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Building an Assessment System

2011 Training Guides

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BUILDING AN ASSESSMENT SYSTEM

Introduction

This session will focus on the practical steps for designing, implementing, and communicating assessment plans at all different levels of an institution. This session will focus on the planning and steps that should be taken in order to implement a solution like LiveText's Accreditation Management System (AMS), which can be used to support all elements of a robust assessment system. Topics of discussion will include identifying learning goals; creating common instruments for measuring outcomes; generating self study documents and program reports that support internal reflection and improvement; and showcasing results for review by external reviewers such as accreditation agencies.

BUILDING AN ASSESSMENT SYSTEM

Assessment in a Nutshell

"Assessment" has many definitions, both inside and outside the context of higher education. In its simplest terms, assessment describes the act of making an estimation or evaluation. When a professor or teacher provides feedback to a student on a task or an artifact of work, he or she is assessing. After assessing an entire class on the same activity, most teachers and professors also reflect, either formally or informally, on how well the students seemed to embody the learning the activity was intended to teach or measure. If the students "got it," the professor or teacher is likely to repeat the activity with future classes. In contrast, if many students struggled, or the activity itself did not provide usable evidence that the students learned, they will likely modify the activity for next time.

This type of assessment is natural, authentic, and something that almost all teachers do. In this manual, however, we will look at assessment as a broader initiative which is purposefully and collaboratively implemented on a large scale – by a program, college, or even an entire university. To "do assessment" at this scale requires planning, communication, commitment, and collegiality among those involved in the initiative. However, the benefits of an assessment system are commensurately greater as well. A well-designed and well-implemented assessment system helps the institution and/or program to present a more coherent, purposeful, and seamless learning experience to students, and to more easily meet the requirements of external reviewers, such as state governments and accreditation agencies.

NOTE: To read more detailed best practices in implementing assessment, see Barbara Walvoord's book, *Assessment Clear and Simple* (San Francisco, Jossey-Bass, 2004)

What Assessment IS

There are many ways to implement assessment at a program or institutional level. These guidelines should help you synthesize a working definition. Assessment is:

- A form of action-research that blends objective methods of measurement and analysis with the professional judgment of faculty
- A collaboration among educators to identify common learning goals and common means to measure them
- A systematic way to measure learning across numerous courses and years of learning
- A systematic way to gather evidence for external reviewers and prevent the need to scramble for evidence retroactively or shortly before reviews.

What Assessment is NOT

One of the keys to a successful implementation of any assessment plan is to get faculty, departmental and college-level leadership – and even students – invested in the process. This sometimes means dispelling rumors and misconceptions about the reasons for approaching assessment as a collaborative enterprise. Make sure that important stakeholders on your campus understand that assessment is NOT:

- "More work for faculty." If implemented correctly, an assessment system will be authentic, will not require more work than what instructors already invest in evaluating student work, and will reduce time spent pulling evidence together for accreditation and internal program review.
- An infringement on the academic freedom of faculty. Common outcomes can ordinarily be aligned very easily to an instructor's existing curriculum.
- A reductive, "standardized testing" approach to measuring learning. Broad, ambitious learning goals like critical thinking and community awareness can and should be assessed effectively.
- An attempt to pass judgment on the teaching performance of individual faculty members or programs. Assessment is not a half-baked accountability measure, but a way to identify and capitalize on opportunities to elevate student achievement.
- A "hoop to jump through" for an accreditation agency or any other external body. Improving learning is an initiative that the institution or program itself should take ownership of.
- An imposition on students. Authentic activities that are already practiced in the curriculum can form the basis for the assessment system. A hollow, tack-on assignment is not needed to assess an institution or program learning outcome.

Creating Advocates

Because assessment at the program and institutional level requires cooperation and participation by the faculty, it is important to create advocates for the process. The sections that follow all assume the system will be developed collaboratively. Consider the following to ensure that a critical mass of the faculty is bought-in:

- **Start with leadership** – Have communication come directly from the president, provost, or dean that the assessment initiative is a priority
- **Get Others Involved** – Convene a committee of faculty to develop the assessment system, and regularly update non-committee members who will nonetheless participate in the assessment system, and give them opportunities to offer their voices as well during the planning stages
- **Share Results** – After the first cycle of assessment, when usable evidence of student learning across the program or institution has been gathered, share what has been learned with the rest of the faculty. People will get involved when they see the opportunity to impact student learning.
- **Reward Leaders** – Leaders are not those who scored their students the highest, but those who helped to build the assessment system. Release time, honors, or just public gratitude are good ways to reinforce participation.

