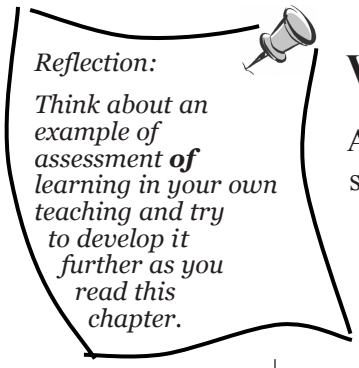
Chapter 5

Assessment *of* Learning



What Is Assessment *of* Learning?

Assessment *of* learning refers to strategies designed to confirm what students know, demonstrate whether or not they have met curriculum outcomes or the goals of their individualized programs, or to certify proficiency and make decisions about students' future programs or placements. It is designed to provide evidence of achievement to parents, other educators, the students themselves, and sometimes to outside groups (e.g., employers, other educational institutions).

> The purpose of assessment that typically comes at the end of a course or unit of instruction is to determine the extent to which the instructional goals have been achieved and for grading or certification of student achievement.
>
> (Linn and Gronlund, *Measurement and Assessment in Teaching*)

Assessment *of* learning is the assessment that becomes public and results in statements or symbols about how well students are learning. It often contributes to pivotal decisions that will affect students' futures. It is important, then, that the underlying logic and measurement of assessment *of* learning be credible and defensible.

Teachers' Roles in Assessment *of* Learning

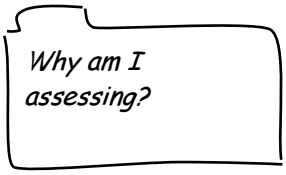
Because the consequences of assessment *of* learning are often far-reaching and affect students seriously, teachers have the responsibility of reporting student learning accurately and fairly, based on evidence obtained from a variety of contexts and applications. Effective assessment *of* learning requires that teachers provide

- a rationale for undertaking a particular assessment *of* learning at a particular point in time
- clear descriptions of the intended learning
- processes that make it possible for students to demonstrate their competence and skill
- a range of alternative mechanisms for assessing the same outcomes
- public and defensible reference points for making judgements

- transparent approaches to interpretation
- descriptions of the assessment process
- strategies for recourse in the event of disagreement about the decisions

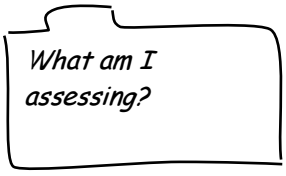
With the help of their teachers, students can look forward to assessment *of* learning tasks as occasions to show their competence, as well as the depth and breadth of their learning.

Planning Assessment *of* Learning



The purpose of assessment *of* learning is to measure, certify, and report the level of students' learning, so that reasonable decisions can be made about students. There are many potential users of the information:

- teachers (who can use the information to communicate with parents about their children's proficiency and progress)
- parents and students (who can use the results for making educational and vocational decisions)
- potential employers and post-secondary institutions (who can use the information to make decisions about hiring or acceptance)
- principals, district or divisional administrators, and teachers (who can use the information to review and revise programming)



Assessment *of* learning requires the collection and interpretation of information about students' accomplishments in important curricular areas, in ways that represent the nature and complexity of the intended learning. Because genuine learning for understanding is much more than just recognition or recall of facts or algorithms, assessment *of* learning tasks need to enable students to show the complexity of their understanding. Students need to be able to apply key concepts, knowledge, skills, and attitudes in ways that are authentic and consistent with current thinking in the knowledge domain.

What assessment method should I use?

In assessment *of* learning, the methods chosen need to address the intended curriculum outcomes and the continuum of learning that is required to reach the outcomes. The methods must allow all students to show their understanding and produce sufficient information to support credible and defensible statements about the nature and quality of their learning, so that others can use the results in appropriate ways.

Assessment *of* learning methods include not only tests and examinations, but also a rich variety of products and demonstrations of learning—portfolios, exhibitions, performances, presentations, simulations, multimedia projects, and a variety of other written, oral, and visual methods (see Fig. 2.2, Assessment Tool Kit, page 17).

Graduation Portfolios

Graduation portfolios are a requirement for graduation from British Columbia and Yukon Senior Years schools. These portfolios comprise collections (electronic or printed) of evidence of students' accomplishments at school, home, and in the community, including demonstrations of their competence in skills that are not measured in examinations.

Worth four credits toward graduation, the portfolios begin in Grade 10 and are completed by the end of Grade 12. The following are some goals of graduation portfolios:

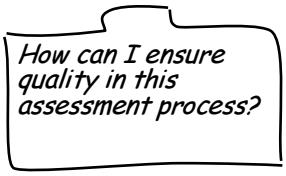
- Students will adopt an active and reflective role in planning, managing, and assessing their learning.
- Students will demonstrate learning that complements intellectual development and course-based learning.
- Students will plan for successful transitions beyond Grade 12.

