# Evidence:
## Program Assessment for Continuous Improvement

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## Tale of Two Rubrics or Developing Rubrics to Assess Information Literacy Competencies


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I recently received a call from a faculty member who wanted information about a database a student had used in a paper. The faculty member had never heard of *CQ Researcher* and wanted to know if it was peer reviewed. I was not surprised the faculty member had never heard of it; *CQ Researcher* is an elementary database giving the pros and cons of hot topics. It is not a database students should use in papers except for background material. To me, this is a student whose information literacy skills are very poorly developed.

An information literate person is one who can identify when information is needed; access, evaluate and then internalize the information; and synthesize the information with their own knowledge. The above student seemed only to be able to identify that information was needed, but not what kind (in this case academic/ peer reviewed) or how to evaluate the information when found.


INSTITUTE FOR FACULTY DEVELOPMENT
AT THE RICHARD STOCKTON COLLEGE OF NEW JERSEY

Helping students to develop life-long learning skills that help them evaluate and find information has become increasingly important in the digital age. However, as we all know, getting them to move past Wikipedia or *CQ Researcher* sometimes feels like beating your head against a brick wall.

Moreover, developing information literacy skills is more than just the purview of the library or any individual program. The college recognized this last year when Information Literacy became one of the ten Essential Learning Outcomes (ELO) of the College's planning initiative. This initiative, based on the Liberal Education and America's Promise (LEAP) program of the Association of American Colleges and Universities, presents a framework of Essential Learning Outcomes (ELO).

## Rubric Macro--IL and College Wide Essential Learning Outcomes

Stockton's ELO are developed through a liberal education and are designed to guide students' learning throughout their college education. The ELO highlight what knowledge and skill sets students should have to be prepared for the challenges of the 21st century.

After developing the ELO, the next step is to identify the skills associated with those learning objectives. The faculty and staff on the Information Literacy ELO team at Stockton created a rubric to begin to define those skills. The rubric evolved from the discussions of the ELO committee based on Information Literacy Progression Standards developed by a collaboration of committees from the New Jersey Library Association, Virtual Academic Library Environment, and American College and Research Libraries. The end product was endorsed by the NJ State College Council of Academic Vice Presidents.

Once adapted to Stockton requirements, the rubric presents a tool that can be used to assess students' information literacy competencies: what students should know in assessing and evaluating resources and how effectively students incorporate these resources in their assignments. It also establishes different levels of skills for freshman, students entering their major, and graduates.

***The Stockton Information Literacy and Research Skills Definition*** *includes students' abilities to recognize what information they need; identify how to locate, analyze and evaluate it; and demonstrate how to synthesize the information in a legal and ethical manner.*

| Objectives | Aware | Competent | Skilled |
|---|---|---|---|
| 1. Identifies and addresses information needed | a) Identifies topic<br>b) Drafts research question(s)<br>c) Uses general information sources | a) Identifies subject or discipline-specific information sources<br>b) Establishes realistic timeline | a) Uses subject or discipline-specific information sources<br>b) Completes realistic timeline |
| 2. i. Accesses information effectively and efficiently and selects search tools | a) Identifies similarities and differences among sources<br>b) Formats<br>c) Selects appropriate tools | a) Recognizes differences between general and discipline-specific sources.<br>b) Identifies appropriate specialized information sources | a) Uses appropriate specialized information sources, such as government documents and professional organizations |
| ii. Constructs search categories | a) Identifies search terms relevant to research topic | a) Conducts subject searches | a) Conducts subject searches and<br>b) advanced search strategies |
| iii. Retrieves information | a) Uses library catalog and b) databases<br>c) Identifies fee-based sources<br>d) Uses URLs to locate Web sites<br>e) Identifies citation elements | a) Requests/accesses information beyond local resources<br>b) Uses subject or discipline-specific databases | a) Uses bibliographies or citations to find materials. |
| iv. Refines search strategies | a) Evaluates results for relevance<br>b) Modifies search strategies | a) Identifies gaps in information gathered<br>b) Identifies alternative search tools | a) Refines strategies based on gaps<br>b) Uses alternative search tools |
| v. Extracts, records, and manages information sources | a) Uses a variety of technologies<br>b) Organizes gathered information<br>c) Determines availability of items<br>d) View/download/email references<br>e) Distinguishes abstract vs. full text | a) Uses some advanced technologies<br>b) Uses some electronic links to access information sources online | a) Successfully uses many advanced technologies (e.g., folders, RSS, preferences) to exploit functionality of information resources<br>b) Successfully uses many electronic links |
| 3. Evaluates and thinks critically about information | a) Evaluates sources for relevance<br>b) Identifies a source's main idea<br>c) Distinguishes scholarly vs. popular<br>d) Distinguishes between free internet sources and library databases. | a) Recognizes flawed logic of arguments<br>b) Recognizes impact of bias and currency<br>c) Distinguishes primary vs. secondary<br>d) Distinguishes trade vs. general sources<br>e) Determines additional information needs | a) Analyzes the logic of arguments<br>b) Describes impact of bias and currency<br>C) Gathers additional information, source types, and/or viewpoints are necessary |
| 4. Uses information effectively for a specific purpose | a) Completes a research product that incorporates new and prior information<br>b) Presents the research product effectively in the appropriate medium | a) Evaluates past and alternative strategies for integrating new and prior information b) Uses a range of formats and technologies to present a research product | a) Incorporates integration of new and prior information<br>b) Recognizes the needs of varied audiences and adjusts formats |
| 5. Uses information ethically and legally | a) Cites sources in formatted reference list<br>b) Demonstrates academic integrity | a) Makes consistent and correct use of a citation style appropriate to the discipline<br>b) Demonstrates academic integrity | a) Consistent and correct use of an appropriate citation style with no errors and with academic integrity |



