Information Literacy: *Understanding Achievement of Institutional and General Education Learning Outcomes*

Cal Poly Pomona is deeply committed to ensuring an educational experience that fosters student learning and success for every student. As part of that commitment, every year, the Office of Assessment and Program Review will select one to two Undergraduate Learning Outcomes to examine. This year, we are focusing on the Written Communication and Information Literacy outcomes. This report summarizes the direct evidence of student achievement of **Information Literacy** skills based on the institutional learning outcome (locating, assessing, using and communicating qualitative, quantitative and scientific information, among a wide variety of sources, methods, and tools) and the general education student learning outcome (find, evaluate, use, and share information effectively and ethically). In addition, responses to related questions on the 2017 National Survey of Student Engagement (NSSE) are presented as indirect evidence.

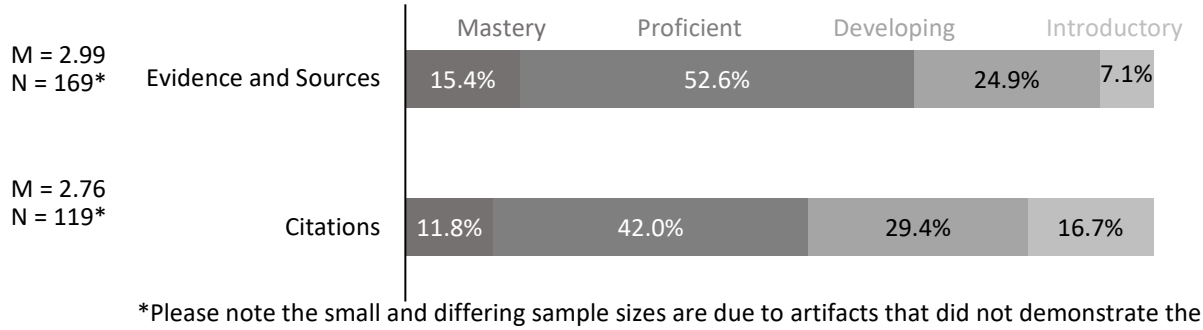
Direct Evidence: Information Literacy Rubric

This year the Office of Assessment and Program Review pilot tested a new assessment approach. In spring 2019 faculty from each of the eight colleges and the library provided the Office of Assessment and Program Review with assignment descriptions and written artifacts from their students with senior-standing for scoring with the Information Literacy Rubric (Appendix). A random sample of 188 artifacts written by seniors representing the eight colleges was selected for scoring with the Information Literacy Rubric. Identifying information (e.g., names, course details) was then redacted from artifacts in the sample.

In early summer 2019, 15 faculty members from multiple departments and colleges participated in a norming session prior to applying the rubric to the written artifacts. Over a two-day period, each artifact was independently read and scored by two faculty members. If there was a discrepancy greater than two points in scores, the artifact was scored by a third reviewer. Scores were calculated by computing an average for each criterion, which was then rounded down to a whole number.

The Information Literacy Rubric defined information literacy through two components and four levels of performance. The chart below displays the percentage of students who scored at each level of achievement.

Information Literacy Rubric Scores Percentage of Students at each Achievement Level



*Please note the small and differing sample sizes are due to artifacts that did not demonstrate the rubric component

Additional analyses were undertaken to compare students by gender, URM status, and first-generation status. One statistically significant difference was found. After controlling for high school GPA, women (n = 52, M = 3.18, SD = 0.72) had significantly higher scores on Evidence and Sources than men (n = 56, M = 2.81, SD = 0.85), $F(1, 105) = 4.63$, $p < .05$.

Indirect Evidence: National Survey of Student Engagement (NSSE)

The NSSE assesses the extent to which students engage in educational practices associated with high levels of learning and development. The data provided below are from CPP's 2017 participation.

CPP freshmen and seniors reported that their coursework has emphasized evaluating a point of view, decision, or information source close to "Quite a Bit," which is a similar level as their comparison group peers reported.

