates the new and prior information, including quotations and paraphrasings, in a manner that supports the purposes of the product or performance
- d. Manipulates digital text, images, and data, as needed, transferring them from their original locations and formats to a new context

2. The information literate student revises the development process for the product or performance.

Outcomes Include:

- a. Maintains a journal or log of activities related to the information seeking, evaluating, and communicating process
- b. Reflects on past successes, failures, and alternative strategies

3. The information literate student communicates the product or performance effectively to others.

Outcomes Include:

- a. Chooses a communication medium and format that best supports the purposes of the product or performance and the intended audience
- b. Uses a range of information technology applications in creating the product or performance
- c. Incorporates principles of design and communication
- d. Communicates clearly and with a style that supports the purposes of the intended audience

## **Standard Five**

**The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.**

Performance Indicators:

1. The information literate student understands many of the ethical, legal and socio-economic issues surrounding information and information technology.

Outcomes Include:

- a. Identifies and discusses issues related to privacy and security in both the print and electronic environments
- b. Identifies and discusses issues related to free vs. fee-based access to information
- c. Identifies and discusses issues related to censorship and freedom of speech
- d. Demonstrates an understanding of intellectual property, copyright, and fair use of copyrighted material

2. The information literate student follows laws, regulations, institutional policies, and etiquette related to the access and use of information resources.

Outcomes Include:

- a. Participates in electronic discussions following accepted practices (e.g. "Netiquette")
- b. Uses approved passwords and other forms of ID for access to information resources
- c. Complies with institutional policies on access to information resources
- d. Preserves the integrity of information resources, equipment, systems and facilities
- e. Legally obtains, stores, and disseminates text, data, images, or sounds

- f. Demonstrates an understanding of what constitutes plagiarism and does not represent work attributable to others as his/her own
  - g. Demonstrates an understanding of institutional policies related to human subjects research
3. The information literate student acknowledges the use of information sources in communicating the product or performance.

Outcomes Include:

- a. Selects an appropriate documentation style and uses it consistently to cite sources
- b. Posts permission granted notices, as needed, for copyrighted material