ULO1: Information Literacy

Assessment Report

Summer Assessment: August 12-13, 2021

Submitted by Sarah Dahlen, Information Literacy Assessment Coordinator, Oct. 13, 2021

Assessment question: How well are students in GWAR courses demonstrating their ability to synthesize information from sources, according to the synthesis rubric?

Process question: How well does the synthesis rubric work to measure student performance in a variety of disciplines?

Faculty scholars:
Jeff Corrigan, Library
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Background:
The synthesis of information from sources is one of the most challenging aspects of information literacy. Previous assessments using the information literacy rubric found that, first, many CSUMB students were not demonstrating proficiency in synthesis, and, second, that the rubric was too blunt a tool to provide a nuanced measurement of this skill. As a result, faculty scholars participating in the Spring 2020 information literacy TLA co-op adapted a synthesis rubric originally developed by Lundstrom, et al. (2015) to better fit our student population and their assignments. That initial revision of the synthesis rubric was used in the information literacy summer assessment in 2020, at which time we used it to measure 300-level student work in SBS. Based on that experience, the rubric was further modified by the faculty scholars participating in TLA co-ops in AY 2020-21. The summer 2021 assessment applied the revised version of the rubric to student work from a variety of disciplines.

Process:
Student papers were collected from GWAR classes taught in Fall 2020 in eight programs, including at least one class from each degree-granting college. Faculty voluntarily contributed student papers from the following programs:

- Business
- Computing and Design
- Environmental Studies
- Human Development and Family Sciences
- Japanese Language and Culture

- Kinesiology
- Math
- Music and Performing Arts

Eight papers from each class were scored using the synthesis rubric, for a total sample of 64 student artifacts. Six faculty scholars participated in the scoring, with each student artifact read by two scholars. Scores that were split by two or more points, or those split between a two and a three (the threshold for proficiency), were resolved through discussion. Scholars met to debrief and reflect multiple times throughout the assessment days.

Results:
The average scores did not meet the level of proficiency (3) for any of the rubric dimensions (Table 1). The skills measured by the rubric dimensions increase in difficulty from left to right in Table 1, so it is unsurprising that the average scores decrease in the same direction. The first four rubric dimensions can be thought of as precursors to synthesis, or elements that need to be in place for synthesis to occur. The final two dimensions, identifying conversations among sources and drawing inferences about the scholarly conversation, are the core elements of synthesizing information from the scholarly literature, and have the lowest average scores.

Table 1: Average score, standard deviation, and count for each of the rubric dimensions

STATS	Source variety	Scope of conversation represented by sources	Translates information from sources effectively	Organizes information from different sources	Identifies conversations among sources	Draws inferences about scholarly conversations on
average	2.5	2.2	2.2	2.1	1.8	1.7
sd	0.69	0.56	0.68	0.72	0.56	0.45
n	57	64	63	62	61	54

As shown in Figure 1, none of the student artifacts were given an “advanced” score for any of the dimensions. While the trend is not quite as clear as with the average scores, we can still see a general pattern of higher scores becoming less frequent as the difficulty level of the skills measured increases.

