Module 3
Assessing for Learning

Required Readings

Reading #1: *"Understanding By Design"*

Consider the following questions when designing a course with the end in mind.

What evidence of learning do I need to gather?

> What do students need to know and be able to do at the end of the course to show that they have mastered the content and skills deemed necessary to successfully progress to the next level.

What will my students' demonstrations of learning look like, sound like?

> What will the students write, say or do to provide evidence that they know and can do what is expected?

Why do I need to gather this evidence of learning?

> What is the purpose of gathering the evidence? Is it to:

- determine students' achievement of the learning targets/outcomes before instruction takes place? (diagnostic assessment)
- to assess students' progress in achieving the learning targets? (formative assessment)
- to evaluate students' achievement of the learning targets at the end of a period of instruction? (summative assessment/evaluation)

Definitions of Types of Assessment

Diagnostic: appropriate assessment activities used, as required at the beginning of a block of learning (i.e., course or unit), to determine students' strengths and learning needs in order to plan, modify, and adjust teaching and/or learning opportunities.

Formative: ongoing assessment used through the learning process to monitor student performance and provide feedback in an effort to enhance and improve teaching and/or learning.

Summative/Evaluation: assessment that occurs at the conclusion of a block of learning (e.g., unit, course, semester/school year) and focuses on student achievement for reporting and promotional purposes as well as to assess program effectiveness for future planning purposes.

Each of the types of assessment can be used to assist teachers in gathering evidence on student achievement. However, the nature of the evidence being gathered, when it is gathered, how it is gathered and for what purposes it is gathered varies depending on the type.

The table on the next page can assist teachers in choosing the best type of assessment for gathering specific information or evidence on their students' achievement of curricular expectations.

Gathering Evidence	Diagnostic	Formative	Summative
What?	Determining what students know and are able to do prior to instruction.	Determining what students know and are able to do as they progress throughout learning and practice opportunities.	Determining what students know and are able to do at the end points in the learning process.
When?	Occurs before instruction begins.	Is ongoing as students learn and practice.	Occurs at one or more checkpoints throughout the learning process (e.g. end of a block of learning, or the course).
Why?	Helps determine starting points, provides opportunities for self-regulation and monitoring and helps the instructor or teaching assistant program appropriately for students.	Provides ongoing, meaningful feedback from the instructor, teaching assistant, peer, or self to help students improve as the learning/practice builds.	Provides students with the opportunity to synthesize knowledge and skills to demonstrate their achievement of learning outcomes.
How?	Assessment strategies to provide information about the learning students have acquired in the past to be used in continued learning.	Assessment strategies to provide opportunities for students to learn and practice (self and peer assessment).	Assessment strategies to synthesize and apply the key learnings that are relevant to the expected learning outcomes at the point students have progressed to in the learning process.

How will I gather the evidence of learning?

What assessment method(s) will gather evidence that is valid, reliable and fair?

Assessment Method: a general means or category of assessment strategies through which student learning may be assessed. (i.e., personal communication (say), paper and pencil (write), or performance (do)).

What type of assessment strategies (tasks) will provide students with the best opportunity to practice and demonstrate their learning?

Assessment Strategy: a particular process used to assess student learning and/or product used to demonstrate student learning. (e.g., presentation, essay, test, musical, visual or dramatic performance).

What type of assessment tool(s) is appropriate for assessing the evidence of learning that is being gathered?

Assessment Tool: a scoring tool that is used to track, monitor or record the assessment data; form is dependent on the purpose and type of assessment. (e.g., marking scheme, checklist, rubric).

The use of high quality assessments in our classrooms provide instructors and teaching assistants with accurate information about how well students are learning and what students need to do to improve their learning.

High quality assessments use a wide range of assessment methods and strategies that allow students to demonstrate their learning in multiple and varied ways appropriate and relevant to the discipline of study; it also requires that the assessment methods and strategies employed are properly matched to learning targets.

Guiding questions for effective curriculum planning:	Evidence of effective planning: (How have I answered each of these questions?)
What evidence of learning do I need to gather from my students to measure their achievement of the learning targets for the course?	
How will my students demonstrate their achievement of these targets – with they complete oral, written or performance-based assessments?	
What purpose will these assessments serve (diagnostic, formative or summative)? To what degree have I addressed each of these purposes?	
What assessment strategies and tools will I use to gather evidence of learning that is valid (aligned to learning targets), reliable (consistent results from multiple demonstrations of learning) and fair?	

