

LDC Annual Assessment and Reassessment Report 2021-2022

Overview

The purpose of SAC-level assessment at PCC is to identify the levels of student achievement of course- or program-level outcomes in the name of improving those levels of achievement. The second part of that process is the reassessment of an outcome that has been assessed in a previous year.

In an initial assessment of an outcome, a SAC should identify any areas of student achievement of an outcome that could be improved. The SAC should then target those areas with a teaching strategy appropriate to its discipline during the reassessment year. The reassessment of the outcome then determines if the strategy was effective by measuring any changes to student achievement. This process, of assessing, analyzing, creating a teaching strategy, and reassessing, is called "closing the loop." It is how assessment can be useful for instructors and, by extension, for students.

Note that questions marked with an asterisk* indicate that the accompanying [help document](#) includes information relevant to that question.

The planning section that follows is to be completed and submitted in Fall Term. If your SAC is unable to complete it in fall, please fill out the planning section when completing the final report in spring.

Submission checklist

Due by November 30, 2021:

- ~~Planning section of report~~
- ~~On completion of the planning section, please email it to learningassessment@pcc.edu.~~

Due by June 24, 2022:

- ~~Full report~~
- ~~Numerical results (disaggregated data or raw data) and data analysis as an appendix.~~
- ~~On completing the full report, please email it to learningassessment@pcc.edu.~~

Planning Section: To be completed and submitted in Fall Term

SAC Assessment Contact:

<i>Name</i>	<i>e-mail</i>
Taryn Oakley	taryn.oakley@pcc.edu

1. What SAC do you represent?

Environmental Studies (ESR)

2. Is this plan for an initial assessment or a reassessment?

Initial Assessment

3. What course(s) will your assessment/reassessment focus on?

ESR 171- Environmental Science Biological Perspectives
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4. In what term(s) will you collect student work?

Fall 2021, Winter 2022

5a. How will you sample student work? If this is a reassessment, did this change from previous years?*

We will collect artifacts from all 4 of the ESR 171 sections from fall term, as well as the one section running from winter term. We will determine a statistically significant sample size based on the number of students enrolled during fall and winter terms. For example, if there are 125 total students, we will assess at least 44 artifacts to ensure that our results are statistically significant.

5b. Will the student work be part of the regular graded assignments for the course(s)? Please describe how the student work you plan to collect is integrated into the course(s)*

The assignment that will be assessed is our signature assignment. Grades from this assignment will also count as points toward their final grade.

6. How will you redact student work (i.e. make it anonymous)?*

Student work will be submitted via D2L. Assignments from D2L will be uploaded into a shared Google folder. Names will be redacted from the assignments and they each will be given an identifying number. A random number generator will be used to select student assignments based on the sample ID number.

7. Explain how your project is a direct assessment. If designing an indirect or exploratory assessment please share your rationale. (Include an explanation if relevant.) If this is a reassessment, did this change?*

This project is a direct assessment as we will be collecting samples of student work and evaluating them to see how well they meet our criteria.

8. Briefly describe the purpose or goal of this project. In other words, what are you hoping to learn? If this is a reassessment, did this change?*

We would like to refine our ESR 171 signature assignment for Quantitative Reasoning. This will allow us to assess whether any changes should be made to the assignment itself, or the teaching methods surrounding the assignment.

9. In general terms, describe the assessment project for the year. What steps will you take in carrying out the project? If this is a reassessment, please describe any modifications to instruction. *

We will be using our piloted signature assignment for ESR 171. It is a quantitative reasoning assignment that asks the student to read a case study about biodiversity and then examine real-world data. Students are asked to graph and then interpret the given data. This assignment will be given as a class assignment and will be submitted via D2L.

10a. What are the benchmarks (minimum acceptable level of student outcome achievement) and how have they been determined?*

We are using the newly developed Quantitative Reasoning rubric v2.5 and the benchmark is a score of 2 or higher on each dimension of the rubric.

10b. What percentage or frequency of students do you hope to see achieve the benchmarks?*

We hope that at least 80% of the students achieve this benchmark.

