Collect Evidence of Student Learning Using a Signature Assignment

A signature assignment is an elegant solution to the question, “How can a degree program with limited resources collect evidence of student learning?” By using a similar assignment—a signature assignment, faculty teaching different courses/sections can efficiently gather meaningful evidence of student learning that can be used for program-level decisions about the curriculum.

Day: Thursday, November 19, 2015
Time: 1:00-2:15 pm
Location: KUY 106

Facilitator: Monica Stitt-Bergh

Format: Interactive
Level: Basic knowledge recommended (e.g., learning outcomes, curriculum map)
Outcomes for today

You will be able to
• describe a signature assignment
• describe how a signature assignment is useful
• identify learning outcomes and/or courses to target for a signature assignment in your degree program

Learning Outcomes Assessment

How can we find out if students have learned what we want them to learn?

*We can use a “signature assignment.”*

Learning outcomes assessment seeks to answer the question, “Have students learned what we want them to learn?”

How can we find out if students have learned what we want them to learn, and at the level? One way is to use a “signature assignment.”
Think about one or more of your program student learning outcomes.

With the SLOs in mind, think of a performance task that demonstrates student achievement on the SLOs.  
(bonus: choose a task that reflects career, community, or discipline)

Examples: analyze financial data & write a financial report (accounting); prepare for and do a mock job interview (career services)

Think-pair-share activity.

Co-curricular example: students write a resume; prepare for and be interviewed for a job; complete a self-assessment and create a plan for self-development

Signature Assignment

An assignment that the program uses in multiple courses, sections, and/or across time.
Signature Assignment

• Purposefully created to collect evidence for one or more learning outcomes

• Starts with a generic template

• Faculty contextualize the generic assignment to fit their course

See handout: signature assignment example, page 1 generic assignment and page 2 tailored assignment

Faculty purposefully create an assignment to collect evidence for one or more learning outcomes. They start with a generic template because shared assignment elements make aggregation possible. Aggregation of results is key to program assessment: the program pools the results from multiple students in multiple courses/sections in order to get a good picture of program-level strengths and weaknesses. Faculty teaching the courses in which the signature assignment is used contextualize it to fit their particular course content.
In terms of the assessment cycle, signature assignments fall under “collect evidence of learning.” The cycle starts with the program stating what it wants students to learn. The program offers learning opportunities—courses, internships—and these are documented in a curriculum map—the map is a graphical depiction of the curriculum. Then the program collects evidence of learning, often near graduation and it can use a signature assignment, an exam, a supervisor evaluation of students’ internship performance, etc. The faculty or others evaluate the learning evidence by using a rubric or other evaluation tool and then use the findings to create an action plan. For example, a program may celebrate success in an alumni newsletter or brochure or it may make changes in the program if student achievement falls short of expectations.
Steps to create a signature assignment.

First, identify target outcomes and courses using the curriculum map.

Thought Prompt 2: Think about the performance task you came up with at the beginning of the workshop. Jot down the outcomes it sheds light on and write down where in the curriculum students might be assigned that task—what course or other program requirement such as a internship.
Let me show you two examples of how the program can use the curriculum map to choose targeted outcomes and to locate places in the curriculum where the assignment could occur. This is an excerpt of a curriculum map.

In this example, a quick glance shows that SLO 1 appears in CRS 480 and that SLOs 2 & 3 appear in CRS 490. These then, are good places to capture learning evidence.
Here’s a second example. In this example, three courses target two learning outcomes and are good prospects for a signature assignment. By using a signature assignment, all students in these courses would complete an assignment that shares certain characteristics, regardless of which course and which professor. That allows the program to aggregate data across these students and look at program-level results.
Steps to create a signature assignment.

Second, develop or modify an evaluation tool (e.g., a rubric).

(this can be done in conjunction with creating the generic assignment)

Thought Prompt 3

Once the outcomes and potential courses have been identified, the next step is to develop or modify an evaluation tool. Whenever possible, start with an existing tool and modify it to align with the learning outcome. Thought prompt 3: Does a rubric already exist?

