Using Program Assessment Results to Improve Student Learning

Assessment Office
University of Hawai‘i at Mānoa
August 2013

Agenda

1. Session outcomes
2. Interpretation & use of results
3. Group work on scenarios
Session Outcomes

You will be able to

1. List reasons why programs may fall short of their *criteria for success*
2. List ways a program may use its results
3. Name one strategy to help faculty act on results

Program Assessment Overview

Learning Outcomes

Improvement Plan

Learning Opportunities

Collection & Analysis of Evidence

Assessment Results

This session
USE OF RESULTS

Apparel Product Design & Merchandising

Contemporary Ethical Issues

American Studies

Examples
INTERPRETATION OF RESULTS

Worthy of a trophy?
Criteria for success

A statement of what is needed for the program to claim it met its goal for student learning.
Criteria for success

Example

90% of the graduating seniors will score “3” or higher on the Critical Thinking Rubric.

Criteria for success

Met

Not met

Celebrate & publicize success

Change or evolve the program
Criteria for success

Met  Not met

a. Celebrate & publicize success

- Update program brochure
- Describe in alumni newsletter
- Post on dept. website
- Flyer on dept. bulletin board
- Share with students during advising or class

Criteria for success

Met  Not met

b. Continue good practices
COMMON REASONS WHY CRITERIA ARE NOT MET

Criteria for success

Met

Not met

2a. Alignment

2b. Curriculum

2c. Student factors
Describe Lincoln’s and Johnson’s role in the Reconstruction Era.

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Rubric</th>
</tr>
</thead>
</table>
| Describe Lincoln’s and Johnson’s role in the Reconstruction Era. | 1 Low = described roles  
2 Acceptable = compared and contrasted roles  
3 Exemplary = compared and contrasted roles and provided context |

2a.i. Poor alignment
2a.ii. Poor alignment

Assessment task ≠ Course activities

2a.iii. Poor alignment

Course standards ≠ Exit standards

La Gioconda (Mona Lisa) by Leonardo Di Vinci.
Criteria for success

Met

Not met

2a. Alignment

2b. Curriculum

2c. Student factors

2b.i. Curriculum

<table>
<thead>
<tr>
<th>Opportunities to learn</th>
<th>Expected level of oral performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course</td>
<td>Oral Communication</td>
</tr>
<tr>
<td>300</td>
<td></td>
</tr>
<tr>
<td>301</td>
<td></td>
</tr>
<tr>
<td>316</td>
<td>X</td>
</tr>
<tr>
<td>350</td>
<td></td>
</tr>
<tr>
<td>355</td>
<td></td>
</tr>
<tr>
<td>400</td>
<td></td>
</tr>
<tr>
<td>480</td>
<td></td>
</tr>
</tbody>
</table>

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2b.ii. Curriculum

Instructional methods

Criteria for success

Met

Not met

2a. Alignment

2b. Curriculum

2c. Student factors

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2c.i. Student factors

Student motivation on the assessment task

Image source: http://www.ttacnews.vcu.edu/2013/02/increasingstudentmotivation/

2c.ii. Student factors

Those who completed the task are not representative or too few in number

Student sample of 1
2c.iii. Student factors

Transfer students

Recap

Reasons why results fall short
a. Poor alignment
b. Curriculum: insufficient opportunities; ineffective pedagogy
c. Student factors: motivation, sample, transfer
PROGRAM AREAS TO CONSIDER CHANGING

See handout for complete list

Evolve the Program

3a. Curriculum

3a.ii Course Content
Evolve the Program

3b. Resources

3b.iii Technology

Evolve the Program

3c. Academic process

3c.i Advising
Evolve the Program

3d. Assessment process

3d.i Assessment question

Good things can come in small packages.
Your Turn . . .

- Discuss the scenario with your tablemates
- Answer the 4 questions
- Be ready to share
  - One reason
  - One action
  - One way to help faculty act on the results
Using Program Assessment Results to Improve Student Learning

Criteria for success example: 90% of the graduating seniors will score “3” or higher on the Critical Thinking Rubric.