Graduation portfolios are prepared at the school level and are based on specific Ministry criteria and standards. Students use the criteria and standards as guides for planning, collecting, and presenting their evidence, and for self-assessing. Teachers use the criteria and standards to assess student evidence and assign marks.

There are three major components of a graduation portfolio:

1. Portfolio Core (30 percent of the mark). Students must complete requirements in the following six portfolio organizers: arts and design (respond to an art, performance, or design work); community involvement and responsibility (participate co-operatively and respectfully in a service activity); education and career planning (complete a graduation transition plan); employability skills (complete 30 hours of work or volunteer experience); information technology (use information technology skills); personal health (complete 80 hours of moderate to intense physical activity).
2. Portfolio Choice (50 percent of the mark). Students expand on the above areas, choosing additional evidence of their achievements.
3. Portfolio Presentation (20 percent of the mark). Students celebrate their learning and reflect at the end of the portfolio process.

(*Portfolio Assessment and Focus Areas: A Program Guide*)



Assessment *of* learning needs to be very carefully constructed so that the information upon which decisions are made is of the highest quality. Assessment *of* learning is designed to be summative, and to produce defensible and accurate descriptions of student competence in relation to defined outcomes and, occasionally, in relation to other students' assessment results. Certification of students' proficiency should be based on a rigorous, reliable, valid, and equitable process of assessment and evaluation.

Reliability

Reliability in assessment *of* learning depends on how accurate, consistent, fair, and free from bias and distortion the assessment is. Teachers might ask themselves:

- Do I have enough information about the learning of this particular student to make a definitive statement?
- Was the information collected in a way that gives all students an equal chance to show their learning?
- Would another teacher arrive at the same conclusion?
- Would I make the same decision if I considered this information at another time or in another way?

Reference Points

Typically, the reference points for assessment *of* learning are the learning outcomes as identified in the curriculum that make up the course of study. Assessment tasks include measures of these learning outcomes, and a student's performance is interpreted and reported in relation to these learning outcomes.

In some situations where selection decisions need to be made for limited positions (e.g., university entrance, scholarships, employment opportunities), assessment of learning results are used to rank students. In such norm-referenced situations, what is being measured needs to be clear, and the way it is being measured needs to be transparent to anyone who might use the assessment results.

Validity

Because assessment *of* learning results in statements about students' proficiency in wide areas of study, assessment *of* learning tasks must reflect the key knowledge, concepts, skills, and dispositions set out in the curriculum, and the statements and inferences that emerge must be upheld by the evidence collected.

Record-Keeping

Whichever approaches teachers choose for assessment *of* learning, it is their records that provide details about the quality of the measurement. Detailed records of the various components of the assessment *of* learning are essential, with a description of what each component measures, with what accuracy and against what criteria and reference points, and should include supporting evidence related to the outcomes as justification.

Resource:
Marzano, *Transforming Classroom Grading*

When teachers keep records that are detailed and descriptive, they are in an excellent position to provide meaningful reports to parents and others. Merely a symbolic representation of a student's accomplishments (e.g., a letter grade or percentage) is inadequate. Reports to parents and others should identify the intended learning that the report covers, the assessment methods used to gather the supporting information, and the criteria used to make the judgement.

Guidelines for Grading

1. Use curriculum learning outcomes or some clustering of these (e.g., strands) as the basis for grading.
2. Make sure that the meaning of grades comes from clear descriptions of curriculum outcomes and standards. If students achieve the outcome, they get the grade. (NO bell curves!)
3. Base grades only on individual achievement of the targeted learning outcomes. Report effort, participation, and attitude, for example, separately, unless they are a stated curriculum outcome. Any penalties (e.g., for late work, absences), if used, should not distort achievement or motivation.
4. Sample student performance using a variety of methods. Do not include all assessments in grades. Provide ongoing feedback on formative performance using words, rubrics, or checklists, not grades.
5. Keep records in pencil so they can be updated easily to take into consideration more recent achievement. Provide second-chance assessment opportunities (or more). Students should receive the highest, most consistent mark, not an average mark for multiple opportunities.
6. Crunch numbers carefully, if at all. Consider using the median, mode, or statistical measures other than the mean. Weight components within the final grade to ensure that the intended importance is given to each learning outcome.
7. Make sure that each assessment meets quality standards (e.g., there should be clear targets, clear purpose, appropriate target-method match, appropriate sampling, and absence of bias and distortion) and is properly recorded and maintained (e.g., in portfolios, at conferences, on tracking sheets).
8. Discuss and involve students in grading at the beginning and throughout the teaching and learning process.

(Adapted from O'Connor, *How to Grade for Learning*)

How can I use the information from this assessment?

