

**Assessment of Information Literacy at the GE/freshman level:
Progress Report 2012-2013, by Felicia Palsson**

Background/Contextual Information

This report describes the second year of a pilot program to assess information literacy skills at the freshman level. For full background information and a report on the first year of the pilot see the [SSU Library Instruction Program](http://library.sonoma.edu/services/instruction.php) website (library.sonoma.edu/services/instruction.php). At Sonoma State University, information literacy is one of five General Education (GE) learning outcomes required in the freshman year composition classes. For three years running, the Library Instruction Coordinator and the Composition Coordinator have partnered to develop an evolving common assignment for these classes and an analytic rubric describing key criteria for meeting the information literacy outcomes.

The common assignment consists of an annotated bibliography followed by a literature review. Students are asked to engage more deeply with sources than they would by writing a traditional research paper. Our aims in implementing the new common assignment (to replace the research paper – a process described more fully in the first year report) are to: (a) compel students to read source material closely and avoid the problem of “quote-mining” source material – a problem frequently seen in the research paper genre; (b) collect common artifacts for assessment of student learning; (c) involve instructors fully in identifying our programmatic criteria for student success.

Learning Outcomes for Freshman Year Composition courses

Currently, information literacy is one of [five required GE learning outcomes in SSU’s freshman year composition \(FYC\) classes](#), as follows:

Area A2: Fundamentals of Communication

1. Critically read, analyze, and evaluate a variety of non-fiction and academic texts from a variety of disciplines, focusing on rhetorical strategies and an understanding of audience, purpose, and context.
2. Write well-developed, well-organized texts in multiple genres and media, including thesis-driven arguments; address an audience appropriately and use a variety of rhetorical effects to enhance cogency and clarity.
3. Develop research skills: find, select, analyze, and evaluate outside sources; integrate the ideas of others into texts that express the writer’s own position. Understand the ethical uses of sources of all types, and use appropriate documentation format in writing and in multimedia presentations.
4. Employ a variety of sentence structures and organizational patterns to illustrate clearly the logic of ideas. Revise and edit written assignments, demonstrating a command of syntax, appropriate diction, and the mechanics of Standard English.
5. Practice presenting persuasive oral arguments; develop active listening skills in order to interpret, evaluate, and engage critically with new ideas.

As written, each of these five outcomes in fact comprises multiple outcomes. For example, the information literacy outcome (number 3) might be listed this way:

**Assessment of Information Literacy at the GE/freshman level:
Progress Report 2012-2013, by Felicia Palsson**

Develop research skills:

- Find, select, analyze, and evaluate outside sources
- Integrate the ideas of others into texts that express the writer's own position
- Understand the ethical uses of sources of all types
- Use appropriate documentation format in writing and in multimedia presentations

One could further make the case that “finding, selecting, analyzing and evaluating” are four different outcomes. The [SSU Library Instruction Program](#) describes our learning outcomes for FYC with the following language:

Students will:

- Identify key concepts and terms that describe the information needed for their assignment.
- Construct a basic search strategy, demonstrating the ability to narrow and broaden search results.
- Retrieve relevant information sources from the Library website as well as the open web.
- Demonstrate awareness of issues surrounding plagiarism.
- Evaluate information sources for authority, credibility, audience, purpose, and relevance.

Since the latter skill (“evaluate information”) pre-supposes, in part, the ability to do the others, i.e. no student can evaluate information without retrieving it, we have focused our assessment time and resources on this higher-order skill. Accordingly we developed a rubric that prioritizes students’ explication of the quality and value of their sources. The assignment we developed highlights the importance to freshmen of using their own authentic voices, thereby emphasizing awareness of plagiarism and asking students to, in the original language of the General Education committee: “integrate the ideas of others into texts that express the *writer’s own position* [emphasis mine].”

