

Goal #4—Interdisciplinary

Methods

Four instructors who taught interdisciplinary (“I”) courses during Spring 2019 agreed to join a team to assess one assignment from each of their classes in terms of the general education goals for I courses. The faculty participating were Lindsey Keenan from Health Sciences (SMD 210), Azamat Sakiev from Political Science (PSC 318), Michael Di Giovine from Anthropology (ANT 277), and Meg Panichelli from Social Work (SWO 225). Including me, five colleges were represented (though my courses were not assessed). All classes were taught face-to-face.

After discussing goals, structure, and rubrics via email, we met on May 10, 2019 as a group to ensure we were all on the same page regarding how we were assessing items. During that meeting, we were able to create a common understanding of the purpose of our work, the purpose and value of the AACU Integrative Learning Value Rubric (ILVR), and how to best utilize that rubric. In addition, we randomly selected items for all five of us to assess during our meeting. We then compared the results of our assessments and explained why we assessed the items the way we did. This allowed us to ensure consistent adherence to the ILVR in our assessments. Ideally, we would have met another time before fully assessing all documents; however, summer travel plans prevented us from having such a meeting (more on this below). Instead, each of the four participants were asked to assess five additional artifacts (item submitted by a student) from each faculty member’s assignment and submit the assessments via Qualtrics. After that, I compared the results to make sure all participants were assessing similarly with minimal outliers. After that, we agreed to stay in dialogue as we encountered issues.

After I checked the first round of assessments and concluded that the participants were sufficiently on the same page in terms of use of the ILVR, each of the four evaluators assessed the remaining artifacts for all four courses, including the one they taught. They entered their scores into a Qualtrics database. Due to unanticipated delays and changes to travel plans, we were not able to meet to discuss the results of the assessments.

Summary of Team Discussion

During our initial meeting, we collaborated on the most effective ways to share materials and assessment data. While some favored using spread sheets to collect data, we finally decided to use Qualtrics so we would have additional support through IT and be able to run more complex reports if it became necessary. We also discussed the Integrative Learning Value Rubric and its usefulness in assessing interdisciplinary content. We agreed that we would use the ILVR as it is an effective tool for assessing students’ successful engagement with

interdisciplinarity. By the end of the meeting we were confident in our understanding of the ILVR and how to use it.

In the process of discussing the ILVR, we clarified more precisely what we mean by interdisciplinarity and its connection to a liberal arts education. Through this conversation, we realized that at least two members of our committee were concerned they had not created course assignments that adequately attended to interdisciplinarity. One member, in their first year at WCU, was unaware they were teaching an I course until I asked them to serve on this committee. After looking at the assignment in question, we determined that it could, for the most part, be assessed for interdisciplinarity. Though some student submissions did not take an interdisciplinary approach, as that expectation was not explicitly required in the assignment, many of the student submissions did because of the interdisciplinary nature of the course. In order to account for the assignments that could not be assessed for interdisciplinarity, we agreed to include an option for N/A in our assessment questionnaire. This option also allowed for assignments that lead students toward certain categories in the ILVR but not others.

Initially we were concerned that using assignments that were not explicitly interdisciplinary would have a negative impact on our results. We determined, however, that it is very likely that other I courses at the university are being taught without explicitly interdisciplinary assignments and that many faculty teaching I courses are not entirely confident in what it means to teach an I course. Thus, the results of the assessments would, in fact, provide us with an accurate picture of how I courses are being taught at our institution. The results in this report should help us better execute our goals for I courses.

We also realized that the length of each assignment varied greatly. In one case, the professor had returned all of the shorter assignments to students before they knew they would be needed for this committee work. Another faculty member submitted an assignment that was extremely short, but of all of the assignments from their course, this one was the most applicable to our task. We found that we could assess assignments of varying lengths and get useful results; however, it does appear that the length discrepancy might have affected the outcomes. This is something that could be important for helping rethink how we teach our I courses and assess them. This is not to suggest that short assignments cannot be assessed using the ILVR, but that the assignments will need to be more precise if it is to affectively assess the learning of I content.

In our committee's early discussion about how to assess the assignments, we considered the problems of expecting one assignment to meet all five areas under assessment. While some participants felt most assignments cannot do all five without sacrificing other course goals so we can assess I goals, we all seemed to conclude that interdisciplinary courses, by their nature, meet the five areas even if they more clearly meet some than others. I argued that an assignment is still affective as an I assignment if it meets all five areas to some degree and at least several at the Milestones or higher.

