California State University, Fresno: Information Literacy Report

California State University, Fresno has initiated campus wide assessment of the five core competencies. In 2015, the University established ad hoc committees for each of the WSCUC five core competencies. The Director of Assessment, Dr. Melissa Jordine, established a timeline and coordinates with the chair of the appropriate committee to carry out an assessment of one core competency every year. During the 2018-2019 academic year, the Information Literacy Core Competency was assessed. The Information Literacy Committee was co-chaired by the Assessment Coordinator for the Henry Madden Library, Britt Foster, and another librarian Dave Tyckoson. The Director of Assessment, Dr. Melissa Jordine, also assisted with the selection and evaluation of student work and the committee consisted of a total of three librarians (Britt, Dave, and Matthew Doyle) and three faculty members from different departments.

The Ad Hoc Information Literacy committee consisted of seven members who discussed and reviewed several rubrics. The committee decided to use the AAC&U Information Literacy rubric to evaluate student papers for proficiency. However, during the norming process several faculty noted that while the introduction to papers usually discussed the topic, key issues and often sources, that the actual process of accessing information could not be sufficiently determined by evaluating the completed paper. Therefore, the committee voted to eliminate the criteria titled “access the needed information.” The original rubric is attached at the end of this report and the other four criteria were scored and evaluated by reviewers but accessing information was not included in the assessment.

 One of the most challenging aspects of the information literacy assessment was to identify upper-division courses in which professors were assigning papers that were well aligned to the criteria for Information Literacy. Initially committee members reached out to faculty teaching upper-division major courses to inquire about assignments and research or analysis papers. All papers selected were from courses taken during the last two years of the major and thus all students in the courses were at a point near graduation and were included in the assessment. During the paper selection process, the only criteria considered was alignment to the rubric and some papers aligned well to one or two aspects of the information literacy rubric but did not align to all four and were thus eliminated from consideration. Approximately a dozen papers from courses across several colleges were identified and the professor was sent an email asking them to send a description of the assignment and to participate and provide access to student papers for evaluation purposes. The request for papers for the assessment did not go out until late in the Fall Semester and some professors misinterpreted the email and thought they were being asked to serve on the committee and to evaluate student work and thus declined. As a result, only five professors across three colleges agreed to provide papers for the evaluation and the papers were from only four different courses. The total number of papers evaluated was one hundred and fifty-four and the student papers were from four majors in three different colleges and thus the sample was considered of sufficient size and diversity and steps have been taken to increase the sample size for future core competency assessments.

*Demographic makeup of student participants*

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| --- | --- | --- | --- | --- | --- |
|  | **Course 1** | **Course 2** | **Course 3** | **Course 4** | **Course 5** |
| **Gender** |  |  |  |  |  |
| Female | 34 | 11 | 10 | 13 | 13 |
| Male | 24 | 13 | 10 | 12 | 23 |
| Other | 2 | 0 | 1 | 0 | 0 |
| **Race/Ethnicity** |   |   |   |   |   |
| African American | 0 | 2 | 1 | 0 | 0 |
| American Indian | 1 | 0 | 0 | 1 | 1 |
| Asian | 10 | 2 | 1 | 1 | 0 |
| Hispanic | 29 | 10 | 7 | 12 | 18 |
| Non-resident alien | 0 | 2 | 0 | 1 | 0 |
| Null | 2 | 0 | 1 | 0 | 0 |
| Two or more | 1 | 0 | 0 | 0 | 0 |
| Unknown | 1 | 0 | 1 | 1 | 3 |
| White | 16 | 8 | 10 | 9 | 14 |
| **Pell Eligibility** |   |   |   |   |   |
| Pell recipient | 33 | 17 | 10 | 13 | 0 |
| Non-recipient | 25 | 7 | 10 | 12 | 36 |
| Null | 2 | 0 | 1 | 0 | 0 |
| **Course Headcount** | 60 | 24 | 21 | 25 | 36 |

The benchmark for this assessment was for 90% of students, who are at a point near graduation, to be proficient in information literacy. Unfortunately this benchmark was not met on any of the four criteria. More than 80% of students were proficient in each of the criteria and slightly more than 80% of students were proficient in all four criteria which means that about 9% fewer students met the benchmark than expected. One important aspect of information literacy is determining the extent of information needed and 82% of students were proficient. This criteria was extremely significant since the committee eliminated the criteria focused on accessing needed information and thus in terms of assessing what kind of sources were considered and deemed relevant the first criteria was the only one relevant. The two criteria most indicative of the information literacy skills of university students are the second criteria on evaluating information and sources and the criteria on using information effectively. The students in the sample were most proficient in these two categories, with 87% of students proficient in evaluating information and 88% of students deemed proficient in using information effectively. It is significant that almost 90% of students were evaluated and found to be proficient in these criteria and that the committee also had the greatest rate of inter-rater reliability on these two criteria which provides additional validation for the assessment. Only 84% of students were proficient in using information ethically, and even though the key issue with papers was that students did not have complete citations for all information that required a reference, it is still of concern. The committee did not detect any cases of deliberate plagiarism such as lifting entire passages or concealing the source of the information but the failure to correctly cite information from sources is nevertheless of concern. The majority of students clearly set out an argument, identified and used information from valid sources effectively and were responsible and ethical, if inconsistent, in the citation of those sources. The majority of students who did not demonstrate proficiency in information literacy were either not able to clearly articulate an argument and support it with evidence or the evidence provided did not directly relate to or support their argument.

