

Student Assessment

Introduction

Student assessment is one of the key issues in education. How do we know if students have learned what we are trying to teach them? There are multiple forms of assessment available. We believe that offering varied methods is the best model. You will find in the following documents some examples of different types of assessment, and how some MSU faculty have used them. You will also find resources and guides.

Assessing Student Performance

Assessing student performance in an online course is similar to classroom assessment. Frequent assessment helps students keep pace with content requirements.

Assessment can be based on writing an individual paper, preparing a group presentation, class participation, attendance, homework problem sets, exams (essay, short answer, multiple choice, true/false), and so on. Alternatively, when a student performs a task rather than taking a test, it is called performance assessment.

Examples of performance assessment include: debating a topic; demonstrating a skill; conducting an experiment and writing the results; doing a project; or compiling a portfolio of work.

Ideally the assessment process informs the teacher and the learner about learner progress and at the same time, contributes to the learning process. In theory, good assessment:

- Measures meaningful learning outcomes
- Does so in a fair, reliable, accurate way
- Is easy to administer, score, and interpret
- Informs the teacher about student performance and how they are interpreting course experiences
- Results in meaningful feedback to the learner
- Is itself a learning experience

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Feedback on Assessment

Feedback is a very important part of learning. Feedback is the mechanism that lets the learner know whether they are on the right track. The dictionary.com (<http://dictionary.reference.com/>) definition of feedback is "The return of information about the result of a process or activity; an evaluative response."

Assessment and measurement strategies provide feedback to both the student and instructor. Students learn more effectively if they receive frequent, meaningful, and rapid feedback. Feedback may come from the instructor directly, from assignments and assessments which have feedback built into them, or even from other students.

Feedback to learners about where they are and where their instructors want them to be comes in many different ways, such as:

- Instructor participation in a discussion assignment
- Writing assignments that require submission of a draft for instructor comments and suggestions for improvement
- Self-mastery tests and quizzes that include informative feedback with each answer choice
- Interactive games and simulations that have feedback built in

Technology can provide automated assessments which provide instant right or wrong feedback. Interactive media provide feedback when they add a visual change to indicate mouseover, or a sound to accompany an action. This very simple form of feedback lets the learner know their input has been received. More sophisticated technologies can offer constructive criticism. Technology can also help by gathering and organizing student performances and making it easy to offer feedback. However, human participation is often a necessary part of feedback.

What Assessments Will You Use?

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Measuring student learning is always a challenge no matter what the delivery format. Your choices are limited by time, resources and creativity. When thinking about student assessment in a course, the following questions may help decide how many and what types of assessments you will include in your course.

- What is it you want your students to learn? (see Assessment and learning objectives) (LINK)
- What do they already know? Is a pre-test needed to measure prior knowledge?
- Which assessment methods match your teaching style?
- What assessment method will best test what your students learned?
- Will you test memorization or performance?
- Will these assessments be low or high stakes? (what portion of final grade)
- Should you use adaptive testing? (will the test adapt to user responses)
- How many assessments are sufficient? How many papers should you assign? How many quizzes and exams will be enough?
- Will the number of students affect the type of assessment you choose?
- How quickly will students receive feedback?
- How much time will you spend correcting or commenting on assessments?
- How much grading support will you have?

The types of assessments selected and the methods used for submitting assessments should be appropriate for the online learning environment, such as:

- Submission of text or media files by email or 'drop box'
- Exams given in a proctored testing center
- Quizzes with time limitations, printing disabled, and other security measures
- Multiple assessments which enable the instructor to become familiar with
- Individual students' work and which discourage 'proxy cheating' (someone other than the student completing and submitting work)

Examples that are not appropriate:

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- Required assessments that cannot be submitted online, such as a lab practicum in a science course
- A course in which the entire set of assessments consists of 5 multiple choice tests taken online, with no enforced time limit, the print function enabled, and minimal security features in place

Pre-Testing

You might find it helpful to find out whether your students meet the basic knowledge and skill levels required to learn your materials. Use a pre-test to find out. Pre-tests are often paired with remedial materials.

Some instructors offer self-assessment pre-tests prior to the beginning day of class and offer students ways to catch up before the first day. Others provide time during the first week for students to do such things. Alternatively, you could pre-test prior to each module, week or topic.

Practice Exams

Practice exams and problem set homework are popular with students in courses which use exams for grading. Students who complete a practice exam usually encounter fewer problems on the official exam. Technical problems have been worked out, and the student knows what to expect in terms of types of questions.

It's important to let the student know that practice exam questions will be similar to what they will find on their exams. However, the specifics will differ based on course content. For example, a nursing case study will be presented and students will need to identify specifics relating to the case. In exam, they will view case studies, but the details will differ. Students are very likely to complete a practice exam which parallels the real exam even though it does not count toward their grade.