One area of concern we discussed without drawing any conclusions or suggesting solutions was that of what kind of I courses should we expect to see scoring at the Capstone level as opposed to lower levels. Though one might expect the 300-level course to have higher scores on the ILVR, even with a longer assignment students may not score higher if they are taking an interdisciplinary course for the first time. While we were unable to identify a solution to this problem, we believe assessments of I courses could benefit from an understanding of the level of interdisciplinary competency various types of courses should achieve. If all I courses are expected to reach higher levels of interdisciplinary competency in all areas, that should be made clear to all instructors.

Process of Data Collection

Before going further, I should note that, in order to make sense of the project, Lauren Keefe in D2L and I agreed on a common set of terms to ensure we understood each other. Our lack of clarity on the terminology we were using led to the problems with the initial survey and slowed down the creation and use of the surveys. The agreed upon terms are as follows, in case they prove useful for future assessments. These are the terms I use for this report.

- **Assignment:** the instructions given by faculty to students for how to complete the task.
- **Submission or Artifact:** the individual artifact that each student submitted to their professor.
- **Survey:** the sets of questions each participant in this study answered using Qualtrics
- **Evaluation:** the thing each participant did to each assessment.
- **Assessment:** the overall project that our committee collective did and the act of evaluating each artifact.

Faculty participants submitted individual student assignments to our D2L page under the assignments tab. There they also submitted a description of the assignment. I created a Qualtrics survey through which each participant would submit their assessments. Participants then evaluated the first five artifacts for each assignment.

Unfortunately, after participants submitted their assessments of the initial twenty artifacts, I realized that the survey as written was not an effective tool for generating the reports I needed. While the survey allowed me to ensure there were no extreme outliers in the assessments for each individual artifact, it did not allow me to look at patterns across artifacts for each assignment or across assignments. In other words, it only allowed me to compare how faculty were assessing each artifact, not the assignment overall. With help from Lauren Keefe, I was able to reconstruct the survey in a way that allowed me to glean useful data. As part of this process, I collected all of the faculty artifacts and created a single PDF for each faculty member's assignments. This ensured all faculty members assessed artifacts in the same order. I then asked faculty to resubmit their initial assessments along with the remaining assessments.

I organized the Qualtrics surveys by creating one survey per faculty participant. This means there were four surveys that assessed all of the artifacts submitted for each assignment. For example, when assessing the assignment for SWO 225, each participant would click on the survey for that faculty member. For the first survey question, they then selected their own name so we knew who had completed the assessments. Next, via a drop-down menu, they selected the number of the assignment they were assessing based on the order they encountered it in the pdf. They then entered their assessments for each artifact for that assignment before beginning the survey for the next assignment.

Lauren helped me create a report that showed the mean score for each category (or level) of the ILVR for all of the artifacts across all four of the assignments. This first report also provided the percentage of artifacts ranked in that category. (I did not, at this point, feel it necessary to create reports for averages for each artifact, though that data can still be generated.) Lauren also created one report for each of the assignments submitted by the faculty members. These reports also showed the mean score for each category of the ILVR but for all of the artifacts for one assignment. The report also included the percentage of artifacts for that assignment ranked in that category. Because we decided to include a category of N/A, the results tend to push the mean up slightly in some cases.

Assessment Results

Please note that, because we added the category of “N/A,” the assessment rankings in the results represent the ILVR as follows:

- 5: Capstone
- 4-3: Milestones
- 2: Benchmark
- 1: N/A

Overall Ratings						
Dimension	5	4	3	2	1	Mean
Connection to Experience	8.90%	29.06%	39.32%	21.94%	1.42%	2.79
Connection to Discipline	12.54%	31.05%	37.89%	18.23%	0.28%	2.63

Transfer	13.68%	36.75%	32.48%	16.52%	0.57%	2.54
Integrated Communication	18.00%	27.71%	41.14%	12.86%	0.29%	2.5
Reflection and Self-Assessment	16.52%	25.64%	39.60%	13.96%	4.27%	2.64

The results of all four surveys combined indicate that the participants were for the most part in agreement regarding the assessments, with some important divergences. The results also suggest that the assessed student artifacts overall are reaching Milestones, but with much smaller percentages in the Benchmark or Capstone categories. While it would be ideal to see higher scores in the Capstone category, it is important to note that, of the four classes under assessment, three were 200-level courses; only one course was at the 300-level and none at the 400-level, where we would be more likely to see Capstone-level work. Further, some assignments were better tailored toward assessing for interdisciplinarity. I will explain this further in relation to the data below.

