

Selecting Assessment Measures

Assessment measures are products of student work that have been identified for evaluation of students' proficiency or mastery of a learning outcome.

Why can't I just use course grades?

- Course grades typically incorporate criteria – such as attendance, participation, and effort – that are not direct measures of learning.
- Impossible to standardize syllabi, or grading of assignments by each instructor of a course.
- With respect to validity, course grades are limited because evidence to support the students' mastery of the learning outcome cannot be adequately established (AERA, APA, & NCME, p. 11.)
- Course grades thwart the process of systematically examining patterns of student learning across courses and programs

Source: Carnegie Mellon University – Eberly Center

What should I look for when selecting an assessment measure for my program?

Measures should...

- Be collected at the individual student level (no group assignments)
- Clearly relate to the learning outcome (valid)
- Be direct measures of student learning (evidence from student work products) and not based on student progression or opinion e.g., surveys, graduation rates, course completions)
- Provide meaningful and useful information
- Incorporate what you already have in place e.g., Course-embedded assessment measures
- Include an ambitious but attainable performance target or benchmark

What are different types of assessment measures?

Assessment measures are classified as either direct or indirect. Direct assessment measures are typically tangible work products that students developed while in the course of the program and can be evaluated objectively. Examples of assessment measures include:

- **Examinations:** select specific questions or to insert specific questions into an exam (often the Final Exam) to be used to assess specific course learning objectives.
- **Course papers, essays, research papers and projects**
- **Performances and speaking opportunities**
- **Field Experiences, lab reports and internships:** Student reports which are produced in field experiences, laboratory experiments or reflective evaluations of internship experiences can be used to assess their learning in such course activities.

- **Pre/Post tests:** A knowledge assessment instrument that is administered in the beginning and at the end of the course
- **Student portfolios:** A collection of different assessment activities for which a student may be evaluated
- **Capstone evaluations:** Is an assessment of the general education experience within a given major. It evaluates the development of skills in content and application throughout the general education program

Indirect assessment methods provide some indication that students have acquired some level of knowledge but do not incorporate the collection and evaluation of student work products that tell specifically what students have learned in the program. For example, consider the comprehensive exam for a doctoral program as an assessment measure.

Distinguishing between direct and indirect measures

Example: The Comprehensive Exam

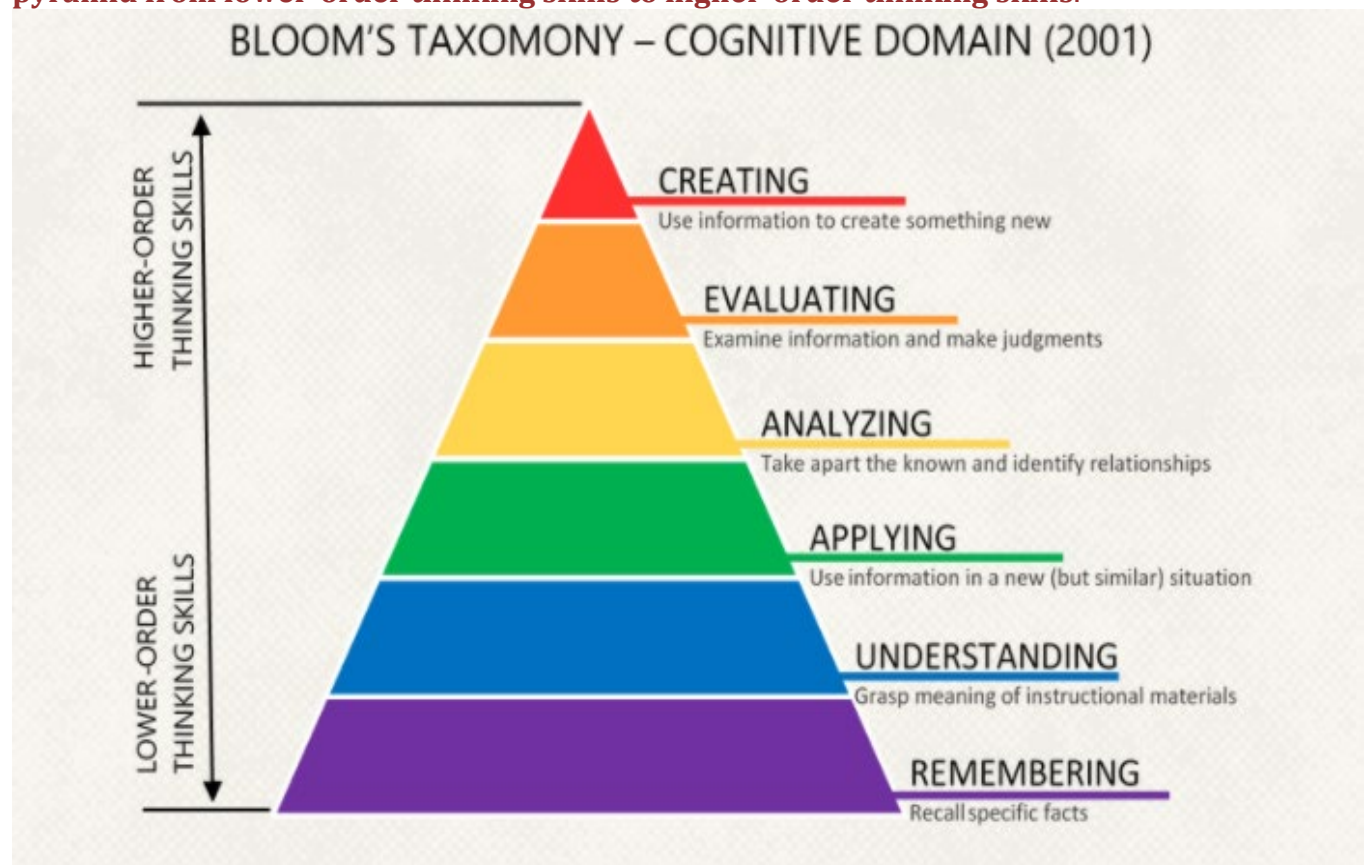
Direct Measure	Indirect Measure
Identify topic(s) to be tested in the comprehensive exam that are evidence of student mastery of a particular learning outcome. A representative from the student's comprehensive exam committee rates the student's proficiency on that topic using a scoring guide.	Reporting the number of students in the program who complete and/or successfully pass the comprehensive exam by a particular point in the program.