Steps to create a signature assignment.

Third, develop a generic assignment—a template.

(this can be done in conjunction with creating the evaluation tool)

Third, develop or modify an assignment that will allow students to demonstrate mastery of the learning outcomes. The assignment will be a generic template that faculty can modify to fit the context of their course. This can be done at the same time the faculty is contemplating the evaluation tool which is usually a rubric. (Another evaluation tool: observation checklist)
Shared elements:
   a) Task, purpose, audience
   b) Learning outcome(s)
   c) Format and technical specifications
   d) Rubric/scoring criteria

Handout: generic template for the biology assignment illustrates these four shared elements.

The signature assignment shares elements so that students’ results can be aggregated to form a picture of program-level student learning competency. The faculty start with these: task, purpose, audience; learning outcomes; format and technical specifications; and rubric/scoring criteria. Please complete thought prompt 4 which asks you about the purpose and audience.
Good assignment design helps students succeed. In fact, one of the common assignment findings here at Mānoa and across the country, is that a poorly designed assignment leads to poor student achievement and vice versa: a good assignment helps student succeed.

Here are a few tips: Whenever possible, use an authentic performance task. These students will soon be in the community and workforce and they need experience with real-world or disciplinary tasks to prepare them.

Asking students to reflect and self-assess their work, especially using the rubric or criteria as a guide, is a powerful addition to the learning experience.

Scaffolding and process steps are an important part of assignment design. We know from learning theory that powerful learning takes place when we give assignments that are just out of students’ reach if they were to do them on their own but that they can do successfully with appropriate scaffolding—appropriate guidance and feedback.

In addition, faculty can activate students’ prior knowledge about the subject area or about the task at hand (e.g., write an essay) in order to gauge current understanding and address misunderstandings. I participated in a research project in which we independently asked professors and students about an assignment. Their perceptions did not always match. In one case, the professor asked students to critique a film, but most of the students in the class thought they were doing a subjective movie review on whether they liked the movie or not. Identifying these kinds of misunderstandings can lead to important breakthroughs in their understanding.

In the case of oral communication, anxiety plays a major role in student performance. Dealing with that anxiety early in the semester through scaffolding will lead to better student performance.

Think-pair-share. What problems might students encounter and how can an assignment scaffold decrease the barriers to learning and high quality performance?
Steps to create a signature assignment.

Fourth, implement.
(Pilot test as needed.)

Fourth, implement the signature assignment. Pilot test if the assignment is brand new.
Implementation

- Faculty modify the generic assignment to fit their course context
- Faculty evaluate their students’ assignments
  - Faculty agree on standards and quality (“norming”)
- Faculty send their students’ results to the assessment coordinator
  - Use technology to expedite aggregation and analysis

Better implementation: one or more faculty other than the course instructor evaluate a sample of the assignments

The most efficient way to implement is to have faculty in the target courses take the generic assignment and contextualize it.

The faculty teaching the courses evaluate students’ assignments using the agreed upon rubric. It’s highly recommended for the faculty to get together and agree on standards and quality so one professor’s “4’ is the same as another professor’s “4” – this is obviously a good idea if the results are to be pooled later across faculty and/or across semesters.

The faculty send their students’ results to the assessment coordinator. You can use Google Forms or SurveyMonkey or equivalent to expedite sending and use Excel or equivalent to aggregate and analyze.

A better method of implementation is for at least a sample of the students’ assignments to be scored by someone other than the course instructor. This increases credibility and the more faculty involved, the better likelihood that the results will be used and changes made later to improve the program if needed.
Benefits

An efficient and meaningful way to collect evidence of student learning across courses, faculty, time.

Allows the program to aggregate information from students to form a program-level snapshot of student achievement.