Components of an Assessment Plan

Program Mission

The Mission Statement describes, at a high level, what the unit (whether it is an entire university, a college, or a program) is trying to accomplish. Mission statements should include language about what students are expected to learn or what graduates are expected to know, but they also present an opportunity for the unit to articulate its own unique character, and what makes it special as a place for learning. A mission statement should give the reader a sense of the unit's values, character, and vision. If the mission statement is written for a particular program offered at an institution, the program's mission statement should be aligned with the institution's broader mission and goals.

Learning Outcomes / Goals

Learning outcomes are a set of specific goals that students should achieve by the time they complete their course of study. Learning outcomes should be specific and measurable, but writing them does not need to be an exercise in reduction, and the curriculum does not need to be narrowed in order to target and measure them. Learning outcomes can still reflect the lofty goals of the mission statement, as long as they are specific enough to serve as a model to students about the end result expected from their learning. The goals should describe content knowledge, skills developed, values, perspectives, and work practices expected of all program graduates.

Learning outcomes do not need to be developed from scratch by every program. In most disciplines, learning outcomes expected of graduates in the discipline have already been articulated by:

- Professional or labor organizations in the field
- Agencies that grant professional licensures or certifications in the field
- National organizations that accredit education programs in the discipline
- Organizations that represent the industries that employ graduates in the field

Ideas from all these different sources can be gathered, and the program can identify common themes or threads running through them. In addition, the programs should reflect on their *own* articulated vision for what knowledge, skills, and dispositions graduates should embody, and adapt the material they have found. In this way, the process of drafting learning outcomes can begin with research. But ultimately, existing material should be synthesized with the program's own articulated mission, vision, and goals.

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Generally speaking learning outcomes fall into one of three categories:
Knowledge - What does the student know?

Skills - What can the student do?

Dispositions - What does the student value?

Exercise in writing learning outcomes

Picture the *ideal* graduate of your program – not just the best graduate you have ever seen but the best graduate you could ever *hope* to see. Now imagine that you have to describe that graduate using 6-8 sentences. These sentences can be long, but each should have a discernible theme. Try to cover all three categories listed above in your description. A lay-person in your field should be able to read your description and get a fairly good sense of both what is expected of graduates in your discipline, and what your program values.

Questions to assist in writing outcomes:

1. What concepts and principles should students be able to apply? (i.e. civic engagement, skills for lifelong learning)
2. What important cognitive skills should students develop? (i.e. written communication, oral communication)
3. What social and affective skills should students develop? (i.e. teamwork)
4. What metacognitive skills should students develop? (i.e. problem solving, research strategies)
5. What types of problems should students be able to solve? (i.e. inquiry and analysis, information literacy)

Next, rewrite the sentences of your description as a numbered list. These 6-8

sentences are probably a good first draft of program learning outcomes that broadly state what graduates should know, value, and be able to do:

1.

2.

3.

4.

5.

6.

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Components of Learning Outcomes

Student learning outcomes are defined in terms of the knowledge, skills, and abilities that a student has attained after going through the program. However, a rich and complex outcome – respect for diversity or written communication, for instance – is really achieved through the complex interaction of smaller, more operational skills. To give students clear usable feedback, outcomes are divided into components. Some best practices for writing components are:

- Identify 5-10 per outcome
- Observable
- Measurable
- Performance-based

The result should be a two-level hierarchical list in which each learning outcome is made of more specific **components**.

