

Assessment

Assessment in higher education shapes the experience of students and influences their behaviour even more than the teaching they receive. (Gibbs & Simpson, 2004)

What is Assessment?

Assessment is a central element in the overall quality of teaching and learning in higher education. Assessment of students' learning can take many forms including essays, portfolios, tests, performances, presentations, design proposals, and more.

The quality of assessment procedures can be enhanced at each of the three distinct stages of:

- Establishing expectations for what students will learn and how they will demonstrate their learning
- Selecting a type of assessment that matches the learning objectives
- Providing effective feedback to provide to students

1. Establishing Expectations

The first step in assessment of learning is to clearly articulate your expectations for what students will learn and how they can demonstrate this learning. These expectations form the basis of later decisions about types of assessment and feedback.

Identifying Expectations

An efficient approach to identifying learning expectations is to draw on established learning frameworks such as Bloom's Taxonomy (Bloom, 1956) and ICE (Fostaty Young & Wilson (2000). Learning frameworks organize the many potential forms of learning into a concise structure detailing what is to be learned and at what level. The ICE learning framework (which stands for Ideas, Connections, and Extensions) was conceptualized by Wilson (1996) and fully developed by Fostaty Young & Wilson (2000) based on a natural learning progression where student understanding deepens gradually:

| ICE Model | |
|-------------|---|
| Ideas | Ideas represent the building blocks of learning. They can be: discrete 'chunks' of information; facts, definitions, vocabulary, steps in a process; or discrete skills. Assessed by tasks requiring (or allowing) recall and repetition of information from books or from lectures. |
| Connections | At the subject or topic level, connections are made by making appropriate links between |

| | |
|------------|--|
| | ideas (or chunks of information). At the personal or broader level, connections are made by relating new knowledge to what is already known, in a course, in other courses, or in a student's personal or professional experience. |
| Extensions | Extensions involve re-working students' knowledge and understanding by extrapolating, predicting outcomes or working out implications. |

To use the ICE framework, identify course content in terms of basic ideas, subject connections and personal or broader connections, then further extensions to learning that involve greater critical thinking. For more information about the ICE model, refer to the Resources section at the bottom of this page.

Writing Learning Objectives

After generating ideas about expectations for students' learning, the next challenge is writing the learning objective. As the terms "understand" and "learn" are vague, more precise words such as arrange, propose, compare, and illustrate are preferred. Expectations designed based on the ICE learning framework can be cognitive, affective or psychomotor domains and thus expressed with one of the over 180 sample action words for stating learning objectives.

Communicating Expectations

Learning objective can be communicated to students verbally during lectures, in writing on the syllabus, online in Moodle or the course website, and within descriptions of upcoming assessments. The expectations need to also be communicated to whoever is evaluating your students as graders, field-placement supervisors, peer-reviewers, and students when self-reviewing.

Written guidelines and rubrics can convey the expectations to both students and evaluators about what will be learned and what level of demonstrated learning is worth what grade. Rubrics are scoring guides; appearing in chart form, they outline explicit criteria across progressive levels of performance. When rubrics are well constructed, they have the additional benefit of helping students plan for appropriate assignments when provided in advance of deadlines, and post-feedback improvement when provided after submitting. For more information about rubrics, please refer to our rubrics page.

2. Selecting a method of assessment

The most appropriate assessment is determined by the level (ideas, connections or extensions), domain (cognitive, affective or psychomotor), and course context (students, program goals, resources). In general, assessment can support student learning when designed to:

- Provide students with ample opportunities and methods for engaging with the course material.
- Allocate appropriate time and level of engagement with the material.
- Identify or build on existing skills to engage students in productive learning

Traditional Assessment methods:

- Fill-in-the-blanks
- Matching
- Multiple-choice
- True/False
- Essay Questions

Alternative Assessments

For Presenting Summarized Information:

- Video, Audio or Podcasting - a video or audio clip often online
- Concept map - a visual display of concepts and their connections
- Field Trip Report or Lab report - summarize the experience and findings
- Chapter summary, Book Report, Annotated Bibliography
- Portfolios or Scrapbooks - collections documenting growth or successes
- Speech, Travelogue or Monologue - recorded or in-person description
- Journal - reflective or descriptive, short one-time or ongoing writing
- Wiki - a collaborative space for co-creating summaries and sharing ideas
- Observation or Transcript - a record of a scripted or natural instance
- Posters - online or simultaneous presentations in class of brief summaries