Reading #2: *"Using Assessment to Foster Student Interest and Motivation"*

(Adapted from) Mendler, A. (2000). *Motivating Students Who Don't Care: Successful Techniques for Educators.* Bloomington: IN: Solution Tree.

Assessment that encourages learning fosters motivation by emphasizing progress and achievement. In environments that foster motivation, failure is viewed as a learning opportunity. Comparison with others who have been more successful does not motivate most learners. It can lead to withdrawal from the learning process in areas where students have been made to feel they are incompetent. Motivation can be preserved and enhanced by assessments that protect the learner's autonomy, provide some choice, constructive feedback, and create opportunity for self-regulated learning.

The following fundamental beliefs underlie assessment practices that effectively motivate students:

1. All students are capable of learning when they have the academic and personal tools to be successful.

2. Students are inherently motivated to learn but learn to be unmotivated when they repeatedly fail and don't see failure as a learning opportunity.

3. Learning requires risk taking, so learning environments need to be safe places where risk taking is both encouraged but supported.

4. All students have the basic needs to belong, to feel competent, and to influence what happens to them. When these needs are met, the motivation to learn is fostered.

5. High self-esteem results from the mastery of challenging tasks.

6. High motivation for learning most often occurs when students are treated with respect and dignity.

The Five Motivational Processes in Assessment

Below is a list of how assessment practices can impact positively on student motivation. Each list is designed to support one of the five processes that motivate: emphasizing effort, creating hope, respecting power, building relationships, and

1) Emphasizing Effort
- Use formative assessment to encourage students to learn from their mistakes.
- Provide students the opportunity to redo, retake and revise in the learning process.
- Separate effort from achievement.
- Provide feedback opportunities to nurture self-regulation in the learning process.
- Ensure feedback provided begins with the positive before focusing on the consequences of errors.
- Provide reasons for the requirement of effort by ensuring why what students are being asked to do and learn is important.

2) Creating Hope
- Ensure assessments challenge students so that the level of challenge matches or is slightly above the student's level of ability.
- Provide opportunities to build supporting skills through the learning process before evaluating student work.
- Acknowledge your own mistakes and how you might learn from them so that students see that someone who is successful makes mistakes as well, and learns from them.
- Encourage students to develop achievement goals.

- Encourage students to use organizational strategies and tools to assist them in remaining organized throughout assessments.
- Encourage students to be prepared and to assist one another is doing so by developing a classroom community that encourages all students to be prepared for learning.
- Ensure students understand the learning process and what role they play in it.
- Make sure out of class assigned work is relevant and appropriately supports learning.

3) Respecting Power

- Involve students by nurturing the development of learning habits of mind and having them consider the consequences of not acting on these habits.
- Defer to student power by acknowledging that they, and they alone, have to power to change their behaviour and learning skills.
- Use open-ended questions in assessments so that students feel that their opinions and positions are valued while building critical thinking skills.
- Use reciprocal teaching in assessments **–** when students teach others they feel empowered and develop respect for the role of the instructor while maximizing their learning potential.
- When addressing a student's mistakes, make every effort to do it with PEP (privacy, eye contact, and proximity) to show you respect their learning.
- Offer students real choices; give the power of learning directly to the student by providing students with open-ended assessments that incorporate significant and meaningful choices.

4) Building Relationships

- Affirm the belief that the student is more important than what they do or don't do – provide them the opportunities to redo, retake or revise in the learning process.
- Provide opportunities for detailed written feedback beginning with the positives and followed with questions so that students can work through the learning process.
- Provide opportunities for genuine feedback beyond superficial praise such as 'I loved this!' 'Excellent work'; feedback that provides students direction for improvement.
- Have teaching assistants host focus groups to determine what struggles assessments are presenting to students and empower the students by clarifying and acting on their concerns.
- Share stories of yourself when you struggled with assessment experiences and how you dealt with them. This not only builds relationships with students but also introduces new strategies to the students that they can draw on when faced with a similar situation.