1. Criteria met
   a. Celebrate and publicize success
   b. Continue good practices

2. Common reasons why the criteria for success are not met
   a. Alignment
      i. Assessment task not aligned with test/rubric standards
      ii. Assessment task not aligned with course activities
      iii. Course-level standards not aligned with exit-level standards
   b. Curriculum
      i. Too few opportunities to learn given the high level of performance expected
      ii. Instructional methods ineffective
   c. Student factors
      i. Lack of student motivation on assessment task
      ii. Those who completed the assessment task are not representative or too few in number
      iii. Transfer students experienced a different curriculum

3. Program areas to consider changing & examples
   a. Curriculum
      i. Instructional methods: use problem-based inquiry instead of lecture-only pedagogy in core courses
      ii. Course content: review major theorists in all 300-level courses
      iii. Course sequence: add a pre-requisite
      iv. Frequency of course offerings: offer core courses every semester
   b. Resources
      i. Faculty: change emphasis for vacant position to include ability to teach a particular set of SLOs
      ii. Professional development: ask faculty to attend a workshop on giving students effective feedback on their writing

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iii. Technology, physical space, equipment: purchase equipment so students can practice GIS data modeling

c. Academic process

i. Advising: ask advisers and students to collaboratively complete a SLO checklist and use it to guide course registration

ii. Program advertising and program recruiting: revise brochure and webpage to emphasize the skills gained in the program

iii. Career exploration and career services: offer brown-bag lunch series with local employers

iv. Admissions standards: set “C” as minimum grade needed in certain courses before student can declare major

d. Assessment process

i. Assessment question: ask a meaningful question that faculty are interested in answering

ii. Assessment task: revise the task so it better meets the student learning outcomes

iii. Data collection methods: randomly select students instead of relying on volunteers

iv. Data collection methods: use existing class assignments because students are already motivated to do well on them because they count toward the course grade
Using Program Assessment Results to Improve Student Learning

Scenarios (based on actual programs but modified for this workshop)

#1 Science Capstone

Context. A science program is using its senior capstone course to assess student learning, skills, and values. In the capstone, students complete one research project. The capstone products include the following: research proposal, research report, and oral presentation at the department mock conference. The course instructor evaluates the students’ written work using a Writing Rubric and the Research Ethics Rubric. Faculty who attend the department conference evaluate the oral presentations using the Speaking Rubric.

Curriculum Map.

<table>
<thead>
<tr>
<th>Courses ↓</th>
<th>Outcomes</th>
<th>Writing</th>
<th>Speaking</th>
<th>Research Methods</th>
<th>Research Ethics</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 + Lab</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>310 + Lab</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective: 320, 340, or 360</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
<td></td>
<td>Varies</td>
</tr>
<tr>
<td>380</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>410 + Lab</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective: 425, 435, or 445</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
<td></td>
<td>Varies</td>
</tr>
<tr>
<td>450 + Lab</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>480 Capstone</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

“X” = emphasized in course

Capstone requirements and expectations (condensed).
You will conduct a literature review, write a 4-page research proposal, carry out research, write a final 10-page research report, and orally present your research and findings at the department mock conference (15-minute presentation). The written products will be evaluated on the quality of content, clear and appropriate research methods, format, and quality of expression (i.e., grammar, word choice). The oral presentation will be evaluated on your ability to engage the audience with your “academic story,” speak with confidence and poise, answer questions from the audience, and select appropriate content.

Criteria for success. 95% of the student projects will score “3” Met Standard on each of the four rubrics: writing, speaking, research methods, and research ethics.

Results. 38 of the 40 graduating seniors completed the capstone course project.
Student Results

Discussion questions.

1. Did the program meet its criteria for success?

2. What are 2 possible reasons why the criteria for success were met/not met?

3. What action might the program consider given these results?

4. How might the assessment team help faculty act on the results?
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Scenarios (based on actual programs but modified for this workshop)

#2. English Literature Exit Exam

Context. The English undergraduate program decided to use two Graduate Record Exam (GRE) tests to determine if seniors had met program outcomes #1, #2, and #3. The program asked all graduating seniors to take the GRE Literature in English Test (230 multiple choice questions on British Literature, American Literature, and World Literature after 1925) and to take the GRE General Test which measures verbal reasoning (primarily multiple choice questions) and analytical writing (two 30-minute “analyze an issue” and “analyze an argument” writing tasks). The department agreed to pay their test fees: $185 for the General Test and $150 for the Literature in English Test.

Curriculum Map.