- Outcome 1
    - Component 1
    - Component 2
    - Component 3
    - Component 4
- Outcome 2
    - Component 1
    - Component 2

Components should use richly descriptions and active verbs. Avoid constructions such as:

- "The student **knows…"** or
- **"**The student **understands…"**

The emphasis should be on how the student **demonstrates** understanding in a demonstrable way. The following tables provide examples of descriptive verbs that can be used when writing components:

Knowledge Verbs

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Cite	Describe	Apply	Analyze	Arrange	Appraise
Define	Discuss	Assign	Appraise	Assemble	Assess
Give	Explain	Demonstrate	Calculate	Collect	Check
Label	Express	Dramatize	Categorize	Combine	Choose
List	Identify	Employ	Compare	Compose	Compare
Match	Locate	Illustrate	Contract	Conclude	Critique
Name	Recognize	Interpret	Criticize	Construct	Decide on/to
Recall	Report	Operate	Debate	Create	Discriminate
Record	Restate	Practice	Diagram	Design	Estimate
Relate	Review	Schedule	Differentiate	Determine	Evaluate
Select	Tell	Shop	Distinguish	Diagnose	Grade
State	Translate	Sketch	Examine	Differentiate	Inspect
Tell		Use	Experiment	Dissect	Judge
Underline			Inspect	Examine	Measure
Write			Inventory	Formulate	Monitor
			Relate	Manage	Rank/Rate
			Solve	Organize	Research
			Test	Plan	Review
				Prepare	Revise
				Propose	Score
				Refute	Select

Disposition Verbs

Receiving	Responding	Valuing	Organizing	Characterizing
Listen to	Reply	Attain	Organize	Believe
Perceive	Answer	Assume	Select	Practice
Be alert to	Follow along	Support	Judge	Continue to
Show tolerance of	Approve	Participate	Decide	Carry out
Obey	Continue		Identify with	

Skills Verbs

Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
Assemble	Diagram	Implement	Package	Refill	Sketch
Attach	Dictate	Inspect	Perform	Regulate	Sort
Balance	Direct	Instruct	Plant	Renovate	Splice
Build	Dismantle	Interview	Portion	Repair	Stratify
Bundle	Document	Lift	Position	Replace	Sterilize
Calibrate	Draw	Line	Prepare	Reproduce	Tape
Care for	Duplicate	Load/reload	Press	Retrieve	Terminate
Clean	Edit	Locate	Process	Route	Transfer
Code	Execute	Log	Program	Save	Treat
Collate	Fix	Make	Proofread	Search	Trim
Collect	Format	Manage	Propagate	Secure	Troubleshoot
Conduct	Gather	Measure	Prove	Select	Verify

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***Create a list of measurable components (preferably 3-6) for one of your outcomes.*

1.

2.

3.

4.

5.

6.

Methods and Process of Assessment

Rubrics assess the specific criteria and standards for student performance on a selected task.

Rubrics

The Anatomy of a Rubric

	Performance Level	Performance Level	Performance Level	Performance Level
Element Language (Alignment to component)	Performance Descriptor	Performance Descriptor	Performance Descriptor	Performance Descriptor
Element Language (Alignment to component)	Performance Descriptor	Performance Descriptor	Performance Descriptor	Performance Descriptor
Element Language (Alignment to component)	Performance Descriptor	Performance Descriptor	Performance Descriptor	Performance Descriptor
Overall Assessment Language (Alignment to Outcome)	Performance Descriptor	Performance Descriptor	Performance Descriptor	Performance Descriptor

Definitions and Vocabulary

Element – The row of an assessment rubric, aligned to one of the specific, measurable components of the learning outcome being measured.

Performance Levels: The columns of the rubric. Each column should have a general descriptor of the level of performance (e.g. Exemplary, Satisfactory, Unsatisfactory) Collectively, performance levels are referred to as the "scale" of the rubric.

BEST PRACTICE: The performance scale should range from three to six levels. Both the number of levels and their titles should be consistent among different rubrics for measuring a unit's learning outcomes.

Performance Descriptors: In the cells where elements and levels intersect, include a qualitative or quantitative description of what a learner must achieve in order to attain a score at a designated performance level. To enhance the statistical reliability of the rubric, make performance descriptors along the row substantively different from one another. If the performance descriptors in an element are identical with the exception of a single adjective, then the instructor's assessment will rest only on their subjective definition of that one word.

