Five Evidence Gathering Routines
Activity 3.7

Introduction

Formative assessment involves continuously collecting and using evidence to move student learning forward. Rather than adding a bunch of new evidence collection strategies to your instructional practice, we find that the best way for teachers to elicit evidence during instruction is to start with what you do already. Below we introduce five instructional routines—routines already established in your classroom—and offer techniques to enhance these routines so that they can be used to collect evidence of student learning. Done well, each of these routines incorporates the *insights about evidence*, and assumes that these foundations of evidence collection are in place as the routines are carried out in the classroom.

The following five instructional routines support teachers to elicit formative evidence of learning during instruction.

(1) Eliciting evidence through activating prior knowledge.

(2) Eliciting evidence through academic dialogue.

(3) Eliciting evidence through questioning.

(4) Eliciting evidence through observation and analysis of student work.

(5) Eliciting evidence through peer and self-assessment.

Following this reading, a selection of videos will be posted, each of which provides a classroom example of one of the five routines. Keep in mind which routines you will want to learn more about by seeing them in action.

Eliciting evidence through activating prior knowledge

As instruction begins in a new lesson, students will have different starting points, misconceptions, and foundational knowledge. Activating prior knowledge helps teachers:

- Identify students' prior knowledge;

- Understand students' depth of knowledge;

- Identify missing elements in skill or understanding;

- Elicit misconceptions; and

- Clarify where to begin instruction.

Instructional routines focused on activating prior knowledge help students explore connections across content areas and engage in thinking about the Learning Goal. There are a wide variety of knowledge activation techniques that serve to elicit student understanding. Well-documented strategies include K-W-L charts, quick writes, checklists, carousel brainstorming, entrance tickets, and white board prompts. Activating prior knowledge used to be considered an anticipatory activity, done only at the outset of learning, and was often used as a motivational or engagement strategy. However, background knowledge should be assessed, enhanced, and worked on throughout a learning sequence. Knowledge activation routines help students make connections between what they know and what they are learning. As such, they serve to support student understanding throughout a lesson.

Eliciting evidence through academic dialogue

When students engage in academic dialogue, they are thinking, exploring ideas, and making connections. When students talk, teachers can better understand what students know, the strategies they are using, and how they are thinking about the content. Creating a classroom culture in which there is equitable academic talk amongst all students requires significant teacher support. Teachers must clearly define the purposes and parameters of classroom dialogue, provide scaffolds for student learning, and establish times for student dialogue. With these structures firmly in place, teachers and students can use dialogue and discussion to continuously elicit and apply evidence of learning.

Effective use of academic dialogue to support eliciting evidence includes:

- Develop and uphold classroom norms that promote a safe expression of ideas, including emerging ideas or student misconceptions;

- Establish opportunities to explore multiple viewpoints and solutions;

- Ensure dialogue allows for equitable participation by all students;

- Establish consistent use of both large and small group dialogue; and

- Integrate opportunities for students to lead discussions or elicit evidence during discussions.

Eliciting evidence through questioning

Questioning is one of the most powerful tools teachers have at hand to elicit and explore student thinking. Effective oral questioning aids cognitive growth, provides connections to prior knowledge, contributes to a classroom culture that promotes learning and risk-taking, and supports students' ability to internalize next steps in learning.

The following are essential elements of effective questioning that support eliciting evidence.

- *Plan questions in advance* of the lesson that will prompt student thinking throughout a lesson. This might include developing questions that will elicit

thinking at key points in the lesson or sequencing questions to address appropriate cognitive demands as student understanding becomes more sophisticated.

- Use questions to engage in **assessment conversations.** The typical questioning pattern in a classroom is "teacher initiation, student response, teacher feedback." In an assessment conversation, the teacher asks a question, the student responds, and then the teacher follows up on the response to further explore student thinking. The follow up might:

  - Build on student thinking to make connections (*"How would this connect to what we studied in our last unit on nutrition?"*);

  - Challenge students to prove their thinking (*"What evidence do you have to prove that?"*);

  - Probe students' ideas and misconceptions (*"What would that look like if...?"*);

  - Bring other student voices into the conversation (*"What do you think about what was just said? Can you build on his response?"*); or

  - Engage others to elicit different thinking (*"Can you think of a different way to approach that problem?"*).

- Apply the research on **effective questioning**. Use wait time, integrate questions that encourage *higher-order thinking*, and employ *pre-thinking strategies* (pair/share, pre-write) when asking cognitively complex questions.

Eliciting evidence through observation and analysis of student work

Using multiple representations of learning helps teachers understand a more complete picture of each student's understanding. When planning to gather evidence of learning, consider *learning opportunities where student thinking can be observed*, including:

- Drawing
- Diagrams
- Graphs
- Concept maps
- Model building

- Investigations
- Student writing
- Graphic organizers
- Detailed outlines
- Student notes

When teachers ask probing questions about student representations, they have an additional source of evidence on which to make a decision about next steps.

Eliciting evidence through peer and self-assessment

Teachers are not the only ones who elicit evidence of learning. In a formative assessment classroom, students play a key role in eliciting and using evidence of learning—through both self- and peer assessment. Once students have internalized the Learning Goal and Success Criteria, students consider the extent to which these have been met or not met. The teacher's role is to structure opportunities for students to learn how to be effective peer and self-assessors. While the ultimate goal of peer and self-assessment is to benefit students, teachers also gain insights into student learning by what students say or write about each other's work.

Some final thoughts on documenting formative assessment evidence

Classroom observation tools are employed frequently in formative assessment classrooms to document students' status as they are learning. Though high tech versions are available, most teachers we work with prefer to track notes on a clipboard or tablet, using a simple table or spreadsheet. This is typically formatted on one page per class, with the Success Criteria written along the top and each student's name written alphabetically along the left column. Teachers then take notes as they observe each student working in-the-moment on each of the Success Criteria. Teachers tend to develop their own rating scales, using either numbered or check systems, and incorporate note-taking practices that work for them. Many teachers make notes about following up on individual students the next day or creating small groups of students who might need extra support or opportunities to extend their learning. Whatever the system, it needs to be convenient and familiar so that teachers can focus on their students, rather than on the record keeping.