Compare Evidence to Likely Range of Student Responses

Transcript for the online video from CSAI – Section 2

Welcome back to the module on Analyzing and Interpreting Evidence of Student Learning.

Recall that this module delves into four main ideas in Analyzing Evidence. They are:

- Analyze Relative to Your Learning Goals and Success Criteria
- Compare Evidence to Likely Range of Student Responses
- Use Multiple Sources and In-the-Moment Evidence
- Take Account of Students' Prior Knowledge and Experience

This video focuses on comparing evidence to a likely range of student responses.

Recall our conception of a range of student responses from the Gathering Evidence module. These responses span from emerging to maturing and consolidated levels.

From the stage where new learning is just beginning to take hold, to students gaining a greater understanding of what they are learning, to finally being able to use new learning independently.

What do we mean by comparing the evidence of student learning to the likely range of student responses? Think of the pathway to success that different students are likely to travel from different starting and to where they might end without the responsiveness of formative assessment. The range runs from how struggling learners are likely to respond to an activity or assignment, without extra help or scaffolding; to what success looks like for your most advanced students – and includes the responses of students in between.

Teachers can approximate this range by analyzing examples of students' work from students who experienced various degrees of success the last time the lesson was taught. Teachers can sort these examples into piles to reflect low, medium and high performance. And then from these, teachers may infer a likely learning progression. Absent prior student responses, descriptions of what the teacher thinks student learning may look like at different points in its evolution are also very helpful.

For example, by analyzing each pile, teachers can anticipate what learning looks like at an emerging stage, at a maturing stage, or what learning looks like when it is consolidated and students are ready to move to a new goal. Similarly, if teachers have already identified how specific misconceptions or misunderstandings may evidence themselves in student work or other responses, teachers will be able to compare current evidence to these reference points.

Next, we'll see an example of some teachers' anticipated student responses.

In this science example, students are learning why things sink and float and how to explain their thinking with the help of evidence from their observations.

Here is a table that lays out the learning goal, success criteria, and evidence gathering opportunity. Note that there is both a science content goal and a language goal.
You can pause the video here a moment to read this fully.

Next we'll see a range of anticipated student responses that differentiate the three levels for both the science and language learning goals.

At the emerging level for their science understanding students can explain why things sink or float in terms of mass or volume only. At this level in language, they begin to establish a relationship between ideas with single word connectors, and use only one or two technical vocabulary words.

Here are some student examples at the emerging level. The students establish a cause and effect relationship with the word "because", and explain scientific concepts using the words "mass" and "volume".

At the maturing level in their science understanding, students can explain the relationship between mass and volume and what this has to do with sinking and floating. In language, they do this through establishing cause and effect and contrast relationships. Students also increase their use of technical vocabulary to explain scientific concepts.

In these examples of student responses, students establish cause and effect using the sentence beginning, "if", and create contrasts with adjectives such as "lighter", "heavier", and "different". Students use some technical vocabulary, such as the word "density".

At the consolidated level in their science understanding, students can clearly explain the mass/volume relationship and use relative density to further explain why things sink and float. In language at this level, this is done through establishing relationships between ideas through various means and through using a variety of technical vocabulary. In particular, students use word groups structured as expanded noun phrases to precisely communicate scientific ideas.

In this example, the student establishes cause and effect with the word "because" and explains concepts precisely using technical vocabulary in expanded noun phrases, such as, "mass/volume ratio" and "the density of liquids". The first phrase also serve to establish a relationship between ideas with use of the word "ratio".

When teachers are clear about possible student responses, they are better able to analyze evidence in the moment and determine next steps. Similarly, this clarity helps teachers when they analyze student work - they know what they are looking for and what it will tell them about the status of student learning.

Next we'll pause and reflect.

Think of a lesson you've taught recently. What was the range of student responses that demonstrated emerging, maturing, and consolidated understanding?
Pause the video a moment to reflect on this question.

Thank you. You have completed the second section on Analyzing and Interpreting Evidence of Student Learning module.

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