CLASSROOM ASSESSMENT TECHNIQUES

This job aid describes some simple, non-threatening ways you can evaluate your students' learning and their reaction to your teaching methods.

This job aid will help you to:

- plan and conduct a classroom assessment
- analyze the feedback
- make changes to improve learning as early as the next class

net Includes techniques for online courses.

Distinguish between classroom assessment and traditional evaluation

Before you examine the classroom assessment techniques in this job aid, let's take a look at what classroom assessment is, and how it's different from traditional methods of evaluating student learning.

Traditional methods of evaluating student learning usually occur at the end of the term, when it is too late to make any changes. They are also very threatening to students because they are normally graded and will affect their success in the course.

Classroom assessment techniques, on the other hand, are non-threatening ways of evaluating student learning and their reaction to your teaching methods. The purpose of classroom assessment is to enable both instructors and students to mutually improve learning.

Classroom Assessment vs. Traditional Evaluation	
Classroom Assessment	Traditional Evaluation
• student-centred • active • context and content specific	• content-centred • passive • content specific

Plan for classroom assessment techniques

Before we discuss how to use classroom assessment techniques, it is important that you feel comfortable doing this kind of assessment. Not all teaching styles are the same; neither is assessment universal. The following five guidelines by Cross and Angelo in their book *Classroom Assessment Techniques: A Handbook for Faculty* (1988, pp. 9-10) reinforce this.

Five guidelines

1. Don't try any technique that doesn't appeal to your intuition and your experienced judgement as a teacher.

2. Don't make self-assessment into a self-inflicted chore or burden.

3. Do choose techniques that will benefit both you and your students.

4. Don't ask your students to use any technique you haven't previously tried yourself.

5. Do remember that administering an assessment technique and analyzing the feedback will probably take twice as long as you estimate.

Planning

Knowing what you are looking for will help to determine which technique to choose, and how to interpret the results. Therefore, before using any technique, complete a planning worksheet like the one following.

Classroom assessment planning sheet

1. What do I want to know?

   _____
   _____

2. Which technique will I use to get this information?

   _____
   _____

   Why?

   _____
   _____

3. How will I introduce this technique to my students?

   _____
   _____

4. How much class time will it take?

   _____
   _____

5. How will I know if the technique was successful?

   _____
   _____

6. What instructional changes will I make as a result of the information I receive?

   _____
   _____

Use various classroom assessment techniques

The classroom assessment techniques described below were selected and adapted from Cross and Angelo's book *Classroom Assessment Techniques: A Handbook for Faculty*. These are just a few methods involving brief written exercises. For other ideas, see an Instructional Development Consultant in the Learning and Teaching Centre.

The muddiest point

This technique will help you determine which key points were missed by the students.

The muddiest point

In today's session, what was least clear to you?

_____

_____

Adapted from Cross & Angelo (1998)

When and how to apply it

- Apply this technique after a lecture or after the class session.
- Hand out the cards to the students and give them about 3 minutes to respond anonymously.
- Don't use this method after every class or it will become monotonous and the information won't be as useful.

One-minute paper

This is a useful technique because it is anonymous and encourages the quieter students to ask questions.

One-minute paper

1. What was the most useful or the most meaningful thing you learned this session?

_____

_____

2. What question(s) do you have as we end this session?

_____

_____

Adapted from Cross & Angelo (1998)

When and how to apply it

- The one-minute paper (or as many minutes as you like) can be used after a class or at the beginning of a class to review the previous session.
- Student answers to question 1 indicate whether you met your goal for the session.
- Student answers to question 2 indicate which parts of the lesson you may need to review.

Listing

Use this technique when you want to assess retention.

List

List 5-7 words or short phrases that define or describe what _____ means to you.

_____

_____

_____

_____

_____

Adapted from Cross & Angelo (1998)

When and how to apply it

- Use this technique just after a class, or later for review purposes.
- You can limit the number of items you are looking for, the time allowed, or both.
- When you review the cards, compare the points on the students' lists to those you hoped they would include. If there are noticeable omissions you know what to review.
- Remember that this technique will only enable you to discover what they recall. It doesn't indicate whether they fully understood.

Application cards

This technique helps you to determine if the students really "understand" the material you have just taught them.