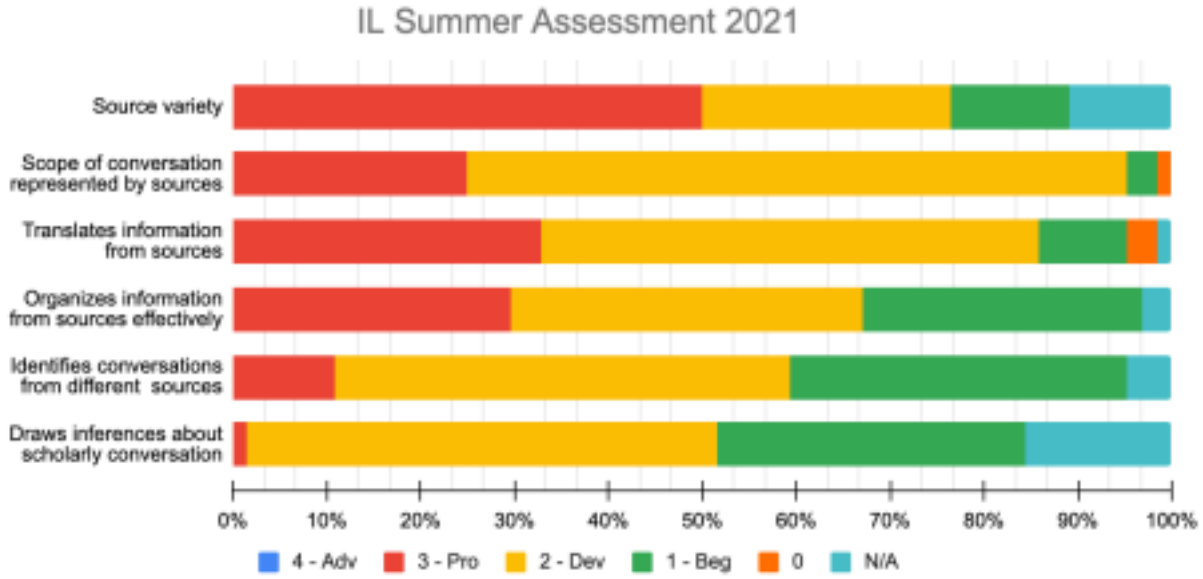

Figure 1: Percentage of student artifacts scored at each level of performance

Discussion:
The results suggest that there is a great deal of room for improvement in the teaching and learning of synthesizing information from sources. It is crucial to note, however, that none of the assignments provided were designed with this rubric in mind, and the degree to which they prompted students to synthesize information from sources varied. Therefore, the low scores must be interpreted (at least in part) as the assignment prompts’ failure to elicit synthesis from students; this is not an indictment of the instructors, but rather of the assessment team’s inability to identify the classes/assignments most appropriate for this assessment. In our attempt to include classes from a wide range of colleges and disciplines, we lost sight of the necessity to identify relevant assignments, which is particularly important for such a specific rubric.

Whether this rubric can be applied across disciplines is a question that remains unanswered. The current iteration of the rubric is designed to measure a particular type of synthesis: putting scholarly sources into conversation as one might do in a literature review. Since crafting the rubric, it has come to my attention that there are other ways to synthesize information from sources that may not be adequately measured by this rubric, such as the synthesis of qualitative or quantitative data from various sources in a meta-analysis. It is possible that not all types of synthesis can reasonably be assessed with a single rubric.

Conclusion/Next Steps:
While we were not able to reach any definitive conclusions about how well students are demonstrating synthesis, the faculty participating in this process learned a great deal about

synthesis and have concrete ideas for improving teaching and learning in this area.

First, further modifications of the synthesis rubric are required to clarify descriptions, particularly to ensure that each level of proficiency is adequately described. Developing a companion document that would provide insight to users of the rubric on the nuances of its application would also be useful.

Second, we would like to develop an assignment guide providing ideas and specific language for faculty looking to elicit a greater degree of synthesis from student assignments.

Finally, it would be useful to develop a survey for CSUMB faculty that would collect information about what synthesis looks like in different disciplines, where it is being explicitly taught, where it is being implicitly expected, how faculty perceive students to be performing with this skill, and whether they would participate in professional development in this area.

What faculty can do in their classes:

- If you expect students to synthesize information from sources in their assignments, be explicit about this in your assignment prompt
- Teach students how to synthesize! Don't assume they're learning it elsewhere.
    - Not sure how? Ask a librarian for help
    - Refer to the Teaching Synthesis document

References

Lundstrom, K., Diekema, A., Leary, H., Haderlie, S., & Holliday, W. (2015). Teaching and Learning Information Synthesis: An Intervention and Rubric Based Assessment. *Communications in Information Literacy*, *9*(1). https://doi.org/10.15760/comminfolit.2015.9.1.176