UC Santa Cruz’s Methodological Portfolio in Program Learning Outcomes Assessment

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Outline

- **What** is Program Learning Outcome (PLO) assessment on our campus?
  - Framework with multiple levels of analysis: (a) programmatic, (b) course, and (c) assignments

- **How** did we get started?
  - Articulating PLOs, curriculum matrix, and multi-year assessment plan
  - Rubric-based assessment, one-two PLOs at a time

- **How** have faculty used the evidence?

- **Who** has been involved?
  - Curriculum committees, program directors, course instructors, TAs; IRAPS

- **Why** should we continue?
  - Main challenges
Campus Framework

A programmatic perspective / program-specific assessment

- Faculty-owned
- Main goal is to collect evidence for program improvement
- Articulated Learning Outcomes for Degree Programs
- Curriculum Alignment of Courses and Program Learning Outcomes (PLOs)
- Rubrics for each PLO articulate multiple, specific criteria differentiating levels of student achievement
- Assessment plans with two lines of evidence: Direct evidence (rubrics) and Indirect evidence (student self-assessment and feedback)
- Use of evidence to make decisions about the program
Campus Framework

All undergraduate programs share common Program Learning Outcomes:

Disciplinary knowledge
Research or Creative Activity skills
Analytical Critical Thinking skills
Effective Communication (written and oral)
Study Design

Primarily exploratory studies to measure senior students’ proficiencies

With additional questions about

- equity in student outcomes (first generation, transfer students)
- impact of previous course work
- comparison of different capstone options
- comparison of single and combined majors
Rubric Design

Rubrics articulate specific criteria and levels of student proficiencies for each PLO

- Most rubrics focus on evaluating one PLO
- At least two criteria per PLO if multiple PLOs are evaluated

- Used VALUE rubrics as a starting point
- Some rubric examples from the discipline
- Developed own rubrics
Rubric Design

Rubrics’ quality determines the level of detail in the results and their usefulness

- Studies show that it is very important to articulate commonly occurring errors or failed attempts to demonstrate proficiency for students who “partially met” or “didn’t meet expectations”

<table>
<thead>
<tr>
<th>Criteria (traits)</th>
<th>Did not meet expectations (1)</th>
<th>Partially met expectations (2)</th>
<th>Generally met expectations (3)</th>
<th>Fully met expectations (4)</th>
</tr>
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<tbody>
<tr>
<td>Trait 4. Evidence selection</td>
<td>Too few sources, or most sources are inappropriate for investigation of stated problem</td>
<td>Some sources address stated problem but others are inappropriate resulting in a major gap in investigation of stated problem</td>
<td>Sources selected are appropriately relevant and allow exploration of the problem; source base overall solid but may have minor gaps to address</td>
<td>Sources selected are appropriately relevant and extensive to allow exploration of stated problem (no gaps)</td>
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Data collection

Most programs evaluated final papers in senior courses

An entire cohort of seniors:
- All seminars offered in an academic year
- All senior exit options that included small seminars, theses and a large course
- One capstone course or one required course (field study)
  → Evaluated by course instructor

A representative sample from a cohort (50-70):
- A sample of senior seminars (one in each concentration area)
- A sample of papers in a large senior capstone course
  → Evaluated by a committee
How have faculty used the evidence?

Examples

1. They demonstrated that the changes in instruction and the amount and quality of learning support have led to high proficiencies in senior students’ writing.

2. They had evidence to compare the quality of different capstone options measured in terms of student learning (grades were not useful).

3. They had evidence that indicated that improvements should be made in the sequence of courses -> revision of assignments.

4. They decided to keep assignments or exams created for PLO assessment as the required part of the course and program.
Faculty engagement

- curriculum committees
- program directors or faculty charged with leading assessment
- course instructors
- TAs

Curriculum committees
- Select a PLO
- Design a rubric, select courses where to collect data
- Evaluate student work or work with instructors who evaluate student work
- Analyze data, discuss results and implications
- Produce an annual PLO report
Why should we continue?

**Criteria-based assessment provides evidence to**

- Improve teaching and learning (e.g., design and revise assignments, evaluate student work, provide feedback on areas of the curriculum needing attention, provide feedback to students);
- Evaluate instructional innovations;
- Evaluate changes in the curriculum (e.g., introduction of new courses, removal of courses, changes in prerequisite courses or requirements);
- Establish more consistent expectations for student performance in courses taught by different instructors;
- Conduct curriculum review;
- Measure student success in an informative way for students, parents, and employers (as opposed to GPA or average salary);
- Prepare for program review, ABET and campus re-accreditation
Main challenges

1. How to use evidence from Program level assessment to improve courses and assignments
   - Encourage course instructors to develop learning outcomes in the existing courses and review/revise assignments

2. How to design studies that are relevant to faculty’s decisions/concerns
   - Move from exploratory studies to focused inquiries with a specific programmatic concern

3. How to improve the quality of rubrics and data
   - Build trust around the framework and use of assessment
   - Engage more faculty in asking critical questions, articulating expectations, and using assessment results