<table>
<thead>
<tr>
<th>Outcomes 1-3</th>
<th>1. Demonstrate knowledge of the major texts and traditions of literature, including texts and traditions of Hawai‘i and the Pacific region</th>
<th>2. Analyze texts closely in terms of style, figurative language, and literary conventions</th>
<th>3. Write well-argued essays that apply concepts from literary theory and criticism and include outside sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses ↓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>301</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>321-326</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>350-358</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>360-375</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>380-395</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>401</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>411-418</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>430-445</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>451-456</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>470-486</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

“X” = emphasized in course

Criteria for success. 95% of the students will score
a) 580-980 on the GRE Literature in English Test,
b) 155-170 on the Verbal Reasoning section, and
c) 4.5-6.0 Analytical Writing section on the GRE General Test.

Results. 21 of the 145 graduating seniors took the GRE and reported their scores to the department.

<table>
<thead>
<tr>
<th></th>
<th>Literature in English Score 580-980 60th-99th percentile</th>
<th>Verbal Reasoning Score 155-170 65th-99th percentile</th>
<th>Analytical Writing Score 4.5-6.0 72th-99th percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Students (21 students total)</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Continued on back
Discussion questions.

1. Did the program meet its criteria for success?

2. What are 2 possible reasons why the criteria for success were met/not met?

3. What action might the program consider given these results?

4. How might the assessment team help faculty act on the results?
Using Program Assessment Results to Improve Student Learning

Scenarios (based on actual programs but modified for this workshop)

#3. Course-Embedded Assessment Project (Biostatistics)

Context. The Biostatistics program implemented a course-embedded assessment project to assess how well students can

a) clearly explain core biostatistics terms, concepts and theories;
b) apply statistical reasoning to contemporary biostatistics issues and policy problems;
c) apply appropriate quantitative techniques and conduct analysis using equations and graphs; and
d) effectively communicate results of research and analysis.

Three courses that cover these outcomes in depth were selected: BIOS 467, 477, and 480. Professors randomly selected 50% of their students and scored their final exams using the department’s agreed-upon scoring rubric (below). The results were aggregated by the assessment coordinator.

Curriculum Map.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Terms, concepts, theories</th>
<th>Statistical reasoning</th>
<th>Quantitative reasoning</th>
<th>Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>301</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>302</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>310, 350, 365, or 375</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>321</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>401-450</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>467</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>477</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>480</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

“X” = emphasized in course

Rubric.

<table>
<thead>
<tr>
<th>Quality Level</th>
<th>Outcome</th>
<th>1: Beginning</th>
<th>2: Approaching</th>
<th>3: Accomplished</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terms, concepts, theories</td>
<td>Does not understand or apply biostatistics concepts; or confused</td>
<td>Describes biostatistics concepts, but does not clearly understand or apply them</td>
<td>Understands and applies concepts and theories in a clear and effective manner</td>
<td></td>
</tr>
<tr>
<td>Statistical reasoning</td>
<td>Does not identify question at hand and fails to think critically and solve problems</td>
<td>Identifies question at hand, but fails to think critically and solve problems</td>
<td>Identifies question at hand, thinks critically and solves problems in an illuminating way</td>
<td></td>
</tr>
<tr>
<td>Quantitative reasoning</td>
<td>Does not understand or apply quantitative skills to the topic/issue</td>
<td>Uses quantitative skills relevant to the topic/issue but applies them incorrectly or in an incomplete manner</td>
<td>Adeptly uses quantitative skills to address the issue/topic at hand</td>
<td></td>
</tr>
<tr>
<td>Communicate</td>
<td>Fails to communicate findings in a meaningful way</td>
<td>Communicates findings, but fails to stimulate interest from reader and/or communicates findings in an unclear manner</td>
<td>Communicates findings and stimulates interest from the reader and communicates findings in a clear manner</td>
<td></td>
</tr>
</tbody>
</table>

Continued on back

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**Criteria for success.** At least 85% of the students will score “3” Accomplished, on each outcome.

**Results.**  
115 randomly-selected students (49% of students enrolled in the three courses).

![Bar chart showing percent of students in different categories.](chart.png)

- **Terms, concepts, theories:** 95% Accomplished, 5% Beginning, 0% Approaching
- **Statistical reasoning:** 60% Accomplished, 35% Approaching, 5% Beginning
- **Quantitative reasoning:** 50% Accomplished, 40% Approaching, 10% Beginning
- **Communication:** 85% Accomplished, 10% Approaching, 5% Beginning

**Discussion questions.**  
1. Did the program meet its criteria for success?  
2. What are 2 possible reasons why the criteria for success were met/not met?  
3. What action might the program consider given these results?  
4. How might the assessment team help faculty act on the results?