Based on The Association of College and Research Libraries (ACRL) "*Information Literacy Competency Standards for Higher Education" at:* http://njla.pbworks.com/w/page/12189896/Progression%20Standards%20for%20Information%20Literacy

## Applying the Rubric

Assessment of student learning has become a major focus in higher education because of increased demands from multiple stakeholders for greater accountability from college faculty and administrators about how they are assuring that quality education is offered for students and how the programs at the colleges undergo continuous improvement.

Faculty can use a variety of assessment methods in assessing students' information literacy competencies, such as the following:

- Creating a research diary/log (using screen capturing software) to document the steps taken in the research process
- Comparing student performance when one group had an in-person library instruction session and the other group watched video tutorials about the use of the library
- Recording the steps taken in the research process in a written journal and assessing the search techniques used at the beginning of the semester and again after engaging with the video tutorials
- Studying the quality of the bibliography of research papers with the Information Literacy rubric

Faculty can use the rubric to assess students' level of information literacy skills. They can further use the results to guide revisions to the course content and library instruction in the course.

**Information literate people can identify when information is needed; access, evaluate, and internalize the information; and synthesize the information with their own knowledge.**

**"The compartmentalized curriculum is appropriate for the lower order skills, BUT higher order skills should be infused into discipline specific courses"**

Some findings according to the literature:

- Information Literacy (IL) Skills "apply to all disciplines in an institution's curricula" (Middle States Commission on Higher Education, 2003)
- An information literate person is able to determine the information needed and be able to retrieve it efficiently. Using the information also carries legal and ethical responsibilities (Association of College and Research Libraries, 2000).
- IL skills can be taught in a compartmentalized curriculum (e.g. in a research course, or in direct instruction through the library faculty). Another option is a distributed curriculum in which the IL skills are embedded into the curricula of discipline-specific courses (Middle States Commission on Higher Education, 2003).
- IL is comprised of both higher order and lower order skills (Association of College and Research Libraries, 2000).
- An example of a lower order skill is the identifying of keywords, synonyms, and other related terms for the information needed.
- An example of a higher order skill is the expanding of the initial synthesis, when possible, to a higher level of abstraction to construct new hypotheses that may require additional information.
- The compartmentalized curriculum is appropriate for the lower order skills, BUT higher order skills should be infused into discipline specific courses (Association of College and Research Libraries, 2000; Middle States Commission on Higher Education, 2003).

# Micro-Grading the Library Workbook

**David Lechner, Assistant Professor in the Library**

Participation in the 2012 Summer Assessment Institute run by the Institute for Faculty Development led the library faculty to explore use of a rubric in the portion of our library instructional program which focuses on the students enrolled in Stockton's freshman seminars. The resulting rubric, developed for the Library Research Skills Workbook, is intended to serve at least four ends:

- to develop standards for specific levels of performance for measuring the success of students in completing various activities as an indication of their competence in specific points of information literacy,
- to provide those students with clear, detailed feedback concerning that performance,
- to standardize the responses of the individual library faculty members in assessing the students' performance in the completing the workbook and, if possible,
- to lighten the load of grading the workbooks: the library faculty collectively grade approximately a thousand workbooks in the course of the fall semester.