Feedback to Students

Because assessment *of* learning comes most often at the end of a unit or learning cycle, feedback to students has a less obvious effect on student learning than assessment *for* learning and assessment *as* learning. Nevertheless, students do

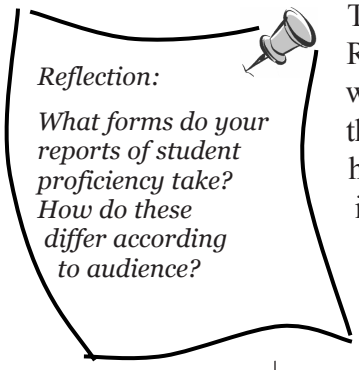
rely on their marks and on teachers' comments as indicators of their level of success, and to make decisions about their future learning endeavours.

Differentiating Learning

In assessment *of* learning, differentiation occurs in the assessment itself. It would make little sense to ask a near-sighted person to demonstrate driving proficiency without glasses. When the driver uses glasses, it is possible for the examiner to get an accurate picture of the driver's ability, and to certify him or her as proficient. In much the same way, differentiation in assessment *of* learning requires that the necessary accommodations be in place that allow students to make the particular learning visible. Multiple forms of assessment offer multiple pathways for making student learning transparent to the teacher. A particular curriculum outcome requirement, such as an understanding of the social studies notion of conflict, for example, might be demonstrated through visual, oral, dramatic, or written representations. As long as writing were not an explicit component of the outcome, students who have difficulties with written language, for example, would then have the same opportunity to demonstrate their learning as other students.

Although assessment *of* learning does not always lead teachers to differentiate instruction or resources, it has a profound effect on the placement and promotion of students and, consequently, on the nature and differentiation of the future instruction and programming that students receive. Therefore, assessment results need to be accurate and detailed enough to allow for wise recommendations.

Reporting



There are many possible approaches to reporting student proficiency. Reporting assessment *of* learning needs to be appropriate for the audiences for whom it is intended, and should provide all of the information necessary for them to make reasoned decisions. Regardless of the form of the reporting, however, it should be honest, fair, and provide sufficient detail and contextual information so that it can be clearly understood. Traditional reporting, which relies only on a student's average score, provides little information about that student's skill development or knowledge. One alternate mechanism, which recognizes many forms of success and provides a profile of a student's level of performance on an emergent-proficient continuum, is the parent-student-teacher conference. This forum provides parents with a great deal of information, and reinforces students' responsibility for their learning.

The Communication System Continuum: From Symbols to Conversations

Grades	Report cards (grades and brief comments)	Infrequent informal communications	Parent-teacher interviews	Report cards with expanded comments	Frequent informal communication	Student-involved conferencing	Student-led conferencing

(O'Connor, *How to Grade for Learning*)

An Example of Assessment *of* Learning

Elijah was interested in assessing student mastery of both the modern and the traditional skills required for survival in the Nunavut environment where he teaches. The overarching theme of survival is taught in the early grades and culminates at the senior level in a course delivered in Inuktitut. Students learn how to take care of themselves and others, and how to adapt what they know to the situation at hand. Survival requires not only skills and knowledge, but also a concept the Inuit people call *qumiutit*, or the ability in an emergency situation to pull out of stored memory information that will enable a person to cope, not panic. Traditionally, this was learned in a holistic manner, grounded in Inuit traditional guiding principles that were nurtured and developed from birth, and taught and reinforced in daily living.

Throughout the term, Elijah took his students to an outdoor area to practise on-the-land survival activities, using both traditional and modern methods. He always took with him a knowledgeable Elder who could give the students the information they needed to store away in case of emergency. The students watched demonstrations of a skill a number of times. Each student then practised on his or her own, as Elijah and the Elder observed and assisted.

Why am I assessing?

I want to know which survival skills each student has mastered and their readiness to survive in the natural environment.

Elijah knew that students need to have a high level of expertise in the survival skills appropriate for the northern natural environment.

What am I assessing?

I am assessing each student's performance of traditional and modern survival skills.

Elijah assessed each student on each survival skill (e.g., making fire the traditional way, tying the knots required for the *qamutik* cross-pieces on a sled).

What assessment method should I use?

I need an approach in which students can demonstrate the traditional survival skills that they learned. The method I choose should also allow me to identify which skills they did not master.

Elijah knew that the best way to determine if students have mastered the skills is to have them perform them. When students believed they were ready, Elijah created an opportunity for them to demonstrate the mastered skill to a group of Elders, who then (individually, then in consensus) determined if the performance was satisfactory.

How can I ensure quality in this assessment process?

Ensuring quality with this approach involves clear criteria: either the student performs the skill successfully or does not.
I need to provide adequate opportunities for the student to demonstrate the skills under various conditions and at various times.

A student's competence in a survival skill is often demonstrated by an end product. For example, competence in knot tying is demonstrated by a knot that serves its purpose, and competence in fire building is demonstrated by a fire that is robust.

