

# Student Learning Assessment

A “Train-the Assessors” workshop developed in collaboration with:

- The Office of Institutional Effectiveness (OIE)
- Student Learning Assessment Committee (SLAC)
- Institutional and Student Learning Assessment Middle States Self-Study Working Group

December 8, 2011



# Student Learning Assessment Workshop

## Objectives

**At the end of this “Train the Assessors” Workshop, participants will be able to:**

1. State the purpose for conducting assessment and the value of that assessment being student learning focused
2. List the basic “building blocks” of an assessment plan
3. Define the following: mission, vision, objectives, student learning outcomes, assessment, targets/criteria
4. Write a student learning outcome
5. Construct a direct assessment to assess student learning
6. Identify and rate several assessment methodologies based on appropriateness
7. Confidently facilitate this workshop for other faculty and administrator audiences

# 1. Purpose of Student Learning Assessment

**Assessment** answers the following questions:

- How do we know we've accomplished what we've set out to accomplish?
- Did we realize our purpose?
- As a result of existing, are we improving student learning?

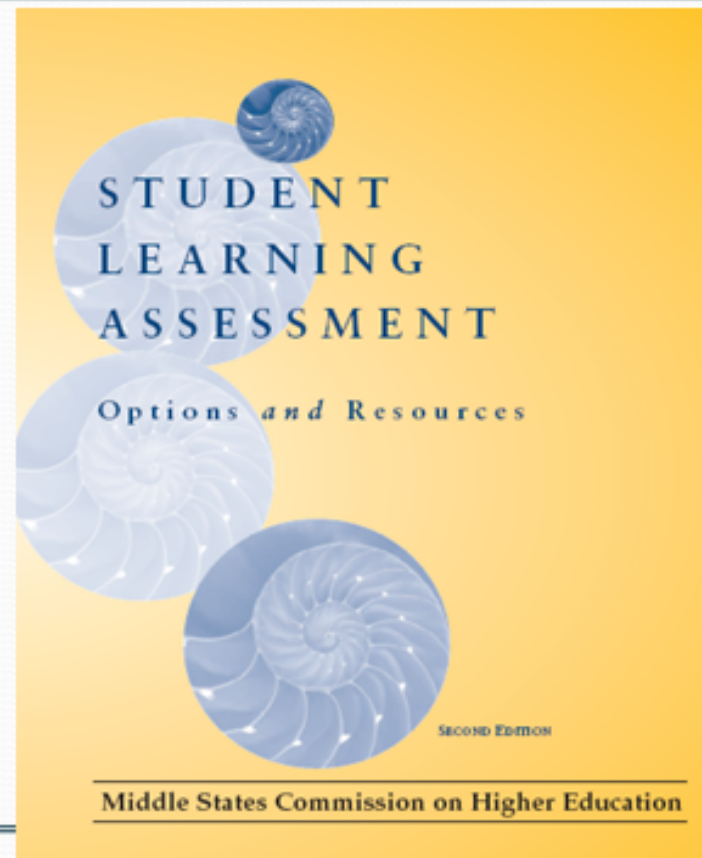
# 1. Purpose of Student Learning Assessment

Why? Department of Education → The Higher Education Act (HEA) → Middle States Commission on Higher Education



MIDDLE STATES COMMISSION  
ON HIGHER EDUCATION

**Standard 14** (14 standards):  
Assessment of student learning demonstrates that the institution's students have knowledge, skills, and competencies consistent with *institutional goals* and that students at graduation have achieved appropriate higher education goals.



# 2 & 3. Building Blocks of Assessment

## **Mission-**

What's the purpose of the program or service

## **Objectives-**

General aims of the program

## **Student Learning Outcomes-**

Clearly articulated statements of what students are expected to learn

# 2 & 3. Building Blocks of Assessment

## Assessment Targets or Criteria-

- To what extent are students expected to learn
- Two parts:
  1. *Level of proficiency*: indicates that the student work being evaluated is acceptable
  2. *Standard*: How many of the students need to meet that level of proficiency for the student learning outcome to be deemed as “met” or “achieved”?

## Assessment-

Methods used to collect evidence of student learning.

Assessment (results) answers the question, “*How do we know*”?

# 4. Write a Student Learning Outcome

## Student Learning Outcomes-

- Clearly articulated statements of what students are expected to learn
- What is should be known, demonstrated, or achieved to be considered successful in the program
- Also includes topic/content area & context
- Three “types” of learning:
  - cognitive- knowledge
  - skills and
  - affective- feelings
- Ex. Successful graduates will be able to correctly **apply** at least two methods to **validate** student perception surveys

Demonstrate

Context

Topic/content area

# 4. Write a Student Learning Outcome

## Student Learning Outcomes HELP:

- FACULTY

Can select and organize program and course content  
Determine appropriate assessments and instructional strategies

- STUDENTS

Are given clear set of expectations  
Direct their learning efforts and monitor their own progress

- STAKEHOLDERS and CONSTITUENTS

Appreciate the monitoring of student progress and academic quality  
Continuous improvement of student learning



# 4. Write a Student Learning Outcome

Bloom's Taxonomy for categorizing learning outcomes in educational settings. The three categories in his schema are cognitive, affective, and psychomotor. The cognitive category is divided into lower-level skills through higher-level skills.