Although the Library's workbook has existed for many years in something like its present form, a few years ago it was revamped to explicitly reflect specific points enumerated in the ACRL standards for information literacy across its five modules. In the present academic year, a rubric was developed to establish standards for determining specific activities to be "inadequate," "adequate," or "outstanding." One positive outcome of the use of the rubric has been a heightened degree of follow-up after the initial submission of the workbook by a given group of students. Subject to the discretion of the specific member of the library faculty reviewing the workbook, related to the relative weakness of the students' work, standards were established. These rubric-based standards determine which students would be asked to rework specific deficiencies and resubmit their work.

Thus, a significantly higher number of students likely understood and internalized specific points of information literacy based on that follow-up. It is hoped that such heightened literacy will be demonstrated by the Turning Point "clicker"-administered pre-test/post-test results once the data from several of the freshman seminars has been analyzed.

In addition, the rubric provides the library faculty with a graphic means of gauging which areas of the workbook and the overall information literacy presentation continue to require tweaking for effective delivery. A specific example has emerged from the second point of Module 3: "Student decided whether *Time* is a journal or a magazine." It has become abundantly clear that a significant percentage of the freshman seminar students do not understand the distinction between "journal title" and "article title" when attempting to distinguish popular from peer-reviewed publications. They routinely record the article title rather than the name of the journal or magazine. We intend to develop a slide and a corresponding clicker question for the Turning Point presentation in order to shine a line on this particular point for the next cycle of freshman seminar library sessions.

Rubrics can serve both the strategic goals of planning the broad parameters of instruction and the tactical goals of execution of learning activities targeted at specific information literacy skills.

**Table 2. Workbook Rubric**

| | Outstanding (+) | Adequate (√) | Inadequate (-) |
|---|---|---|---|
| **Module 1**<br>1. Student found appropriate background information. | Used an authoritative source such as *Credo* or *Oxford Reference* | Used a source which may be credible, given the context (no clearly wrong or biased information) | Used only a clearly unreliable source or none |
| 2. Student formulated a question on topic. | Used 2 or more variables to frame an effective question | Created question, but it lacks a clear, limiting focus through use of variables | Didn't create question or only re-stated bare topic |
| 3. Student picked keywords. | Keywords drawn from question, emphasizing nouns; should result in an effective search | Keywords drawn from question and potentially effective for search | Keywords show no particular relationship to the question concerning the topic |
| **Module 2**<br>1. Student selected database for the topic. | Database is a 'good fit' with the topic and should insure some relevant material for the student's research | Database is general interest only, but would include some relevant material for the topic | Database has no particular relevance to the topic |
| 2. Student selected limiters. | Limiters effectively selected; search yielded < 50 hits | Search used some appropriate limits, but still yielded significantly more than 50 hits | Search yielded too many hits: (no use or ineffective use of limiters) |
| 3. Student selected material for the topic. | Material is scholarly and relevant to the topic | Material is relevant to the topic and at least some of it is appropriately scholarly | Material is inappropriate to the topic: either irrelevant, too general or insufficiently rigorous (non-scholarly) |

| | | | |
|---|---|---|---|
| **Module 3**<br>1. Student picked correct answers to questions about the journal. | Consistently understood and applied questions about journal | Understood enough regarding answers to questions to correctly assess journal | Failed to apply or misunderstood function of questions in assessing journal |
| 2. Student decided whether the item is a journal or a magazine. | Employed results of questions to detect relevant pattern of cues | Correct judgment of journal, but failed to appropriately (or inconsistently) apply cues from the questions | Ignored or misapplied cues from questions – incorrect decision |
| **Module 4**<br>1. Student selected a web site. | Web site is a 'good fit' with the topic and should insure some relevant, scholarly material for the student's research | Web site is general interest only (non-scholarly) but should include some relevant material for the topic | Web site has no particular relevance to the topic |
| 2. Student evaluated the web site. | Good evaluation of web site based on the cues provided by the questions/criteria | Evaluation of web site is probably appropriate, but little indication that student considered the cues provided by the questions/criteria | Failed to evaluate web site or largely ignored the cues given by the questions/criteria |
| **Module 5**<br>1. Student demonstrated understanding of "common knowledge" situations versus statements requiring citation. | Responses consistently demonstrate a clear understanding of the distinction between the two situations | Responses demonstrate the ability to make the distinction most of the time (2 out of 3) | Responses do not demonstrate any clear understanding of distinction between the two situations |
| 2. Student used APA, MLA or Chicago to format citations with few if any errors. | All elements accounted for, and order/format matches chosen standard | All elements accounted for, even if order/format is flawed | Missing essential elements, and/or order/format flawed |