The following data is broken down by category of assessment on the ILVR. Each table shows the percentage of artifacts for each assignment (as indicated by the course number) ranked at one of the 5 levels available. Each table also shows the mean score for each assignment in each category of assessment on the ILVR.

Connection to Experience						
Artifact	5	4	3	2	1	Mean
ANT 277	24.41%	52.87%	22.99%	0.00%	0.00%	3.10
SMD 210	6.67%	24.44%	35.56%	27.78%	5.56%	2.09
OSC 318	13.89%	32.41%	40.74%	12.96%	0.00%	2.47
SWO 225	24.24%	37.88%	24.44%	13.64%	0.00%	2.63

Connection to Discipline

Artifact	5	4	3	2	1	Mean
ANT 277	28.74%	51.72%	19.54%	0.00%	0.00%	3.09
SMD 210	15.56%	36.67%	32.22%	15.56%	0.00%	2.52
OSC 318	12.04%	29.63%	37.96%	20.37%	0.00%	2.33
SWO 225	12.12%	33.33%	34.85%	18.18%	1.52%	2.36

Transfer						
Artifact	5	4	3	2	1	Mean
ANT 277	26.44%	41.38%	31.03%	1.15%	0.00%	2.93
SMD 210	6.67%	37.78%	40.00%	13.33%	2.22%	2.33
OSC 318	9.26%	25.00%	38.89%	26.85%	0.00%	2.17
SWO 225	19.70%	22.73%	39.39%	18.18%	0.00%	2.46

Integrated Communication						
Artifact	5	4	3	2	1	Mean
ANT 277	21.84%	47.13%	29.89%	1.15%	0.00%	2.9
SMD 210	7.78%	41.11%	31.11%	20.00%	0.00%	2.37
OSC 318	9.26%	37.96%	25.00%	27.78%	0.00%	2.29
SWO 225	21.54%	24.62%	38.46%	13.85%	1.54%	2.51

Reflection and Self-Assessment						
Artifact	5	4	3	2	1	Mean
ANT 277	24.14%	28.74%	39.08%	6.90%	1.15%	2.68
SMD 210	5.56%	21.11%	32.22%	26.67%	14.44%	1.77
OSC 318	12.04%	53.70%	25.00%	9.26%	0.00%	2.69
SWO 225	33.33%	28.79%	27.27%	9.09%	1.52%	2.83

The above results indicate a wide range of scores for each assignment. While this might give cause for concern, it is important to note that two of the four participants were in their first-year teaching when the assignment was administered. Of the two, one was not even aware they were teaching an I course or what that meant until asked to participate in this assessment project (this assignment, it is important to note, also had the lowest scores which were still surprisingly high all things considered). While we considered replacing that participant, we determined after looking at a small batch of artifacts for that course that the assignment did still meet interdisciplinary goals, though not to the extent that other assignments in the group did. Further, we felt it was important to include new and veteran faculty in the assessment project to get an accurate picture of how all faculty might be teaching I courses and how we might best help new faculty meet I goals.

The length of assignments also seemed to impact how each artifact was scored. Short assignments tended to score lower. For example, the assignment with the lowest scores was the shortest assignment. The assignment for the 300-level course was also particularly short. Though one of the courses with faculty in their first year generally had much higher scores than the other, the course with the higher scores was also significantly longer. I found it interesting, if not significant, that the long assignment by the new faculty member also had the least amount of consistency in terms of ranking by participants. With the exception of the N/A category, rankings were more likely to be evenly distributed across all categories than they were for other assignments. I found it difficult myself to assign rankings for artifacts in this assignment. I wonder if providing new instructors with clear, precise tips on how to create I assignments that assess interdisciplinary competency might help limit issues like this.

The data suggests that the majority of artifacts assessed in this study are reaching Milestones in the ILVR in all categories, though more artifacts scored in the lower Milestone than the higher Milestone, with the exception of the Transfer category. Further, the percentage

of artifacts ranked in the Capstone category was low, ranging from 8.9% to 18%. The percentage of artifacts ranked in the Benchmark category was higher than those ranked in the Capstone category in the areas of Connection to experience, Connection to Discipline, and Transfer. In Connection to Experience, items ranked as Benchmark more than doubled those ranked as Capstone. While one class did tend to have significantly higher Benchmark and lower Capstone rankings, those rankings did not account for the pattern overall. Of the four classes, three often had higher Benchmark rankings than Capstone. In fact, the one class that had higher Capstone than Benchmark had significantly higher Capstone numbers than Benchmark. As a result, the overall scores were skewed up.