<b>Cognitive (knowing, awareness, insights)</b>	<b>Possible verbs to use</b>					
<i>Knowledge</i> (Recalling information)	define repeat	memorize name state	list relate	recall label	repeat select	
<i>Comprehension</i> (Explaining information)	restate report	discuss explain	describe express	identify recognize	locate interpret	
<i>Application</i> (Solving closed-ended problems)	translate discover	apply predict	practice change	illustrate compute	operate demonstrate	
<i>Analysis</i> (Solving open-ended problems)	identify contrast	analyze examine	criticize test	compare infer	differentiate distinguish	
<i>Synthesis</i> (Creating “unique” answers to problems)	design manage	compose construct	plan revise	create rewrite	formulate explain	
<i>Evaluation</i> (Making critical judgments based on a sound knowledge base)	judge appraise	evaluate conclude	value critique	compute discriminate	assess support	

# 4. Write a Student Learning Outcome

	Possible verbs to use
<i>Affective</i> (attitudes, appreciations, relationships)	claims   cooperates   defends   joins   shares avoids   assists   helps   selects   attempts

	Possible verbs to use
<i>Psychomotor</i> (action)	creates   designs   composes   place   align follows   display   moves   shows   reproduce

# 4. Write a Student Learning Outcome

## School of Science Goals

- Clearly express scientific ideas using oral, visual and written communication.
- Apply the scientific method and critical thinking skills to raise questions and define and solve problems.

## Mathematics Student Learning Outcome

- Communicate mathematical ideas with clarity and coherence through writing and speaking.
  - Apply mathematical models to phenomena of the natural world.
  - Make conjectures and prove propositions within the axiomatic structures of mathematics.
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## School of Liberal Arts Goal

- Apply appropriate technologies in their academic pursuits.

## Sociology Student Learning Outcome

- Students will apply their understanding/ mastery of qualitative, quantitative research methodologies, and SPSS to effectively communicate sociological research findings.
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## School of Business Goal

- Think critically and creatively to solve complex organizational problems using appropriate analytic and quantitative techniques and integrating knowledge and skills from various disciplines.

## Management Student Learning Outcome

- Solve complex organizational problems by applying management theory and skills, integrating knowledge from multiple disciplines, and conducting independent research.

# 5. Identify & Construct Direct Assessments

Five types of assessments:

1. Direct measures
2. Indirect measures
3. Program and department processes
4. Curriculum mapping
5. Institutional Data

# 5. Identify & Construct Direct Assessments

## Five types of assessments

### 1. Direct Measures of Assessments

Require students to demonstrate their learning

#### Examples:

- Capstone projects
- Case studies
- Essays
- Minute papers
- Research papers
- Course embedded assignments
- Course test items
- Portfolio assignments (standard across the program)
- Examinations and tests
- National standardized examinations and tests
- Case studies
- Certification and licensure exams

# 5. Identify & Construct Direct Assessments

## Five types of assessments

### 2. Indirect Measures of Assessments

Ask participants about their perceptions or level of satisfaction

#### Examples:

- Surveys
- Alumni surveys
- Employer surveys
- Graduating seniors and graduates surveys
- Non-returning student survey
- Point of service surveys
- Focus groups
- Interviews

# 5. Identify & Construct Direct Assessments

## Five types of assessments

### 3. Program and department processes

Methods used to assess academic activities and services related to student learning (e.g., advising, computer assistance, tutoring, content and curriculum, teaching, readiness for graduate school and the workplace).

# 5. Identify & Construct Direct Assessments

## Five types of assessments

### 4. Curriculum Mapping

- Helps to see if there is alignment in the content of the courses in an academic program with the program student learning outcomes.
- Identifying the level of mastery to evaluate if adequate coverage, rigor, & depth

Student Learning Outcome	Course I	Course II	Course III	Course IV
Student Learning Outcome 1	Define	Design		
Student Learning Outcome 2	Classification			Choose
Student Learning Outcome 3	Predict		Examine	Evaluate



# 5. Identify & Construct Direct Assessments

Five types of assessments:

## 5. Institutional data

Good indicators of student success, student engagement, student involvement in their own learning

Examples:

- Retention and graduation rates
- Pass rates in subsequent courses
- Campus and community engagement
- Number of Major Changes

# POST SCRIPT: Assessment Methodology

## Assessment methodology considerations

- Outcome(s) should be appropriate for the outcome
- Easily interpreted and unambiguous
- Managed internally
- Pilot study
- Use of **multiple** assessment measures and from different sources
- Normed reference tests provide comparative data
- Both qualitative and quantitative assessment data can be equally effective in ascertaining student achievement
- Use **existing** instruments
- Assessments that are already in use for specialized program accreditations
- Consider resources needed
- Reliability
- Validity

# POST SCRIPT: Assessment Results

## Compiling assessment results recommendations

### Aggregate by:

- Average, median
- Use min, max
- Identify outliers

### List weaknesses & strengths:

- Identify variations in performance

Aggregate by student groups not just overall

Triangulate multiple sources of assessment

# POST SCRIPT: Use of Assessment Results

## Changes to Curriculum

- changes in pedagogical practice revision or enforcement of prerequisites
- revision of course(s) sequence
- revision of content sequence within a course
- revision of course content
- addition of course(s)
- deletion of course(s)

## Changes to Academic Processes

- modification of frequency or schedule of course offerings
- improvements of technology
- revision of advising standards or processes
- revision of admission criteria

## Changes to Resources

- changes in faculty and staff
- implement additional training
- other implemented or planned change

## Changes to Assessment Plan

- revision of intended learning outcome statement(s)
- revision of measurement approaches
- collection of and analysis of additional data and information
- changes of data collection methods

# POST SCRIPT: Existing Sources

Office of Institutional Effectiveness:

Email: [Assess@siena.edu](mailto:Assess@siena.edu)

Web site: <http://www.siena.edu/pages/6979.asp>

# Questions

## Participant Questions

### Participant Survey:

1. Most helpful
2. Least helpful
3. Improve...
4. What else should be included
5. Other Comments/Suggestions