Applications

List the knowledge or skills you have learned during this session in the left column, then list some possible applications in your life.

knowledge or skill	possible application

Adapted from Cross & Angelo (1998)

When and how to apply it

- After a class or unit of instruction, hand out the cards to the students and allow them about 10 minutes to respond anonymously.
- The information will show you whether the students have just memorized the material or if they know how they could use it.
- If any problems or trends are obvious, you can discuss them with the class.

Memory matrix

A matrix is simply a square or rectangle which is divided into horizontal rows and vertical columns. You can include as many rows and columns as you like. The purpose is to assess the students' recall of information and their ability to categorize it.

Memory matrix		

Adapted from Cross & Angelo (1998)

When and how to apply it

- This technique can be used after a lesson, or later as a review. It can also be used as a pre-assessment tool.
- Write in the appropriate row and column headings and leave the cells blank.
- Set a time limit (10 minutes is probably adequate) and instruct the students to fill in the blank cells with as many correct words as they can think of. You could also set a limit on the quantity of words (e.g., 2 words per cell).
- When reviewing the cards, look for patterns. Where did they do well? Where did they do poorly?

One-sentence summaries

One-sentence summaries can determine if your students understand the full meaning of a topic. By answering the seven questions, they can write one sentence which sums up the topic. These summary sentences will help you assess their understanding and will also help the students organize their thoughts.

W W W H W W W
Who? _____
Does what? _____
To what? Or whom? _____
How? _____
When? _____
Where? _____
Why? _____

Adapted from Cross & Angelo (1998)

When and how to apply it

Select an important topic that you would like them to summarize and allow them 10–15 minutes at the end of a class.

Summarizing

The summarizing technique shows what your students learned from a lecture or reading assignment. It also helps to develop their communication skills.

Summary

In no more than three concise sentences, summarize what you've learned about _____ so that you could explain it to a friend.

_____

_____

_____

Adapted from Cross & Angelo (1998)

When and how to apply it

- This technique is used most effectively in class, but can also be used as a homework assignment. However, students may not do the homework diligently if they know it won't be graded.
- You may need to practice this technique a few times with the students before they become skilled at using it.
- The students can also be taught to focus their thoughts to particular groups or individuals (e.g., clients, co-workers, supervisors, the general public).
- The students can keep a copy for studying.

How it works (an example)

The scene

Glen, a newly hired Machine Shop instructor, was unsure of his classroom instruction. He felt very comfortable in the shop and had no difficulty demonstrating how to operate equipment. However, he had no formal instructional training and was not confident about presenting theories and concepts.

The problem

Typically, Glen would present the theory and describe procedures for fabricating a project while in the classroom. He would then move his class into the shop to make the project hands-on. Although the students could manually perform the task, they often made mistakes because they misunderstood the theory.

The solution

Glen decided to try one of the classroom assessment techniques. He chose the "one-minute paper" because it was quick, easy and he wasn't able to devote much class time to it.

After the next classroom lecture, he distributed the one-minute papers to the class. He reviewed the responses that evening. To his surprise and delight, few students had unanswered questions. However, almost all of the students identified the same piece of information as being "the most important". The problem was, it was the wrong piece of information.

The next day, he discussed their responses and reviewed the important part of the lesson. When they moved to the shop later, the projects were completed faster and better than usual.

Classroom assessment in an online environment

Two easy ways for your students to give you feedback are built into all online course environments: email and discussion boards. You can transfer many of the classroom assessment techniques that have been mentioned for use in traditional classrooms to this environment. The most straightforward ones are the "one-minute paper" and the "muddiest point". Use these at logical times in your online course, such as at the end of the first week, or after the end of a module or section of the course.

Whether you choose email or a discussion board depends upon how public you want your students' responses to be. Some students will be reluctant to voice their opinions in an open forum, but be more forthcoming in an email to you. On the other hand, you may generate a lively discussion in a threaded discussion forum. Make sure you give your students clear directions about what to do. For the discussion forum, label it appropriately and set parameters for when the discussion will start and end.

It is always a good idea to invite students to ask questions, and encourage them to ask them publicly, perhaps in a dedicated online question forum. Again, lively discussions may be generated as a result, and you will gain insight into your students' learning.

Some online learning environments have built-in survey tools, and if this is the case, you can make use of them in addition to email and discussion forums.

With a bit of ingenuity and resourcefulness, you may also find other ways to evaluate your students' learning and their reactions to your teaching methods.