5) Expressing Enthusiasm

- Share your excitement about your work, the work assigned to your students and the learning journey they will experience.
- Model being a lifelong learner by taking new learning risks and challenges and sharing your learning experience with your students.
- Design your assessments so that students can select high-interest forms of demonstrating their learning and that honour all student learning needs and dispositions (learning styles and multiple intelligences).
- Authenticate your assessments to increase engagement and relevancy.
- Ask provocative, open-ended questions in your lectures and assessments that will excite students about the learning process.

Reading #3: *"Product and Performance Assessments"*

Product assessments are assessment in which students *plan, produce, and possibly use a product* to meet given set of criteria based on the needs of the user or intended audience. They are an excellent way to assess a student's ability to innovate, solve problems, create and follow plans, and apply knowledge and the skills of problem solving, as well as creative and critical thinking. These assessments integrate content and skill development and are used to measure complex intellectual skills and processes. Examples of product assessments may include:

- art exhibits
- articles
- audio tapes
- books
- design projects
- case study reports
- dioramas
- editorials
- essays
- journals
- logs

- media displays
- models
- museum displays
- multi-media presentations
- plays
- poems
- research papers
- science reports
- spreadsheets
- stories
- videos

Performance assessments are assessments in which students *plan and perform* a certain task to meet given set of criteria based on the needs of the intended audience. They are an excellent way of assessing performance skills and any related or embedded knowledge and understanding of concepts and/or skills. These assessments integrate content and skill development and are used to measure complex intellectual skills and processes. The following list contains some examples of performance assessments:

- competitive/co-operative games
- conflicts resolution processes
- inquiry processes
- carrying out investigations
- carrying out an experiment
- painting a picture

- performing a dance
- playing a musical instrument
- problem-solving processes
- the research process
- reciprocal teaching

Reading #4: *"Exploring the Possible Use of Observational Assessment in Higher Education"*

Case Study

Professor Jerome has been unsatisfied with the achievement results of his students in his first year Introduction to Economics course. He has noticed that that the nature of his students has changed significantly over the years. Many students, although able to communicate their understanding of, and apply key concepts in his course, struggle when asked to demonstrate their learning on traditional multiple choice tests. He recognizes that these tests are designed to measure the students ability to think critically about and apply key concepts in the course in complex ways and has believed for some time now that students are simply not prepared to manage the rigour of these tests.

His teaching assistants have however reported to him that they have observed his students discussing the application of these concepts quite successfully and he himself has noticed that the questions they raise in class require rigourous thought. Coming to the realization that these observations do not align with the students' achievement as measured by test results, he has decided to try something new. If he was to encourage his students to become effective critical thinkers, perhaps this thinking should begin with their choice of how to demonstrate their learning for him in the first place? He wondered how they would respond to being asked to demonstrate their ability to think about and apply key economic concepts in any manner that would best and most appropriately demonstrate these abilities within the nature of the discipline.

Professor Jerome enjoyed the thought of not having to prepare a set of multiple choice tests this term as well as the excitement of what the students may generate. There remained only one nagging concern for him; how would he make sure the student responses would be valid. In other words, how could he ensure the students' assessment responses measured what he wanted to measure – their ability to think critically and apply concepts in new, complex situations?

He decided that the only way he could ensure that these open-ended assessments remained valid was to provide students with a clear sense of what the learning targets for the course were and, more specifically, the criteria that he and his team of teaching assistants would use to assess the student responses. By doing so, his learning targets would be made perfectly clear to all students before they began to complete the assessment and all students would recognize, despite how they chose to demonstrate their learning, that they were all being assessed in the same way! Furthermore, if he developed the criteria for this open ended assessment with his teaching assistants, it would guarantee that they all understood the learning targets as well and how they should be measured. This would allow all of the TA's an opportunity to communicate their concerns about their students' learning and to support one another as they began to grade student work demonstrated in this very new way.

Case Study Questions:

1. What steps did Professor Jerome take to create differentiated assessments that would be fair, valid and reliable for all students?
2. What might excite you about adopting a similar approach to your assessments? What concerns may you have?
3. If you adopted this new approach, what implications would this have for your students? For your teaching assistants? For yourself?
4. What steps may you take in differentiating your current assessments? Is there some way you may begin with this process in a way that would ease any discomforts you may have?