Method and Participation

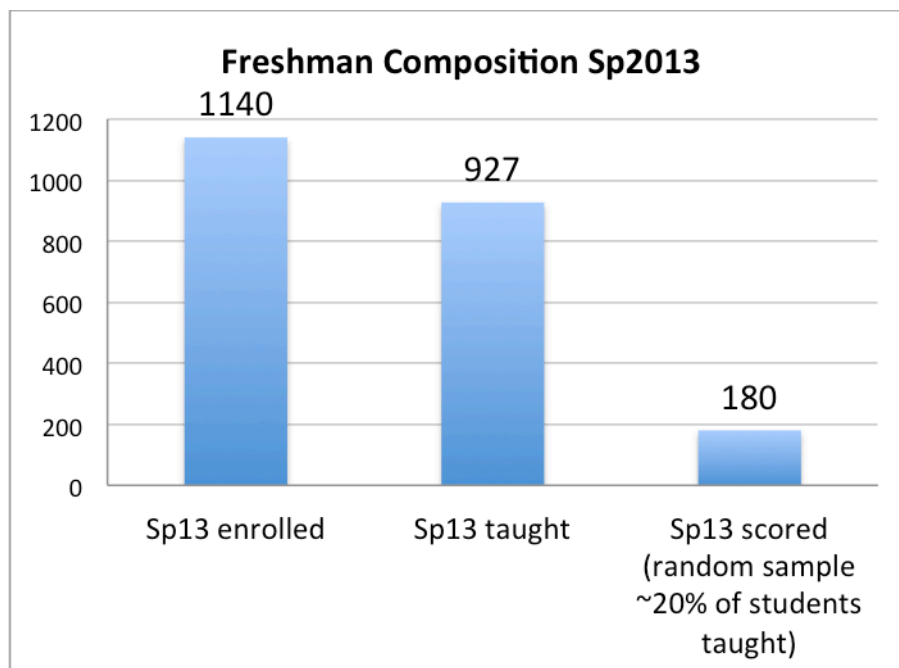
Our overall method with the freshman composition classes is to use a scoring rubric against a performance assessment (the common assignment). The assignment measures student performance, and does not aim to test students on retention of facts. Both the rubric and the assignment are still evolving. Our overall goal is to be able to compare “snapshots” of student performance in the freshman program in the area of information literacy over time, and shape the program as we determine what methods work best. This report describes our attempts to refine the assignment during the second pilot year, 2012-2013, and the methods we employed as we collected and scored student work.

**Assessment of Information Literacy at the GE/freshman level:
Progress Report 2012-2013, by Felicia Palsson**

First, the Instruction Coordinator and Composition Coordinator co-taught a series of in-service workshops for writing instructors (a group that includes graduate student Teaching Associates and adjunct professors as well as an occasional tenured/tenure-track professor). The workshops (we held four in 2012-2013) introduced the background rationale and pedagogical theories behind our decisions. We explicitly encouraged instructors to participate as much as possible, providing opportunities for discussion and hands-on activities that contributed to the actual assignment design. Throughout these workshops we highlighted academic freedom and flexibility. There is great flexibility for professors to make choices within the assignment itself. Our discussions focused primarily on criteria for student success, and crafting an assignment to address those criteria. We also kept documentation of our discussions about the common assignment, guidelines for instructors, sample prompts, and other helpful tools. All of these can be reviewed on the [FYC Common Assignment LibGuide](#).

Collection and Scoring of Artifacts

Library faculty provided direct student instruction in selecting sources, evaluating information, and creating an evaluative annotation for the bibliography. In Spring 2013 we met with about 85% of the freshman composition classes. (This is usually closer to 100%; however, two of the regular writing instructors experienced personal life events during the semester that prevented them from being available.) We taught 927 students. Students were given a consent form explaining that librarians would evaluate their work anonymously for internal purposes/assessment only. We carefully tracked student consent, all identifying information was redacted from their work and each submission was assigned a number for identification. At the end of the semester, we drew a random sample of 180 annotated bibliographies for assessment. The literature review component of the assignment was not collected in sufficient numbers to form any conclusions; however, we did read and score about 50 of these as well.



**Assessment of Information Literacy at the GE/freshman level:
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We scored the annotated bibliographies using a revised version of our original rubric. The revisions did not represent a significant departure from the previous year; however, we incorporated much of the language that emerged from our discussion with instructors. It was important to ensure our criteria were closely matched with instructors' beliefs and priorities about the criteria for good performance on this assignment.

The Spring 2013 version of the information literacy freshman rubric was as follows:

Criteria:	3 or mastery	2 or emerging	1 or beginning
Identification of Bibliographic Information	Student correctly identifies author, title, publisher and date. The citation is complete.	Student correctly identifies two or three elements of the bibliographic information. <i>(Example: the student can identify the title and author correctly, but not the publisher or source.)</i>	Student cannot identify more than one element. <i>(Example: the student can only name the title of a website, and provides no other information.)</i>
Understanding Purpose, Audience and Bias	It is clear the student has understood the author's intentions. Student can recognize bias or persuasiveness in the source OR Student correctly identifies an audience who would benefit from the information.	The student may not be able to determine the purpose of the source precisely, or may generalize about the intended audience. The student may see some bias or make an intelligent guess as to the purpose of the material, but shows lack of clarity.	Student shows no comprehension of the purpose of the material, cannot detect bias OR misidentifies the audience. Usually in this case the student has used an inappropriate source.
Argument for Credibility	The student can suggest evidence for the credibility of the source, either by outlining the author credentials, or by correctly describing the reputability of the publication.	There is an attempt to address the issue of credibility but it seems formulaic or like guesswork.	There is no attempt to address evidence for credibility.
Relevance to Research	Student shows good judgment in choosing to use or not use the material. The student can state some reasoning behind the decision. The reader can see why the student believed this source would support his/her research.	Student indicates s/he has at least a tentative idea of how this material might be used. There may be an intelligent guess but lack of clarity. The response may seem formulaic or tentative.	Student cannot determine whether the material should be used for his/her research, the source seems arbitrary, or, the student identifies an inappropriate source as if it were a relevant one.

**Assessment of Information Literacy at the GE/freshman level:
Progress Report 2012-2013, by Felicia Palsson**

Results

Four faculty (The Library Instruction Coordinator, two additional librarians, and the Composition Coordinator) participated in reading student work. We held a “norming” session in which we discussed the rubric using a variety of samples of student work. Each bibliography was then scored by two (blind) readers. Raw scores were analyzed for inter-rater reliability. The inter-rater reliability was low. Complete agreement (consensus of scores by both readers in all criteria) occurred only about 14% of the time. Recognizing that consensus in *all* criteria is a very strict measure for an analytic rubric, we ultimately calculated inter-rater reliability as the percentage of agreement of scores in at least three out of four criteria. Still, the percentage of agreement was only 54%.

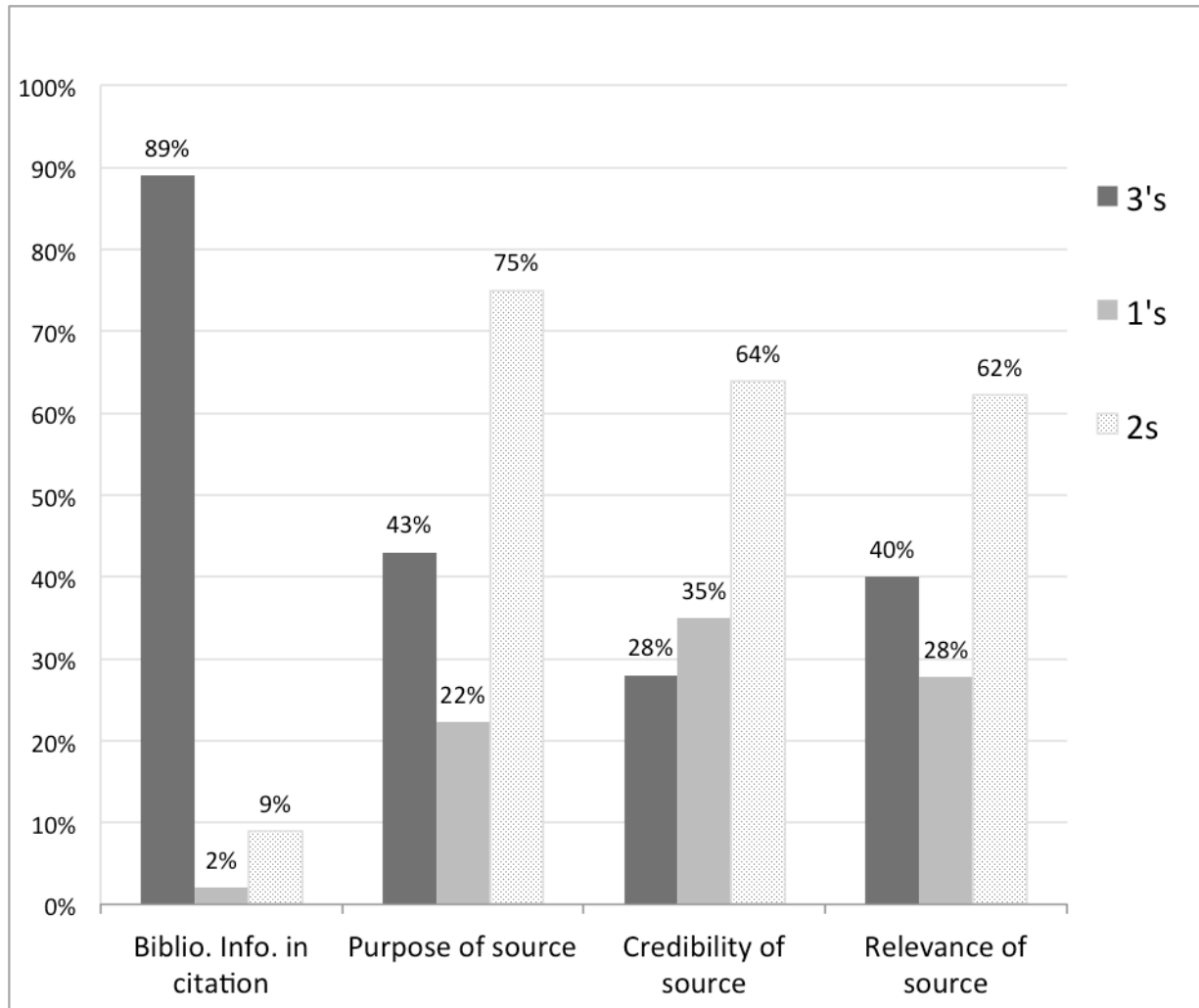
Given this disappointing result, we analyzed our data in other ways and evaluated the rubric for insights. First, we found that scores could be reconciled in the case of the first criterion, identification of bibliographic information, because that criterion had a mathematical calculation for how it *should* be scored. (In other words, it was not a subjective criterion, despite its inclusion in an otherwise qualitative assessment.) Any disagreements between readers could therefore be resolved, resulting in a real score for that category. Second, we decided that scores could be adjudicated by a third reader in the case of a wide spread (where one reader gave a student a “3” and one gave the same student a “1”).