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Subjective Assessment

In subjective assessments the teacher's judgment determines the grade. These include essay tests. Essay tests take longer to answer and they take longer to grade than objective questions and therefore only include a small number of questions, focusing on complex concepts.

Objective Assessment

Objective assessments (usually multiple choice, true false, short answer) have correct answers. These are good for testing recall of facts and can be automated. Objective tests assume that there are true answers and assume that all students should learn the same things.

Self-Assessment

Self assessment types of assignments are provided for quick student feedback. Self assessments:

- Help the learner check if they have mastered a topic
- Provide opportunity to measure learning progress
- Are usually voluntary and may allow multiple attempts
- Inform the learner, but not the teacher
- Can occur whenever a performance activity is linked with feedback about that performance.

Self assessment examples:

- Practice quizzes
- Games, simulations, and other interactive exercises
- Practice written assignments
- Peer reviews
- True-false questions

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Interactive Assessments

Interactive experiences can be designed as spaces within which learner's can perform a task. These experiences can be graded or not. Interactive software can administer quizzes and give instant, usually fun, right-wrong feedback and perhaps explanations of right answers. Examples of interactive assessment:

- A simulator that lets learners virtually drive, facing the full range of driving challenges along the way. Simulators can be used both to teach and to test through performance in the simulation.
- Students could conduct a virtual experiment rather than an experiment in a physical laboratory
- Language software might have sophisticated speech recognition software to provide feedback about pronunciation
- Creation of an online tool, such as a virtual instrument. Students could perform a song, and the software provides feedback about accuracy and timing.
- A game where the goal is to find life in other solar systems. Making sound decisions about where to search, how to get there, and what to look for earns points but also shows that you are learning.

Group Projects

Group projects are more challenging in a fully online course because the online tools often must handle all collaboration. Students do not necessarily live in the same time zone or even on the same continent, there is no set class meeting time, and they may have vastly different schedules. Some online students do their classwork during the week, others work only on weekends. Some like the idea of meeting in-person with their group, others prefer asynchronous collaboration. A majority prefer not to do group work at all. Some students start and finish projects early (they always turn things in first) and others wait until the last minute. Invariably there will be complaints about group members who are not participating.

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In real life many projects are team efforts. There is a great deal of learning value in discussion and collaboration. Tools which can facilitate group collaboration include asynchronous discussion tools for group communication, file sharing to share and revise documents, and chat tools for real-time discussion.

Smaller groups are more manageable. Teams of two are easier to coordinate than larger teams, although some courses do groups of 5 or 6. It is important to carefully assign the groups based on when they like to work and how they prefer to collaborate. Define clear roles, and include peer review of group participation as part of the grade. You can ask students to keep a log of their process and procedures. Provide a "panic button" for students whose team members have disappeared, so you can help them either decide to work alone or connect with another group.

Proctored Exams

One anti-cheating strategy is to require students to arrange for a proctor at a local community college, university or library. The proctor is typically located by the student and approved by the instructor. The proctor checks photoID and monitors the student while they take the exam. Exams are submitted online, or in some cases, printed and faxed by the proctor to the instructor. This can be inconvenient for distant students to arrange and for the instructor to coordinate. MSU testing office participates in a free referral service that facilitates distance learning. If you are interested in learning more about this service please visit the MSU Testing Office and inquire about Distance Testing.

MSU Example

The LearnDAT online remedial math course, jointly offered by MSU and San Francisco State University, used five online exams and two proctored in-person exams. The math faculty at San Francisco State University have compared grades between the online and in person exams and found a high level of consistency in the grades, suggesting cheating is not occurring in the online exams. The instructional team is now much more confident in the integrity of the online exams. Their online

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exams have 20 questions, each question is drawn from a separate pool of five choices. The order of the questions and answers are randomized.

Students as Audience and Peer Review

In the classroom, time constraints prevent students from being able to review each others projects in detail. It is easy to post projects online where everyone can see them. The work is thus a public performance, a potential source of pride or embarrassment. It is helpful for other students to see the scope of work produced by others. They may be motivated on the next assignment by seeing other outstanding projects.

Peer review can be an effective learning technique. Taking on the role of judge is a different mode of understanding the goals of an assignment. Here is a form from Boise State University (<http://at.boisestate.edu/default.asp>) used to evaluate of peer group work.

Participation

Class participation can be an alternative method of assessing the student. A good way to encourage class participation is to make it part of the overall course grade. Class participation may include answering reflective questions in a course module, taking part in weekly class discussions, providing peer review critiques of fellow students' assignments, or locating and contributing online resources to a class-created knowledgebase.

The quality and quantity of submissions can be used to determine the grade. Some LMSs can track the number of posts a student makes to a discussion forum or live chat.

Other Kinds of Assessment

Alternative methods of assessment are limited only by your imagination. Consider assigning reflective journals, one minute papers, contributions to digital archives, or portfolios.