

Assessment throughout the Learning Cycle

Ongoing Assessment

Teachers are constantly collecting informal and formal information about what and how their students are learning. They check student tests and assignments, listen to small-group activities, and observe students engaged in structured and unstructured activities. They use this information for a variety of purposes, ranging from communicating with parents to meeting standards and benchmarks. However, when teachers systematically collect the right kinds of information and use it effectively, they can help their students grow as thinkers and learners.

In some contexts, the terms assessment and evaluation are interchangeable. Here we use the term “assessment” to refer specifically to all kinds of methods and strategies that provide information about a student’s learning. Formative assessment provides learners with feedback about how they are doing throughout the learning process. Summative assessment takes place at the end of a unit or project and gives students and teachers information about the skills and knowledge that students have acquired.

Using a broader variety of ongoing assessment throughout the instructional cycle can provide much more valuable information to both the teacher and learners. Formative assessment can be used to:

- Gauge students' prior knowledge and readiness
- Encourage self-direction and collaboration
- Provide diagnostic feedback to teacher and student
- Monitor progress
- Check for understanding and encourage metacognition
- Demonstrate understanding and skill

The overarching purpose of assessment is to give teachers the information they need to provide quality instruction. Embedded and on-going assessment is at the heart of project-based learning and provides a way for students to show and discover what they know in different ways. With assessment integrated throughout a unit of instruction, teachers learn more about their students’ needs and can adjust instruction to improve student achievement. McMillan (2000) explains, “When assessment is integrated with instruction, it informs teachers about what activities and assignments will be most useful, what level of teaching is most appropriate, and how summative assessments provide diagnostic information.”

Assessment before Instruction

Before beginning a unit of study, a teacher assesses primarily to gauge students’ needs. When teachers plan a unit, along with their curriculum and standards, they reflect on what they have learned about student learning from previous experience with the topic. They recall misconceptions that students often have and areas that have proven to be particularly difficult. Records of tests and quizzes give them useful information about the effectiveness of previous instruction. This kind of information is useful and important as a foundation for planning, but it is only the beginning.

Every teacher knows that all students are different and that all groups of students have their own strengths and personalities. Individual students also vary in the type

of previous instruction they have had, as well as the understanding and interest they bring to a new topic.

By conducting discussions, asking students to fill out graphic organizers or write in journals, teachers can get a sense of students' understanding about a topic and their general attitude about the subject. Collecting information about individual student's understanding before beginning a unit helps teachers gauge students' needs and plan learning activities that increase their motivation to learn and help them succeed.

Assessment during Instruction

During the course of a unit, assessment serves three different purposes:

- To encourage self-direction and collaboration
- To monitor progress
- To check for understanding or to encourage metacognition

Through a variety of kinds of informal assessments such as learning logs, anecdotal observations, checklists, and conferences, teachers collect information about students' skill development and how their thinking and understanding of the topic is progressing. This information helps the teacher differentiate instruction by making on-the-spot decisions, such as taking time out to review a concept before moving ahead with a scheduled activity or revising a sequence of activities to take advantage of student interest.

Knowing how students are thinking about a topic also helps the teacher to "make adaptations for individual learning differences to ensure that all students understand, practice, and master each component as they progress toward the final goal" (Guskey, 2005, p. 33). Through individual feedback and flexible grouping, teachers can help students grow from where they are to where they need to be. Instruction that meets students' individual needs gives them the confidence that they will learn and motivates them to become engaged in the topic and even to take risks with their learning.

Another important purpose of assessment is the development of thoughtful, independent, self-directed learners. In some classrooms, students only get feedback on their learning at the end of a unit through a test or final paper. Often by the time they find out how they did, the class has already moved on to another topic, and the student has little opportunity or interest in correcting any misunderstandings or improving their skills.

In a classroom where assessment occurs often in a variety of ways, students learn to understand what excellence looks like in the work associated with the topic. They may even have had a role in describing quality work on final products or performances. Parents and students receive frequent specific feedback on how students are doing and what they can do to improve. Students have learned strategies for assessing their own thinking and work in comparison to standards of excellence. They have opportunities to reflect individually and in groups on how well they work together to solve problems. When they use their assessments to set specific goals, they can take advantage of instruction to improve their work to be more like the exemplars (Shepard, 2005) and monitor their thinking and teamwork. According to Black and his colleagues (Black, Harrison, Lee, & Marshall, 2003), "This ability to monitor one's own learning may be one of the most important benefits of formative assessment" (p. 67). Peer- and self-assessment help students become

independent learners who understand their own strengths and needs and know how to set goals and monitor their own progress.

Assessment after Instruction

At the end of a unit, students need to show what they have learned and teachers need to know what students have learned and what they will take with them from one unit to the next. These assessments ask students to demonstrate understanding and skill.

Low-level knowledge about a topic can be assessed through a quiz or test, but assessing deeper understanding requires different kinds of tasks. When students plan and carry out performance tasks, they show how well they can apply what they have learned to authentic situations. These tasks must be carefully designed in order to elicit the students' level of understanding and to provide them with opportunities to demonstrate their learning. Tasks such as reports, essays, presentations, artistic performances, and demonstrations, allow students to show what they have learned about content, about working with others, about thinking, and about their own learning processes.

Other kinds of long-term assessments, such as portfolios and ongoing conferences, provide teachers and students with the opportunity to make connections among units of study, even different subject areas, and individual goals. They help students assess their own learning over a period of time and give teachers and schools important information for long-term planning.

Creating a Classroom Culture of Learning

Often teachers plan a unit of study thinking of what *they* are going to do, the lectures they will give, the activities they will plan, and the tests they will create and grade. When formative assessment is a daily occurrence, teachers begin to think more in terms of what their students are doing than in terms of what teachers are doing. Instead of thinking, "I'm going to explain simple machines to my third graders using a video and a demonstration," a teacher asks, "What kind of activity can I ask my students to do that will show me what they understand about simple machines?" Then after gauging students' preliminary understanding, the teacher thinks of ways to help students build their understanding, continually monitoring how they are learning. Teacher behaviors, in this kind of classroom, are only instructional as a means to an end, student learning.

In many classrooms, students often attend class every day with only one thought: "What will be on the test?" Assessment in these classes becomes a guessing game. The teacher wants students to learn what will be on the test without telling students exactly what will be there since the test items are merely a sample of the knowledge students are expected to learn. Students want to find out exactly what will be tested so they can do well and not have to learn any "unnecessary" information. A final grade on a test may be a total surprise and may not reflect accurately a student's understanding of a topic, thus perpetuating the idea that doing well on the test is about playing a complicated game with the teacher, not about learning.

When students receive frequent information about their progress, however, they focus more on learning. They know exactly how they will be assessed since the assessments reflect authentic work in the discipline. As they move through the subject matter of the unit, they receive information about how they are doing, what goals they are meeting, and what they can do to improve. When the time comes at the end of the unit for them to show what they can do, they have had multiple opportunities to build their understanding and skill, and they are not surprised by the outcome.

In classrooms where students, parents, and teachers work together to continually assess students' progress toward learning goals, the classroom environment becomes more focused on learning. Students feel more control and take a more proactive approach to their learning while teachers' focus is "less on teaching and more on the learning in the classroom" (Black, et al., 2003, p. 80).