Reading #5: *"Five Basic Elements of Effective Group Work"*

(Adapted from) Bennett, B. & Rolheiser, C. (2006). *Beyond Monet: The Artful Science of Instructional Integration.* Toronto: Bookation Inc.

Individual Accountability
To make assessments fair, valid and reliable, instructors need to consider how they can make each student in a group assessment accountable for demonstrating their individual achievement of learning targets in the course. This element of effective group work supports the need to make sure each student in a group is responsible for their own learning and willing to encourage and support the learning of others in the group. Individual accountability is the most essential ingredient of effective group work and as such should be included as one of the design criteria for group assessments.

Face-to-Face Interaction
When instructors design group assessments they must also consider the physical structure of their classroom. This structure must encourage students to interact and dialogue with one another effectively requiring that they sit close enough to each other to easily hear each other's voices and see each other's faces. Group assessment should therefore be limited in size to support this type of face-to-face interaction. Generally the optimal group size fall between 3 to 5 group members.

Collaborative Skills
Collaborative skills include the social, communication and critical thinking skills students need to possess to work effectively in groups. Group assessments should provide students the opportunity to develop these skills and should also be the basis for the development of criteria for assessment.

Processing the Group's Academic and Social Efforts
To support students' self and peer assessment of group assessment tasks, time to reflect and assess the group's effort on an on-going basis must be built into the design of effective group assessments. Students must be provided the opportunity to develop a meta-cognitive ability, that is, the ability to think about their own thinking and to communicate this with others as without it, group work will have a negative impact on both social and academic learning, and achievement. Instructors need to consider this element both as criteria for the design of group assessments and in their design of scoring tools for group assessments.

Positive Interdependence
This element refers to students working together in supportive and positive ways and being accountable and caring for one another. Positive interdependence does not always occur naturally and instructors must take care to design group assessment tasks that:
- provide clear and meaningful group tasks and goals
- ensure each student has a clear role to play in the group that allows them to individually demonstrate their achievement of curricular learning targets
- provide students with equal access to the necessary resources to share
- provide students with the incentive to work together (this can be accomplished by designing a task that requires each of the group member to draw from the work of each other to successfully complete the task)

Reading #6: *"Descriptions of Various Scoring Tools for Assessments"*

Arends, R. I. (2007). *Learning to Teach* (7th ed.). New York, NY: McGraw-Hill.

Marking Schemes are designed to provide a set of criteria by which a student's work will be evaluated. The criteria are linked to each specific question. This tool quantifies student responses. It is generally used for selected and constructed response assessments.

Checklists are assessment tools that record the presence or absence of an expected concept, skill, process, or attitude. It is based on criteria for judging a student's demonstration of learning that is clearly linked to the learning targets set out by the teacher at the beginning and throughout the period of learning. Generally checklists take the form of a list. They are used when a specific task or function can be predetermined and focuses on a singular not layered task or when a product or process can be broken down into singular components. They generally take the form of a numbered or bulleted list of key attributes of 'good' demonstration of learning, with related entries such as 'yes or no', a checkmark or space holders to allow the teacher to indicate the presence or absence of the expected learning descriptors.

Rating Scales are simple tools for assessing a demonstration of learning on a several-point scale ranging from low to high. They are based on a set of criteria that allows the assessment of the learning targets/outcomes set out by the instructor. They measure the extent to which specific knowledge, skills, and learning behaviours are observed in a student's learning demonstration. Rating scales provide detailed diagnostic information about a student's learning and record the frequency or degree to which a student exhibits a particular characteristic of learning. They generally take the form of a continuum with statements used to rank, describe or identify learning characteristics. Often they include a numbered or bullets list of learning statements or characteristics.

Rubrics are assessment tools that identify the characteristics of a quality performance or product. A rubric includes criteria and descriptors or performance indicators. They contain detailed descriptions of what student's demonstrations of learning look like or sound like and are based on criterion-referenced standards. Levels of quality are used to assess student work or performances. These may be used for all types of complex assessments. They generally take the form of a chart that embeds a continuum of learning from low levels of quality to higher levels of quality and are used to clearly communicate levels of student performance for a variety of purposes. These purposes include guiding students to greater mastery, to promote greater reliability of assessments, and to provide informative feedback to the student regarding learning strengths, weaknesses and next steps.
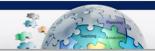
There are generally two types of rubrics. These include holistic rubrics, or analytic rubrics.

