

Five Evidence Gathering Routines

Introduction

Formative assessment involves continuously eliciting, interpreting, 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 your existing instructional expertise. 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. When 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 feedback 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?”)
 - 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, prewrite) 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 feedback 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 interpreting evidence of learning – through both self-assessment and peer feedback. Once students have internalized the Learning Goal and Success Criteria, students consider the extent to which they are making progress towards the Learning Goal. Developing and using instructional routines that incorporate peer feedback and self-assessment support students to interpret evidence independently or with support from peers. Teachers model effective peer feedback and self-assessment practice and develop classroom structures through which students have regular opportunities to evaluate, consider, and get feedback on next steps in their learning. Ultimately, as these routines are applied as part of ongoing instruction, students develop metacognitive skills to more accurately interpret evidence aligned with the Learning Goal and Success Criteria, in order to monitor and adjust learning tactics, and select learning strategies that will help them move forward.

Instructional Routines Support Culture, Identity, and Agency

Teachers' use of daily routines to elicit evidence may involve radical changes in how students are encouraged to express their ideas and their understandings. In more traditional, teacher-directed learning, students had little experience with showing their learning as it was emerging. Students may feel uncertain about showing what they know, at first, but with support they can learn to engage more deeply in describing their own understandings, and attempt to describe their understanding of peers' learning. Attending to classroom culture, understanding students' identities as learners, and developing structures that support students to have agency in their learning are all part of establishing daily routines for evidence collection, interpretation, and use.