Student Learning, Assessment, and Accreditation

Department Chairs
September 14, 2010
Are you teaching a course that you have taught before?

Are you teaching the course in the identical way that you taught it before?

How did you determine that changes should be made?
“A University should be a place of light, of liberty, and of learning.”

Benjamin Disraeli
“Among the public’s many expectations of higher education, the most basic is that students will learn,...”

“Effective assessment is best understood as a strategy for understanding, confirming, and improving student learning.”

From “Student Learning, Assessment, and Accreditation,” The Higher Learning Commission
“I approach teaching exactly the way I approach scientific research. I have clear goals. I have clear measurements. I figure out what the past research says and what the guiding principles are. I guide what I do by that, and I measure if it works. And if it doesn’t work, I try something different until it does.”
Nobel laureate Carl Wieman, physicist and science educator
Guide to Assessing Student Learning

- What is our purpose? (mission)
- What do we want our students to learn? (student learning outcomes)
- What evidence will show us that our students are learning? (assessment methods)
- How does the evidence demonstrate student learning? (review and analysis)
- How can we improve student learning? (action)
Assessment Cycle (Spiral)

- Identify Learning Outcomes
- Gather Evidence of Learning
- Interpret Evidence
- Implement Change

adapted from Assessing for Learning (2004) by Peggy L. Maki
Focus on learning FIRST...assessment follows

Keep your assessment plan:

• Meaningful
• Manageable
• Useful
Assessment Cycle (Spiral)

Mission

- Identify Learning Outcomes
- Gather Evidence of Learning
- Interpret Evidence
- Implement Change

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Start at the beginning...your mission statement

What is a mission statement?

- broad statement describing the department’s purpose
- primary functions
- stakeholders

aligns with the institutional mission
may include a statement of what makes the department distinctive
Revisiting and renewing your mission statement

General template for a mission statement:

The mission of (name) is to (primary purpose) by providing (primary functions) to (stakeholders).

Review your mission statement in your
Department Assessment Plan
Department Strategic Plan
Using the questions for self-evaluation.

Develop (or re-develop) your mission statement.
Assessment Cycle (Spiral)

Mission

- Identify Learning Outcomes
- Gather Evidence of Learning
- Interpret Evidence
- Implement Change

adapted from Assessing for Learning (2004) by Peggy L. Maki
“Learning outcomes are statements describing our intentions about what students should know, understand, and be able to do with their knowledge when they have graduated.”

Making connections throughout the institution

DESIGN BACKWARD

Intended Learning Outcomes of the Lesson
Intended Learning Outcomes of the Unit
Intended Learning Outcomes of the Course
Intended Learning Outcomes of the Academic Program
Intended Learning Outcomes of the Institution

DELIVER FORWARD
Defining Student Learning Outcomes

Guiding question:

What knowledge, skills, abilities, and dispositions should the ideal student (graduating from our program) demonstrate?
Of what value are clearly articulated Student Learning Outcomes?

- Provide direction for our instruction
- Inform students about our intentions and expectations
- Focus on lasting results
- Form a basis for our assessment
What is the difference between a learning goal and a learning outcome?

Goal: “broad and long-term descriptions of learning expectations”

Learning Outcome: “specific descriptions of expectations that...learners can demonstrate when they complete a course, program, or baccalaureate degree”

Goals and Outcomes

GOALS
• Broad
• General
• Abstract
• Not easily validated

OUTCOMES
• Narrow
• Precise
• Concrete
• Can be validated
Example: Dental Health 101

GOAL: Understands proper dental hygiene

OUTCOMES
Outcome 1: Identify the active ingredient in toothpaste
Outcome 2: Explain why teeth should be cleaned twice a year
Outcome 3: Describe how poor dental hygiene can lead to poor overall health
Students will (or will be able to):

<<action verb>>

<<learning object>>

by <<criterion>>.