These results suggest that students are not developing a strong competency in interdisciplinarity. Of greatest concern to me is that artifacts from three courses under review in most categories were more likely to be marked as Benchmark than Capstone. While a majority of students are demonstrating the ability to integrate their learning about multiple disciplines into their own lives and other areas of study, they are not as successful at synthesis, depth of understanding, or original thought and creation. In other words, students do not seem to be developing the skills they will need in their upper-level courses or when they enter the workforce, Capstone-level skills.

While it is likely the artifacts would have ranked higher had the assignments more explicitly asked students to engage in interdisciplinary work, it will be harder for students to master interdisciplinarity if they are not doing interdisciplinary work in their I courses. For example, I realize that I also have not been explicitly asking students to do interdisciplinary work in their papers for my I courses. Even though the essay prompt I give moves them toward interdisciplinary work, they would be better able to understand the benefits of interdisciplinarity and develop a greater mastery were I to mark the interdisciplinary component of the assignment. If, as I suspect, many faculty teaching I courses are not creating assignments that explicitly ask students to engage interdisciplinarity, then we are not adequately preparing students for a job market that will increasingly demand interdisciplinary skills.

Ideally, students taking I courses would have Capstone and upper Milestone interdisciplinary skills. Below, I make some suggestions for how we might better help students develop those skills.

Suggestions

For Improving I Courses

- Identify all faculty teaching I courses and send them an email before the start of the semester with a general summary of what is expected of an I course along with the

requirements for I syllabi. We can't always count on chairs or other faculty to inform new or temporary faculty about the intricacies and special needs of I courses.

- Provide workshops at or shortly after new faculty orientation on how to teach various general education courses. Providing sample assignments and course schedules along with Q&A might eliminate confusion for new faculty.
- Assign new faculty a mentor for I courses. This mentor would be someone who could meet with the new faculty member prior to them teaching an I course to make sure they are prepared. This would also be helpful for more senior faculty who are teaching I courses for the first time.
- Make clear to instructors the level of interdisciplinary competency their students are expected to achieve.
- Make sure syllabi for I courses have at least one assignment wherein which the prompt explicitly marks for students that they are doing interdisciplinary work. It would probably help, as well, to explain to faculty that this is required in order to ensure students are clearly aware of how they are doing interdisciplinary work so they can better master those skills.
- Make sure that faculty teaching I courses know that if they use short written assignments and plan to use those to assess interdisciplinary learning, they will need to be strategic in how they ensure students have room to demonstrate their interdisciplinary competency.
- Think through ways that I courses in large, lecture-hall contexts (which rely on tests as opposed to essays) can be assessed for interdisciplinary learning such that it allows for comparisons to smaller, more essay-based courses.

For Future Assessments

- Build teams at the beginning of spring semester so participants can make sure they have appropriate assignments available to assess.
- Try to get comparably sized classes and assignments.
- We recommend having faculty who are new to WCU and/or I courses and faculty with more experience. By having faculty who are not entirely confident in teaching interdisciplinary courses, we can get a better sense of the needs of those faculty as we will likely always have faculty teaching I courses who are not confident in teaching interdisciplinarily.
- Make sure all participants will be local at least until the middle of July, save for short vacations. If participants will be absent for half or more of that time period, it will create too many hurdles should complications arise.
- Stick with the ILVR. It is a good tool for evaluating interdisciplinary content. A variety of interdisciplinary assignments can be fairly assessed through this rubric. If this rubric is not applicable to an assignment, it might suggest the assignment is weak in interdisciplinarity.

- Make clear whether an assignment in an I course has to achieve all or just some of the ILVR goals. If it is just some, then assessment should include all assignments used to assess the various goals of the ILVR.
- Select a committee chair who understands statistics and data analysis to ensure you are able to get the best possible data from the project.
- If you cannot always find a chair who understands statistics and data analysis, identify effective Qualtrics survey structures and reports that can be shared from year to year. That way the data is consistently and more easily compared. Also so the people running the assessment committees don't make unnecessary and time consuming mistakes.