For Creating Something New:

- Design - plan, document and propose a new approach or entity
- Blueprint or map - visual display of an idea
- Puzzle or Games - create activity to share newly acquired knowledge
- Virtual Tour or Tour - show spaces and places
- Performance - a scripted or improve expression of a concept or recreation
- Software development or model creation - sample or working version
- Audition - prepare and perform in a competitive environment
- Composition - create a written or performed collection of material

For Responding:

- Games - trivia, jeopardy as class or teams, during class
- Inventory or Survey - find out general trends in community or your class
- Quiz/Pop Quiz - quick clickers or paper measure of individuals knowledge
- Readiness Assessment - pre-testing at the start of a session

- Debate - dual or multi-sided discussion with pre-set positions, can have audience participant, judge or allow for switching sides
- Discussion - collaborative sharing of individuals' unique ideas
- Critique - evaluate and offer rationales, evidence, and alternatives
- Problem solving - engaging in often real-world challenges, applying ideas

For Student involvement in assessing:

- Measure participation in class or in discussion forums
- Include peer assessment, where students evaluate or provide feedback on each other's work or contribution in a group
- Self-evaluation asks students to reflect on and assess their own work

For more support in selecting appropriate assessment methods, contact the CTL to book a consultation or visit our resource library.

3. Providing Effective Feedback

Feedback is an opportunity to support students by identifying current strengths and areas of improvement, indicate specific ways students can improve, or provide an evaluation of the level achieved by the end of a course. The type, timing and focus of feedback depend on what are the aims for each assessment.

Purpose of assessment

Assessment can serve several goals related to student learning including:

- Diagnostic - to determine baseline ability
- Formative - provide initial feedback to support improvement
- Summative - identifying achieved performance level

These goals determine the amount of feedback the students need to receive and the type of feedback. For example, a total grade may be appropriate for summative evaluations, while formative is more effective when a grade is broken down by criteria with information about their current skill level and what a higher skill level looks like. Detailed rubrics can provide informative feedback quickly, while simplified rubrics provided quick totals.

Diagnostic Feedback

Diagnostic assessments provide a baseline level to which later achievement by individuals or the class can be compared. Feedback is primarily a score or other indicator of skill or knowledge level. Such information can be useful for instructors planning a course's content, pace or assessed skill level, and for students to realize how much they will need to learn to achieve course or career goals. Students' improvement from based could be recognized and rewarded informally (e.g., by congratulating a class on doubling their average), or formally by including improvement

as criteria for grades or other formal rewards. One challenge for use as a formal criteria is that individuals near the top have less room to grow than individuals with low scores.

Formative feedback

The purpose of formative feedback is to guide students in further learning by highlighting what they have done well and indicating how and where they can improve. The feedback needs to be timely, so it is received by students when it still matters to them and they can apply it to further learning.

Providing relevant feedback:

- Use a scoring key or rubric explicitly tied to learning objectives
- Specify the level of learning to occur according to a learning framework, such as ICE
- Articulate high and clear expectations and available resources within the course and on campus

Match the focus and level of detail given to:

- Where can this student change for the greatest improvement value?
- How students will need to apply the feedback in the future?
- How much time will students have to review the feedback?

Offer selective criticism.

- Choose 2-3 things that are a priority.
- Make it clear that you have focused on the most important things for them to work on and tell them what grade they can reasonably expect if they make these changes. For example: "To turn this into a paper that merits a passing grade, you would need to..."
- Offer an honest appraisal communicated kindly to avoid demotivating students. For example: "Define concepts early in your paper" versus "Confusing!"

Summative Feedback

Indicating final achievement level, summative feedback usually comprises of a total grade broken down across specific criteria for the purpose of accountability and clarity when later reviewing any students' grades. Feedback on how to improve is minimal or provided only as requested. Although the purpose of an assessment is summative, an option for formative feedback might be provided as courses do build on each other. In this scenario, an instructor would ask students to indicate if they would like to receive comments and only those who requested such formative feedback received it in addition to their summative grades. Rubrics can be designed to provide concise summative grades as well as formative comments.