RESOURCE:

For examples of well-composed rubrics to assess rich and complex learning outcomes, see AAC&U's VALUE rubrics, http://www.aacu.org/value/rubrics

NOTE: Try to avoid relying on comparative language when writing performance descriptors. (i.e. do not define the highest level of performance as "thorough and accurate" and the middle level of performance as "less thorough and less accurate")

A Rubric to Assess a Rubric

This rubric is both an example of an instrument that can be used to assess a task, and also a tool that can be used to check that a rubric you have created follows best practices.

	Target	Acceptable	Unacceptable
Performance Scale	Performance levels are clearly defined and consistent with other rubrics measuring learning outcomes for the unit both in the number of levels and their titles	Performance levels are clearly defined. The rubric has the same number of levels as other rubrics mearuring learning outcomes for the unit.	Performance levels are not clear. The rubrics developed to measure learning outcomes in the unit have inconsistent performance scales
Performance Descriptors	Performance descriptor cells have one expectation per cell.	Most performance descriptors have one expectation per cell	Performance descriptor cells inappropriately include multiple expectations per cell
Verbiage	Performance Descriptors and components are written in rich, operational language that make criterion clear	Performance Descriptors and components are mostly clear and adequately describe the criteria	Performance Descriptors and components are written in vague or subjective language.

Curriculum Map

Once common instruments have been developed to assess learning outcomes, the unit must consider which courses and program components contain teaching and learning directed toward achieving these specific student learning outcomes.

Use these questions to guide the task-identification process:

1. Does the task match specific instructional intentions?
2. Does the task represent the content and skills you expect students to attain during the program?
3. Does the task enable students to demonstrate their progress and/or capabilities?
4. Can the task measure several outcomes at one time?

A curriculum map is a guiding document that gives a simple visual indication of where in a program different learning outcomes are assessed. **Checkpoints** make up the columns of the curriculum map and may be: required courses, internship or field experiences, committee assessments, portfolio reviews, or any other common experience or activity students complete in the program. **Outcomes** make up the rows of the curriculum map and are the same as the outcomes discussed above.

The cells indicate both when the assessment instrument is used and may also include a brief description of the specific activity or assignment.

Outcome	Checkpoint 1	Checkpoint 2	Checkpoint 3
Outcome 1			Portfolio Review Panel
Outcome 2	Philosophy Statement Essay		Portfolio Review Panel
Outcome 3			Portfolio Review Panel
Outcome 4			Portfolio Review Panel
Outcome 5		Field Observation	Portfolio Review Panel
Outcome 6	Oral Presentation		Portfolio Review Panel

Note: It is recommended to assess outcomes at more than one checkpoint to show growth over time.

Review of the Assessment Plan

The assessment plan can be used for departmental planning as well as for institution-based and accreditation-based assessment. Self-assessment and review of the plan will allow for valuable feedback and improvement of the process. During the review, comments can be added to show strengths and areas of improvement.

Assessment Plan Checklist

Mission and Goals:

- Does the mission statement reflect the institution's mission and describe what the program is trying to accomplish?
- Do the goals describe what a graduate should know, value, and do upon completion of the program?

Learning Outcomes:

- Do the learning outcomes appropriately reflect the program's mission and goals?
- Do the learning outcomes clearly state what a graduate of the program will know or be able to do upon graduation?

Methods of Assessment:

- Are the assessment methods appropriate for each learning goal?
- Do at least some of the assessment methods provide direct evidence of student learning?

Curricular Mapping:

- Will all of the outcomes be assessed at multiple points in the program (i.e. beginning, middle, and end)?

Conclusion

Assessment is an integral part of any academic program. The benefits of developing a broad and deep assessment strategy go well beyond demonstrating compliance with accreditation, program review, or state accountability requirements. With proper planning and reflection along the way, assessment can be built around the activities, courses, and evaluation time that are already a part of the informal assessment work that instructors do every day. By collaboratively building the same authentic process outward, programs and institutions are able to identify areas of strength and promote growth to improve teaching and learning. The assessment planning process will ensure informed decision making and accountability at all levels, and more importantly, inform the curricular decisions that improve student learning.