How can I use the information from this assessment?

Now that I know which skills each of the students has mastered, I can report this information to the students and their parents. I can use this information to identify a learning path for each student.

As the Elders judged each student's performance of the skills, Elijah recorded the results. He shared the information with each student and his or her parents in a final report, as shown here.

Report on Survival Skills

Student: _____ Date: _____

Traditional Survival Skills	Modern Survival Skills	Adaptability to the Seasons	Attitude	Success	Next Steps
1) Skills					
Building a fire / means of keeping warm:					
• fuel sources • getting a spark	• propane heaters, stoves • clothing				
Shelters:					
• emergency shelters • igloo building[4] • qamaq[5]	• tents				
Transportation needs:					
• making the knots required for the qamutik cross pieces on a sled • building a kayak/umiak	• fixing a snowmobile (spark plugs, repairing track, drive belt) • keeping a boat seaworthy				
Navigational issues:					
• reading the land • reading the sky • understanding seasonal variations • reading inuksuit	• using GPS • map reading				
Preparation for land travel:					
• packing a qamutiq (sled) • load, balance • necessities: snow knife, rope, food, water, heat source	• letting others know where you are going • necessary tools, supplies, snowmobile parts, fuel • using communication devices				
Food sources:					
• plants and their nutritional properties • hunting, skinning, and cutting up seal, caribou, etc.	• kinds of food to take on the land, and their nutritional properties				
2) Relationship to the Seasons					
Assessing conditions / recognizing danger signs: • seasonal changes • land changes • water changes • wind changes • weather changes	Climatic changes: • weather changes and how this affects the land and water • knowledge of animals and their characteristics and behaviours				
3) Attitudinal Influences (Having the right attitude to learn)					
• respect for the environment (cleaning up a campsite upon leaving, dealing with the remains of an animal, not over-hunting/fishing) • respect for Elders and their knowledge • ability to learn from Elders					

4. Expertise in igloo building includes understanding of types of snow, the shape and fit of blocks, and the use of a snow-knife.
5. A qamaq is a rounded house, built of scrap wood or bones, and covered with skins, cardboard, or canvas.

Elijah's report identified which of the students had mastered the specified skills required to survive in the Nunavut environment. It outlined other areas (such as adaptability to the seasons and attitudinal influences) about which peers, parents, and family members would need to provide input before a comprehensive assessment could be made. The assessment also identified those students not yet ready to survive in the natural environment. But the Elders did not stop working with the students who did not reach mastery. Elders see learning as an individual path in which skills, knowledge, and attitudes are acquired along the way. If a particular skill was beyond the capability of a student, the Elders identified other areas where that person could contribute to the common good of the community, and was accepted for the gifts he or she brought to the group. In this way, the Elders helped Elijah differentiate the learning path for each of his students.

Summary of Planning Assessment *of* Learning

	Assessment *for* Learning	Assessment *as* Learning	Assessment *of* Learning
Why Assess?	to enable teachers to determine next steps in advancing student learning	to guide and provide opportunities for each student to monitor and critically reflect on his or her learning, and identify next steps	to certify or inform parents or others of student's proficiency in relation to curriculum learning outcomes
Assess What?	each student's progress and learning needs in relation to the curricular outcomes	each student's thinking about his or her learning, what strategies he or she uses to support or challenge that learning, and the mechanisms he or she uses to adjust and advance his or her learning	the extent to which students can apply the key concepts, knowledge, skills, and attitudes related to the curricular outcomes
What Methods?	a range of methods in different modes that make students' skills and understanding visible	a range of methods in different modes that elicit students' learning and metacognitive processes	a range of methods in different modes that assess both product and process
Ensuring Quality	• accuracy and consistency of observations and interpretations of student learning • clear, detailed learning expectations • accurate, detailed notes for descriptive feedback to each student	• accuracy and consistency of student's self-reflection, self-monitoring, and self-adjustment • engagement of the student in considering and challenging his or her thinking • students record their own learning	• accuracy, consistency, and fairness of judgements based on high-quality information • clear, detailed learning expectations • fair and accurate summative reporting
Using the Information	• provide each student with accurate descriptive feedback to further his or her learning • differentiate instruction by continually checking where each student is in relation to the curricular outcomes • provide parents or guardians with descriptive feedback about student learning and ideas for support	• provide each student with accurate descriptive feedback that will help him or her develop independent learning habits • have each student focus on the task and his or her learning (not on getting the right answer) • provide each student with ideas for adjusting, rethinking, and articulating his or her learning • provide the conditions for the teacher and student to discuss alternatives • students report about their learning	• indicate each student's level of learning • provide the foundation for discussions on placement or promotion • report fair, accurate, and detailed information that can be used to decide the next steps in a student's learning