Student Learning Outcomes: Examples

**Journalism:**
Write a news story in the proper inverted pyramid format.

**Machine Technology:**
Demonstrate basic shop safety and safe attitudes in all class activities.

**Graphic Arts:**
Create visual sketches of a variety of fundamental graphic imaging techniques.
Student Learning Outcomes

- Learner-centered
- Specific
- Action oriented
- Cognitively appropriate for the program level
- Measurable

Levels of the Cognitive Domain

Evaluation

Synthesis

Analysis

Application

Comprehension

Knowledge
### Levels of Cognitive Domain

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1: Knowledge</td>
<td>• Remember or recall information</td>
</tr>
<tr>
<td>Level 2: Comprehension</td>
<td>• Understanding information</td>
</tr>
<tr>
<td>Level 3: Application</td>
<td>• Use ideas, concepts, and actions to solve problems</td>
</tr>
<tr>
<td>Level 4: Analysis</td>
<td>• Use critical thinking</td>
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<tr>
<td>Level 5: Synthesis</td>
<td>• Put together the parts to form something new</td>
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<tr>
<td>Level 6: Evaluation</td>
<td>• Make judgments based on evidence or defined criteria</td>
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</tbody>
</table>

Verbs associated with each level of the cognitive domain:

<table>
<thead>
<tr>
<th>Level</th>
<th>Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1: Knowledge</td>
<td>• ask, define, draw, fill in, identify, label, list, listen, match, memorize, name, observe, recall, record, recite, repeat, select</td>
</tr>
<tr>
<td>Level 2: Comprehension</td>
<td>• defend, describe, discuss, distinguish, document, explain, estimate, express, generalize, identify, locate, paraphrase, recognize, report, restate, review, tell</td>
</tr>
<tr>
<td>Level 3: Application</td>
<td>• change, classify, compute, construct, dramatize, draw, demonstrate, employ, illustrate, interpret, manipulate, operate, sequence, show, solve, test, translate, use, write</td>
</tr>
<tr>
<td>Level 4: Analysis</td>
<td>• appraise, calculate, categorize, contrast, debate, defend, diagrams, differentiate, dissect, distinguish, experiment, inventory, map, relate, solve, subdivide, survey, test</td>
</tr>
<tr>
<td>Level 5: Synthesis</td>
<td>• appraise, compare, conclude, contract, criticize, decide, discriminate, justify, rate, recommend, select, state, summarize, support</td>
</tr>
<tr>
<td>Level 6: Evaluation</td>
<td>• assemble, compose, construct, create, design, formulate, hypothesize, invent, manage, organize, plan, prepare, produce, propose, set up, speculate</td>
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Defining Student Learning Outcomes: Starting points

- Gustavus mission statement and core values
- Departmental or Program mission statement
- Professional and Disciplinary Associations
- Colleges and Universities
- Community members (alumni, employers)
- Faculty
- Students
Revisiting and renewing your student learning outcomes:

Review the student learning outcomes in your assessment plan, using the questions for self-evaluation.

Develop (or re-develop) 3-5 student learning outcomes which align with your mission.
Assessment Cycle (Spiral)

Mission

1. Identify Learning Outcomes
2. Gather Evidence of Learning
3. Interpret Evidence
4. Implement Change

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Assessment Cycle (Spiral)

Mission

Identify Learning Outcomes

Gather Evidence of Learning

Interpret Evidence

Implement Change

adapted from *Assessing for Learning* (2004) by Peggy L. Maki
Continuing the assessment spiral...

Next month:

Methods of assessment
(evidence)

Interpreting and evaluating evidence
(criteria and standards of judgment)
Student Learning Outcomes and Accreditation
The Higher Learning Commission Criteria for Accreditation

Criterion One: Mission and Integrity
Criterion Two: Preparing for the Future
Criterion Three: Student Learning and Effective Teaching
Criterion Four: Acquisition, Discovery, and Application of Knowledge
Criterion Five: Engagement and Service
The Higher Learning Commission Criteria for Accreditation Addressing Student Learning Outcomes

Criterion Three Statement: The organization provides evidence of student learning and teaching effectiveness that demonstrates it is fulfilling its institutional mission.

Core Component 3a. The organization’s goals for student learning outcomes are clearly stated for each educational program and make effective assessment possible.
In summary...

Focus departmental conversations on **learning**:
- What is our purpose? (mission)
- What do we want our students to learn? (student learning outcomes)

Think about:
- How do we know if our students are learning (what we want them to learn)?