Information Literacy: NSSE Item Scores

During the current school year, your coursework emphasized:					
1 = Very little, 2 = Some, 3 = Quite a Bit, 4 = Very Much		**Mean Response**			
		CPP	**IPEDS**	**CSU**	**Carnegie Class**
Evaluating a point of view, decision, or information source?	FY	2.87	2.88	2.91	2.90
	SR	2.91	2.90	2.94	2.97

Summary

The combination of evidence suggests that while the majority of senior students may demonstrate proficient achievement of key information literacy skills, there is room for improvement.

On the NSSE, CPP seniors reported that their coursework emphasized evaluating a point of view, decision, or information source just under the "Quite a Bit" level (*M* = 2.91 on 4-point scale). This rating is comparable to those given by their peers at other institutions, but may still merit efforts to increase coursework emphasis on this key information literacy skill.

Similarly, scores on the Information Literacy Rubric indicate that the majority of seniors performed at the "Proficient" level across both components of the rubric; however, nearly a third of artifacts were scored in the lower half of the rubric (32% at "Developing" or "Introductory") for the Evidence and Sources component, and about 46% were scored in the lower half for the Citations component. The pattern of evidence suggests that actions that will help more students reach the "Proficient" or "Mastery" levels may be warranted.

It is important to consider the educational experience of the students when examining their level of achievement on a learning outcome. Information literacy is a foundational skill in a myriad of GE courses (e.g., areas A and D, and synthesis courses); however, the rigor and level of exposure is not clear. Therefore, we might examine the types of information literacy instruction and assignments given as we look for ways to improve student learning.

Improving Student Learning

Discussing this report with faculty and/or staff in your program will help to determine the program-level actions needed in order to improve student achievement in the Information Literacy outcome. If you have evidence of learning for a related program outcome, you might include it in your discussion of the University evidence.

As you review the Information Literacy evidence, here are a few questions that you might consider:

- For which components of Information Literacy do you feel students demonstrated satisfactory levels of achievement?
- For which components of Information Literacy do you feel students need to improve?
- Do you feel students have sufficient Information Literacy skills to complete assignments in your program?

- What types of assignments are used to develop students' information literacy abilities?
- What modifications to your courses or program can be made to ensure students are satisfactorily learning information literacy skills and improve on the components you identified as needing improvement? While not an exhaustive list, typical categories of changes made as a result of assessment evidence include modifications to:
    - Curriculum (e.g., add a course or change the sequence of courses)
    - Pedagogy (e.g., include more assignments requiring use of information and sources, dedicate a specific amount of class time to a skill you identified as needing improvement, incorporate a class activity to enhance student learning)
    - Resources allocation (e.g., establish a standard syllabus for a key course, develop a departmental peer tutoring program)
- What recommendations do you have for CPP to improve student's written communication skills?
- Do you have any suggestions for improving the methodology used for the pilot assessment approach followed this year?

It is important that you keep a record of the decisions you make about the evidence, and the actions you take to improve Information Literacy skills. The Office of Assessment and Program Review will request this information as a follow-up to this report.

Appendix

Information Literacy Rubric

Evaluation Criteria	Mastery (4 pt.)	Proficient (3 pt.)	Developing (2 pt.)	Introductory (1 pt.)
Use of Evidence and Sources to support ideas	Evidence and sources directly and effectively support ideas in the writing and are well integrated into the text.	Evidence and sources are used to support ideas in the writing, however not always fully integrated.	Evidence and sources are used in an attempt to support ideas in the writing; however, their integration into the text may be inconsistent or superficial.	Minimal to no evidence. Sources are used to support ideas in the writing
Citations- Use of sources ethically, according to established standards	Student correctly (all the time) provides citations and references of all material presented.	Most of the time, student correctly provides citations and references of most material presented.	Occasionally, student correctly provides citations and references of all material presented.	Student does not correctly provide citations and references of all material presented.