11. Describe the tools (e.g. rubrics, checklists, standardized exams) you will use in the project to evaluate student work. If this is a reassessment, please describe any changes from previous years. [Note: Significant changes to the assessment tools constitutes a new assessment.]

We will use the Quantitative Reasoning rubric v.2.5 developed by the Science, Computer Science, and Math DSAC.

12. Describe how the SAC will ensure that the evaluation of student work is consistent. If using a rubric, please describe how the SAC will norm to the rubric, and verify inter-rater reliability. If this is a reassessment, please describe any changes from previous years.*

We will score the student work during our spring SAC meeting, or shortly thereafter, using the Quantitative Reasoning rubric v. 2.5. Some of the questions in this assignment have right or wrong answers and will not need to be normed. For the questions that involve interpretation, we will have a norming session and come to consensus before scoring. Norming will be completed by scoring several artifacts openly as a group, and coming to a consensus before completing scoring. Then we will all score the same artifact independently and discuss any scoring differences until we come to a consensus. This step will be repeated until all individuals are scoring artifacts in a similar manner.

13. Different SACs and individuals have different training in assessment. Your LAC coach is available to help with any step. What might you need help with moving forward?

Right now we don't need anything, thank you!

STOP This concludes the planning portion of the form.

Please save this document and submit it to learningassessment@pcc.edu by November 30, 2021.

In the spring, complete the reporting section that continues on the next page.

Annual Assessment and Reassessment Report 2021-2022

The purpose of SAC-level assessment at PCC is to identify the levels of student achievement of course- or program-level outcomes in the name of improving those levels of achievement. The first part of that process is the initial assessment of an outcome.

On completing the form, please email it to learningassessment@pcc.edu.

Note that questions marked with an asterisk* indicate that the accompanying help document includes information relevant to that question.

If your SAC was unable to complete the planning section, above, during Fall Term, please fill that section out before completing the following end-of-year report.

14. Were any changes made to the assessment plan submitted in Fall Term? If so, please briefly describe them.

Nope!

15. Please provide an executive summary of your results; include only key data points and your overall findings regarding student learning.

The benchmark goals were met for dimensions 1, 3, and 4. The benchmark goals were not met for dimensions 2, 5 and 6. That said, for dimensions 2 and 6 more than 77% of students met, so we were quite close to our goal of 80% meeting the benchmark. Dimension 5 had nearly 71% of students meeting the benchmark.

16. Please accompany your report with the numerical results (disaggregated data or raw data) and data analysis of your project as an appendix (i.e. along with this report, send the project results themselves as a spreadsheet or document) if possible. If that is not possible, please explain.*

Yes, attached.

Spreadsheet can also be accessed here:

<https://docs.google.com/spreadsheets/d/1BU2Q9QOhzqpC0N9DXGe3CXdf1A6R4563/edit?usp=sharing&oid=111647292515992699772&rtpof=true&sd=true>

Scores for individual artifacts were done using a google form, so please let us know if you would like access to those.

17a. What were the benchmarks levels (minimum acceptable level of student achievement of the outcome) for the project?*

We are using the Quantitative Reasoning rubric v2.5 and the benchmark is a score of 2 or higher on each dimension of the rubric. We were hoping that at least 80% of students would achieve this benchmark.

17b. What percentage or frequency of students achieved the benchmark levels?*

Overall, 100% of students achieved at or above the benchmark in at least one dimension. When split by dimension we see that the following percentages met our benchmark of 2 or above:

- Dimension 1 (State the Problem or Question): 80.65% of students
- Dimension 2 (Determine Information Needed): 77.42% of students
- Dimension 3 (Representation): 80.65% of students
- Dimension 4 (Interpretation): 87.10% of students
- Dimension 5 (Draw Conclusions): 70.97% of students
- Dimension 6 (Community & Environmental Implications): 77.42% of students

18. How was student work redacted (i.e. made anonymous)?*

Students were asked not to include names when they submitted their assignments to D2L. The assignments were then downloaded into a google folder with a number identifier, and no names attached. If students did include names, the names were redacted before submitting to the google folder.