After making these adjustments, scores were analyzed based on the *prevalence* of high and low scores across all readers. This seemed a fairer analysis of the students’ scores, given our difficulties with reader consensus. We measured how likely it was that a student scored a 3 by averaging the readers’ scores and counting any 2.5 average or above. We measured how likely it was that a student scored a 1 by a simple average of 1 scores.

The overall results as adjusted therefore lend themselves only to a loose interpretation of student performance. They reflect merely the prevalence of high or low scores rather than a strict representation of our readers’ observations. Another insight that we gained from the process was the inherently problematic nature of a 3-point rubric, given that the conspicuous tendency is for readers to choose a safe middle ground. A score of 2 was naturally the most prevalent in all categories. We have lost the advantages of having a nuanced analytic rubric.

Here is the distribution of (adjusted) scores. **The 3s and 1s are adjacent to each other because we are comparing those scores (we can safely ignore the 2 scores, shaded lightest in this graph):**

**Assessment of Information Literacy at the GE/freshman level:
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What, if anything, can we learn from this?

There are only a few very basic conclusions that can be formed. Looking at the prevalence of high and low scores, not concerning ourselves with the middling or “safe” scores, we find:

- Students very rarely fail to include sufficient citation information
- Students are generally better at understanding the purpose of a source (the author’s intentions) than they are at evaluating its credibility. (Note that, in the “purpose of source” criterion, the spread between “3” and “1” scores is the widest gap; in “credibility” it is the narrowest.)
- Students’ weakest area, generally speaking, was credibility evaluation. This was the only case where low scores exceeded high scores.

Conclusions and Changes for 2013-2014

While the assessment work of 2012-2013 was not perfect, it was certainly fruitful. We made significant gains in our assessment process from where we were the previous year. This year we

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enjoyed much greater participation by writing instructors, honed the data analysis, and were able to draw some conclusions (if loose) about student performance.

Given what we learned about our rubric, it will need to be revised again. Hopefully we will have good attendance again by writing instructors at Spring 2014 workshops about the common assignment. We will attempt to rewrite the scoring criteria using a 4-point scale in the performance descriptions. This will enable us to regain the nuance of our rubric, and better leverage the actual observations of readers. We will have to improve our “norming” process and ascertain inter-rater reliability at an earlier stage, before scoring all the bibliographies. Also, we need to collect the literature review samples in significant numbers and score them in conjunction with the bibliographies, since that component of our assignment was lost from the assessment process.

Overall, the Library Instruction Coordinator and Composition Coordinator believe we are making great strides toward our goal of having an authentic, sustainable, performance assessment for the freshman information literacy program. We benefitted from our initial revelation that a common assignment could be foundational, designed in collaboration with instructors, and could serve as our common artifact for comparing student work. We are well ahead of our long-term timeline for WASC and will have this process in place to provide a true snapshot of student learning in our program. We anticipate continued improvement and more conclusive results for the General Education Program by the year 2015.

This report describes assessment work completed in the summer of 2013, based on student work in the Spring 2013 semester. This document was written in stages between October 2013 – January 2014.