Signature assignments have benefits such as these. It is efficient and meaningful because it is based on existing assignments and probably existing rubrics too.; it is embedded in existing courses—it’s not an add-on. It targets outcomes that faculty care about and employs good assignment design. And, bottom line, allows the program the ability to aggregate student information to form a snapshot of student achievement in the program. Faculty see beyond their course.
Additional Benefits

- Reveals students’ “deep thinking”
- Helps students think/perform like disciplinary experts
- Encourages transfer of knowledge and skills
- Serves as a culminating assignment

In addition, if the assignment follows the tips that I mentioned earlier, then faculty see students’ “deep thinking” because it’s a challenging assignment that needs scaffolding in order to students to succeed. The relationship to real-world work moves students closer to becoming disciplinary experts. If you use self-assessment and prior-knowledge checks, students are encouraged to transfer knowledge and skills across courses and assignments. And if it is the culminating assignment in the program, students leave with something they can potentially share with employers and family.
Your Turn

Review, reflect, modify

Spend a few minutes looking over your answers to the Thought Prompts. Any changes you’d like to make? Do so now.

Slide 21
Mahalo nui!

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Signature Assignment Overview (emphasis on oral communication)

**Signature assignments** are assignments purposefully created to collect evidence of student learning on specific program learning outcomes. They start with a generic template so that faculty in different disciplines or faculty teaching different courses can modify the assignment to fit their context. The template ensures that the contextualized assignments share basic elements so individual student results can be aggregated across courses/professors.

<table>
<thead>
<tr>
<th>Shared elements</th>
<th>Abbreviated Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Task, purpose, audience</td>
<td>Give an oral presentation to increase the audience’s knowledge and foster understanding</td>
</tr>
<tr>
<td>b) Learning outcome(s)</td>
<td>Successful students will be able to prepare and give an oral presentation that is organized, well delivered, uses supporting evidence, and contains a central message</td>
</tr>
<tr>
<td>c) Format and technical specifications</td>
<td>6-10 minute oral presentation, performed live in front of class or other audience, uses visual aids such as PowerPoint</td>
</tr>
<tr>
<td>d) Rubric/scoring criteria</td>
<td>Oral Communication VALUE rubric</td>
</tr>
</tbody>
</table>

**Successful signature assignments . . .**

- Reveal students’ “deep thinking” and help students think/perform like disciplinary experts
- Encourage transfer of knowledge and skills
- Serve as a culminating assignment

**Steps to create a signature assignment**

1. Identify the program learning outcome(s) that will be targeted
2. Develop/select the evaluation tool that provides the criteria used to judge the student performance (e.g., rubric)
3. Design an assignment that will allow students to demonstrate mastery of the learning outcome(s) as specified by the evaluation tool
   a. **Tips**
      i. Use an authentic performance task—that is, one that is related to career, community, and/or disciplinary tasks
      ii. Integrate student reflection and self-assessment of their learning in the assignment

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4. Include these elements in the assignment template

- Purpose
- Audience
- Format and technical requirements
- Learning outcome(s)
- Rubric/evaluation criteria

5. Emphasize the need for faculty to include scaffolding and process steps in the assignment—when faculty contextualize the assignment, they develop scaffolding that best suits their course

   a. **Scaffolding** refers to assigning tasks that students cannot do on their own but can do with **appropriate assistance** and thus will be able to do the task independently in the future

   b. Provide scaffolding by specifying a good process that includes formative feedback
      
      Example: give an oral presentation
      
      i. Review rubric and critique example of an oral presentation (class discussion)
      
      ii. Select topic and read 5-7 credible, relevant articles to supplement textbook
      
      iii. Write a 750-1,000 word summary of the articles and submit to instructor; get feedback
      
      iv. Write a central message statement (in class pair activity)
      
      v. Write and submit a presentation story board; complete out-of-class peer review
      
      vi. Revise presentation story board using feedback
      
      vii. Practice presentation at home (including timing)
      
      viii. Practice presentation (in class small group activity); complete in-class peer review
      
      ix. Give oral presentation to the class

6. Encourage faculty to anticipate common misunderstandings and barriers to student success

   a. Faculty plan activities to draw out students misconceptions or reveal barriers and then create activities to reduce/eliminate them. Examples:

      i. Students take a prior knowledge quiz and faculty use the results to guide their teaching
      
      ii. Students take a survey on oral communication apprehension and faculty use the results to guide their teaching

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How can instructors help students improve oral communication?