A **holistic rubric** allows the assessor to judge a student's demonstration of learning as a whole, independent of the individual component parts however the assessment of the component parts informs the assessors overall judgment. As such this type of rubric is best used when there is no definitive correct response to the assessment.

An **analytic rubric** requires the assessor to judge the individual component parts associated with the whole performance or demonstration of learning. This type of rubric is more effective when there is a fairly specific set of responses or a specific range of responses required by the student.

Anecdotal Records are short, written narratives that describe in detail a student's learning. These are generally used to supplement the gathering of other forms of assessment evidence of learning. They provide an on-going record of individual student progress over time. They may take a variety of forms including brief comments or longer narratives. Overall, they are a useful source of data on student learning providing for a rich portrait of individual student achievement. However, this is the most time-consuming assessment tool.

Reading #7: *"The Instructional Planning Process"*

Step One: **Set clear learning targets** – identify which learning goal and target will be addressed in instruction. Provide or co-construct assessment criteria for these targets that will be used to measure the students' degree of success in attaining the target.

Step Two: **Motivate and engage the learner** – access any related prior learning and experiences and make connections between these, and the intended new learning to be presented.

Step Three: **Define an instructional starting point** – diagnostically assess the existing knowledge and skills of the students related to the intended new learning. Instructor applies the assessment criteria here for the first time. Share findings with students if possible. This lets students know their entry points into learning and enable them to monitor learning growth.

Step Four: **Actively present new learning** – remember that the person doing the work and the thinking is doing the learning - consider a constructivist approach!

Step Five: **Check for understanding** – monitor what and to what degree new learning has been internalized. Apply the assessment criteria informally for a second time.

Step Six: **Scaffold new learning** – continue to instruct to have students practice and refine new learning in manageable pieces. Have students apply the assessment criteria to assist them in understanding how to refine their own learning. The more complex the new learning, the more the learning should be broken down into manageable steps, practiced, revised and revisited. Scaffold learning as builders scaffold new building structures. Remember – the true test of mastery is in the application of the new learning in unfamiliar or unexplored contexts.

Step Seven: **Check for progress** – periodically assess to monitor the depth and scope of new learning that has taken place. Both peer and self-assessment practices are particularly useful in this step.

Step Eight: **Evaluate** – administer a final assessment of the new learning for grading and reporting purposes. This would be the final and formal application of the related assessment criteria.

Reading #8: *"Guiding Questions for Determining the Grade Using Professional Judgment"*

(Adapted from) Cooper, D. (2007). *Talk About Assessment: Strategies and Tools to Improve Learning*. Toronto, ON: Thomson Canada Limited. 213-217

1. Do my assessments provide accurate measures of the learning targets/objectives in my course?

Consider if you have incorporated a range of assessment methods and strategies to triangulate the evidence of learning you have gathered on the achievement of similar learning targets/outcomes in the course? Does this range provide students varied ways to demonstrate their learning?

2. Do I have a sufficient amount of evidence of learning for each student in relation to the learning targets/outcomes for the course to support a valid judgment of the student's most consistent level of achievement?

Determine what a sufficient amount of evidence of learning is at the start of the course. There is no definite or set amount of evidence deemed to be sufficient for all courses however, there needs to be enough evidence to justify the grades you assign. This evidence must include evidence of learning to support all learning targets in the course.

3. How do I deal with a lack of evidence of learning from students who have not completed or submitted their work?

If there is still sufficient assessment evidence to make an accurate, valid and reliable judgment of student achievement, then this is not an issue or concern regarding achievement of learning targets/outcomes. Communicating the importance of positive learning behaviours and habits of mind may be necessary however. If sufficient evidence does not exist, the determination of a grade may not be possible and a failing grade may have to be assigned.

4. Is there any informal evidence of learning you could use to help make a valid, reliable and accurate judgment about the student's most consistent level of achievement in the absence of a complete set of evidence? Observational data, informal conversations with the student, process work?

5. Have I considered more recent evidence of learning in my determination of the student's grade?

More recent evidence of learning often provides a more accurate picture of the student's achievement of the learning targets as learning takes place over time and under appropriate assessment conditions, a students' learning improves over time.