Certainly, reporting the numbers of students passing the comprehensive exam reflects that some students are progressing through the program. However, because there is variation across programs regarding the content and rigor of a comprehensive exam, a direct assessment of students' performance on specific criteria is preferred.

How do I select a good measure for a particular learning outcome? ...Consult Bloom's Taxonomy

In 1948, a group of educators began classifying educational goals and outcomes. The original Taxonomy of Educational Objectives, was created by Benjamin Bloom in 1956 and is commonly referred to as Bloom's Taxonomy. Bloom outlined six main categories of cognitive learning: knowledge, comprehension, application, analysis, synthesis, and evaluation. In 2001, the category names were revised from nouns to verbs.

Diagram showing the Bloom's Taxonomy for the cognitive domain arranged as a pyramid from lower-order thinking skills to higher-order thinking skills.



When selecting an assessment measure choose an assignment or activity that requires the student to deploy an appropriate level of thinking as described in Bloom's taxonomy that is both

- 1) required for the successful completion of the assignment/activity and
- 2) desired of students at a specific level in the academic program

By doing this, the program can confidently report that the assessment measure is a valid measure and can serve as evidence of the student's proficiency with the associated learning outcome.

Examples of Assessment Measures:

Example 1 - Assessment Measures for an Undergraduate Teaching Program

CURRICULUM | MEASURES 2018-19 List of Key Assessments

Type and Number of Assessment ¹	Name of Assessment	Type or Form of Assessment	When the Assessment is Administered
Assessment #1: Content Knowledge – Licensure Tests	Praxis II Exams	State Licensure Test	Program completion
Assessment #2: Content Knowledge – as assessment of general content knowledge in discipline to be taught	Electronic Portfolio (EDML 584)	Portfolio	Program completion
Assessment #3: Pedagogical and Professional Knowledge and Skills – Planning instruction and assessment	Video Case Lessons & Reflections (Methods courses)	Project	Fall, Senior Year
Assessment #4: Pedagogical and Professional Knowledge and Skills – Student teaching assessment with legal/safety/ethical issues	SC 4.0 ML addendum (598 & 599)	Performance evaluation	Fall & Spring, Senior Year
Assessment #5: Candidate Impact on Student Learning	EDRM 423 Assessment Item	Class assignment	Fall, Senior Year
Assessment #6: Professional Responsibilities (often needed but for some optional)	EDML 471 Text Set Assignment	Project	Fall, Junior Year
Assessment #7: optional assessment	EDML 321 Service Learning Assignment	Field-based assignment	Spring, Junior Year
Assessment #8: optional assessment	EDTE 522 Integrated Curriculum Project	Project	Fall, Senior Year

¹As required by [AMLE].

Key assessment student instructions, rubrics and scoring sheets are attached.

^aAs required by [Association of Middle Level Education].

Example 2 - Assessment Measures for a Doctoral Program

Learning Goals	Program Activities	Assessment Measures
Knowledge of Theories and Concepts	Qualifying examinations	Evaluation Rubric for Comprehensive & Qualifying Exams
	Comprehensive examinations	Evaluation Rubric for Comprehensive & Qualifying Exams
	Dissertation Defense	Evaluation Rubric for Dissertation
	Dissertation Proposal	Evaluation Rubric for Dissertation Proposal
Analytical Skills	Qualifying examinations	Evaluation Rubric for Comprehensive & Qualifying Exams
	Comprehensive examinations	Evaluation Rubric for Comprehensive & Qualifying Exams
	Dissertation Defense	Evaluation Rubric for Dissertation
	Dissertation Proposal	Evaluation Rubric for Dissertation Proposal
Original Research	Dissertation Defense	Evaluation Rubric for Dissertation
	Dissertation Proposal	Evaluation Rubric for Dissertation Proposal
Effective Communication	CBC Communications Assessments (incoming students)	Evaluation Rubric for Oral Communications Assessments
	Job Talks, Brown Bag sessions, Other (exiting students)	Evaluation Rubric for Oral Communications Assessments
Student Teaching	Teaching evaluations done by faculty in the department	Evaluation Rubric for Doctoral Student Teaching
Indirect assessment methods		
Alumni Surveys		Web Based Survey