**Inter-rater Reliability**

There were some issues with inter-rater reliability and one factor was that the several members of the committee stepped down and new members were appointed during the year of the actual evaluation. Two different norming sessions were conducted but this seems to have been insufficient. The discussion during norming focused primarily on evaluating information and sources and on using information effectively and this is reflected in the inter-rater reliability rates. There was an 86% inter-rater reliability rate for evaluating information effectively and a 98% rate for using information effectively. These rates provides evidence that the areas most discussed did result in a shared interpretation of the criteria and two separate reviewers agreed on proficiency the majority of the time. However, in the two areas that were not discussed in as much depth there was a variance in the interpretation of the criteria and thus of the scores by the two reviewers. The first criteria on determining the extent of the information was based primarily on the discussion of the topic and sources in the introduction as well as the bibliography and the key factor in the different scores seemed to be a difference in view about what constituted sufficient sources. This was somewhat challenging due to the fact that the paper assignments and sources used varied considerably between the five sets of papers but a more detailed and thorough norming process should have been able to more narrowly define the parameters and produce an inter-rater reliability rate of 85% or higher. Norming sessions for committees conducting these kinds of assessments will now consist of at least three sessions and all criteria will be discussed at length. The second lowest inter-reliability score was for the criteria on accessing and using information ethically and in this case the key issue was not directly related to the norming method. Although less time in the norming session was devoted to the criteria on ethical use of information, clear criteria for proficiency were set out and guidelines in addition to the rubric language were provided. The key issue for inter-rater reliability was that the faculty on the committee applied standards of citation from their specific discipline, instead of adhering to the requirements set out by the rubric and guidelines, to the citations and use of information in papers that were written by students in a different discipline. Some faculty, despite the norming process, default to the standards they use to grade papers by students within their own discipline when evaluating papers for university-wide assessments. This issue will be discussed at all future norming sessions for committees that will evaluate student work for core competency assessments.

**Additional Information Literacy Measure Carried out by a Library Assessment Committee:**

In addition to assessment of information literacy using artifacts from capstone classes, students were also administered a standardized test for information literacy, the Standardized Assessment of Information Literacy Skills (SAILS).  This test is aligned with the Association of College and Research Libraries’ (ACRL) *Standards for Information Literacy in Higher Education*, and consists of 45 multiple-choice questions drawn from a bank of 161 questions. Institutions may use either the cohort or individual scoring version: Fresno State participates in the cohort version of the test, and receives scores in comparison to other institutions who have participated in SAILS.  Incoming freshmen are administered the test in the Fall semester, and outgoing (graduating) seniors are administered the test in the Spring semester.

The Fall 2018 (incoming freshmen, *n=122*) test indicated an overall score below the cohort average, with a mean score of 473±6, compared to a cohort score of 496±1.  A ranked performance of information literacy skills indicates students performed best in questions related to retrieving sources, and lowest in questions related to developing a search strategy.

The Spring 2019 (outgoing seniors, *n=90*) test indicated a score above the cohort average, with a mean score of 517±7, compared to a cohort score of 510±5.  A ranked performance of information literacy skills indicates students performed best in questions related to documenting sources, and lowest in questions related to selecting finding tools.

The results from the SAILS 2018/2019 assessment is consistent with past years’ scores, indicating that students arrive at Fresno State with below average scores, but graduate with scores at or above the average for similar institutions, indicating growth and development in the domain of information literacy during their time at Fresno State.

**Analysis and Conclusions**:

The two measures both indicate that a majority of Fresno State students have sufficient skills in information literacy when they graduate. Although additional emphasis on evidence supporting arguments, would benefit students they are able to identify, evaluate and use information effectively. SAILS data indicates that students develop their information skills during their time at Fresno State. The use of capstone artifacts collected from courses in the participants’ majors also indicates competency in use of information within the discipline/field prior to graduation. Results of the committee’s work will be shared with librarians, for further discussion on library instruction in these areas; particularly, supporting disciplinary faculty in integrating instruction in search strategies, extent of information needed, and ethical use of information.

While the benchmark for the four IL criteria was not met, given the below-average information skills of students upon arrival at Fresno, the high levels of information proficiency are promising. Meeting the benchmark of 90% proficiency is an attainable goal.