19. If the SAC used a rubric, please describe any changes to the norming and scoring process described in the plan (question 12). Share the inter-rater reliability score below.

Our scoring group scored 4 of the 31 artifacts together so that we could norm ourselves. Our overall inter-rater reliability was at least 80% for each of the 4 artifacts that we scored together. Anytime there was not complete agreement, we discussed the differences.

20. In general terms, describe the level of SAC involvement in the project (e.g. were both PT and FT faculty involved in contributing and/or scoring student work? Did all instructors or a representative sample of instructors contribute student work to be evaluated?)

The ESR 171 classes in fall 2021 and winter 2022 were taught by two part-time faculty members and one full-time faculty member. All three of these faculty members contributed artifacts to be scored. The results were scored by one part-time faculty member and two full-time faculty members.

21. Identify any barriers to participation in learning assessment within the SAC. Describe any external factors that got in the way of learning assessment this year -- for example, funding, time constraints, cancelled courses, faculty workload, etc.

The barriers to participation are mainly that our SAC is very small, and so we end up having a lot of work that is done by only a handful of people. All of our active SAC members are members of at least one additional SAC, and so many of us are asked to participate in multiple annual assessments and other time consuming tasks. Having pay available for PT faculty members is helpful, but many PT faculty are too busy with other obligations (multiple jobs, childcare) to add another item on their to-do list. Additionally, our SAC meeting is usually only 2 hours as most SAC members have another SAC meeting to go to in the morning. This means that we can never actually get artifacts scored during SAC meetings, and have to schedule an additional meeting time to do this. This greatly reduces participation as well due to conflicting schedules.

22. What potential benefits to student learning were identified as a result of the assessment project? How will the SAC use the information during the reassessment of the outcome in the future (i.e. “closing the loop.”)*

The biggest benefit to student learning is that re-wording and redesigning this assignment a bit will likely lead to greater student success. As this was the first time we have scored this new assignment, we realized that there is room for improvement. There were two similar (but yet different) versions of the assignment in use, so creating one assignment that all classes will use is the first change that will be made. Some questions should be reworded to make sure that students know what is being asked of them.

Additionally, the two methods of measuring biodiversity appeared to be unclear for multiple students, so making sure to address these concepts in the class before giving this assignment would be ideal.

23. If the results of the project indicate a need for additional instruction on the outcome in the future (i.e. during the reassessment year), what are the possible steps the SAC might take to help students improve outcome achievement?*

The steps will include:

1. Asking faculty who teach this course to meet and create one assignment that is exactly the same for all classes.
2. Rewording and expanding on some of the assessment questions so that students are more clear as to what is being asked of them.
3. Making sure that faculty review the different types of biodiversity measurements before this assignment is given.

24. If this was a reassessment, were any modifications to instruction implemented between the prior assessment and this one? How did the assessment methods and results compare with the prior assessment?*

This was not a reassessment. We will be reassessing this (revised) assignment during the 2022-2023 school year.

25. Please explain how results have been shared, or will be shared, with members of your SAC.

The results will be shared now, via email, and discussed at our next SAC meeting.

26. What changes would you make to your assessment design, methods or process? Please comment briefly on any possible changes to your assessment process that would lead to more meaningful assessment results -- for example, increasing your sample size, or improvements to the norming process, etc.

We believe that the assessment process went smoothly. The benefit to having a small SAC is that we have a small number of artifacts so the norming process can be completed in about 2 hours. The downside of having a small SAC is that the same handful of people end up doing the norming and scoring every year. We don't believe that we need to change anything for the future.

27. Based on your experience with assessment this year, are there any areas that you might want help with from your LAC coach?

We would love to talk to our coach about the norming process, and a norming spreadsheet that was used by the Chemistry department, to see if we can reduce the time of our norming session.

28. Is there anything else you want to share with reviewers about your assessment project?

We believe that improvements to this assignment will improve student success.

Please submit your report to learningassessment@pcc.edu by June 24, 2021.

Submission checklist:

- Full report
- Numerical results (disaggregated data or raw data) and data analysis as an appendix.