“Preparing us for it. Providing us with clear instructions so that we know what we are talking about. Nervousness is probably 90% of why we mess up. But if we know our material, then we’ll slowly overcome stage-fright.”

— Junior
Signature Assignment Example

The generic assignment

**Biology program learning outcomes:**
- Conduct scientific research to make informed decisions;
- Form strong biological arguments; and
- Communicate in writing.

**Task:** Conduct original science research and compose a 2,000 to 3,000 word original scientific research report (exclude the reference section and graphics in word count).

**Audience:** Peers as junior colleagues in the scientific community.

**Purpose:** To demonstrate use of the scientific method for original scientific research and to form strong biological arguments.

**Format and technical specifications:** Traditional scientific report form:
- Title (twenty-five words or fewer, with appropriate descriptors)
- Abstract (150 words or fewer)
- Introduction with literature review and hypothesis
- Methods and materials section
- Results section
- Conclusions and implications section
- Reference section
- Minimum of three graphics with self-contained labels
- Preference tests (if used) with an n (sample size) of 20+
- Statistics appropriate to your expertise

**Standards and criteria:** Department’s Scientific Report Rubric.

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Assignment tailored to a specific course context

In this assignment you will compare two commercially available products on the basis of at least four criteria to determine which is the "better" product as operationally defined. You will conduct original science research and compose a two- to three-thousand word original scientific research report (exclude the reference section and graphics in your word count).

Audience: Write for your peers as junior colleagues in the scientific community.

Main point and purpose: For you to learn and demonstrate use of the scientific method for original scientific research and form strong biological arguments. The skills you will develop in this project are those used by many biology program graduates in their jobs at companies such as Noxell.

Pattern and procedures: Please follow the scientific report form. Your final copy should be typed or word processed and should contain the following components:

- Title (twenty-five words or fewer, with appropriate descriptors)
- Abstract (150 words or fewer)
- Introduction with literature review and hypothesis
- Methods and materials section
- Results section
- Conclusions and implications section
- Reference section
- Minimum of three graphics with self-contained labels
- Preference tests (if used) with an n (sample size) of 20+
- Statistics appropriate to your expertise

Due dates:
Early proposal: February 28
Draft: April 1 (for peer review)
Final: April 26

Standards and criteria: In completing this assignment, demonstrate that you can conduct scientific inquiry and form strong biological arguments. Your written report should demonstrate that you have formulated a hypothesis, designed a good experiment, controlled variables, operationally defined terms, and interpreted data appropriately. In addition, you should demonstrate that you understand the scope and sequence of the scientific report format and the importance of quantification to scientific writing. Your report will be evaluated using the department’s Scientific Report Rubric.

This assignment allows you to practice and demonstrate these biology program learning outcomes:
- Conduct scientific research to make informed decisions;
- Form strong biological arguments; and
- Communicate in writing.

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Signature Assignment Workshop: Thought Prompts

1. Think about one or more of your program student learning outcomes (SLOs). With the SLOs in mind, what performance task demonstrates student achievement on the SLOs? Bonus: choose a task that reflects career, community, or discipline
   E.g., analyze financial data and write a financial report (accounting); write a resume; write a self-assessment and self-development plan

2. (A) What SLOs does the task shed light on? (B) Where in the curriculum (courses or other requirement) could students be assigned the task?
   (A)

   (B)

3. Does a rubric already exist (some modifications may be necessary)?

4. (A) What is the purpose of the performance task and (B) who is the audience? [purpose could be persuade, argue, explain, form relationships, and so forth]
   (A)

   (B)

5. What do you think students might struggle with? What might hinder their success?

6. What “scaffolding” or process steps could help students overcome any barriers to success?