



LEARNING POINT

Prior knowledge: Why is activating it important in the formative assessment process?

In the formative assessment process, a teacher needs to understand what students currently know and can do in order to make informed instructional decisions and provide feedback that advances student learning and understanding. Therefore, it is crucial for teachers to elicit evidence of student understanding in a variety of ways so that students have opportunities to demonstrate their understanding.

Activating prior knowledge is important so that teachers gather accurate and complete information about students' current understanding and skill. It is also important so that students remember what they already know about a topic or a situation and use this as the basis for new learning. Teachers and students will benefit from reflecting on what students understand and any misconceptions they may have about a topic before they move forward with the new learning.

Activating prior knowledge defined

Activating prior knowledge can be defined as a process that encourages students to think about and perhaps share their existing understanding about a topic so as to make connections between what they already know and new information they are learning. To develop students' knowledge

and skill in a given subject, the teacher needs to provide an opportunity for students to consider and share what they already know and can do. This includes all aspects of what a student understands, including misconceptions the students may have about a topic.

student understanding in the formative assessment process. A teacher needs to support students to connect new learning to past knowledge, to self-assess, and to set goals for their learning. A teacher may activate prior knowledge by using a variety of different strategies including:

“Opportunities for pupils to express their understanding should be designed into any piece of teaching, for this will initiate the interaction whereby formative assessment aids learning.”

(Black & William, 1998, p. 11)

Activating student prior knowledge helps students to remember what they already know and understand about the area of learning, thus helping them to build on this previous learning. There are many different approaches to activating prior knowledge, and this process can look different depending upon the content area. These efforts also allow the teacher to gather a complete picture of students' previous learning to guide the student forward and address any misconceptions.

Applications to practice

Prior knowledge is an important element of eliciting evidence of

- concept maps,
- charts that capture what students **Know**, what they **Want** to know more about, and what they **Learned (KWL)**,
- anticipation guides, or
- reflection journals.

At other times, a teacher may structure reflective opportunities for students to connect to prior knowledge by leading students through a guided visualization or having them recall their previous learning by drawing or creating a visual diagram.

For example, in reading, a teacher may invite students to think about

their prior knowledge or experience on the topic of a reading passage in order to make connections to the text they are reading. Students may be able to increase their comprehension and reading skills by using what they already know about a topic to reflect on how the new information fits with what they already know.

In mathematics, a teacher may have students recall a particular experience in which they had to solve a problem. For example, for two-digit addition with regrouping, the teacher may have the students recall when they had to add a large number of items and how they were able to keep track of the sum. The teacher could also have students recall prior learning about place value and addition, and strategies they may have used to create groups of ten to help students make connections to the new learning. In this way, activating prior knowledge could involve telling a story, having students draw a picture, recalling prior learning, or visualizing a related experience.

A science lesson may begin with students completing an anticipation/reaction guide about photosynthesis. The students will fill out whether they agree or disagree with statements about photosynthesis before they engage in new learning. The teacher and students can reflect on the student responses to inform instructional and learning decisions. Then after the lesson, students can record their answers again and compare their predictions with their final conclusions. In another example, a teacher may activate prior knowledge before an investigation of a phenomenon by asking students what they already know about the phenomenon.

The tables to the right include some different ways teachers may activate prior knowledge. While the tables provide examples, the primary focus of activating prior knowledge is to gather information about students' current level of understanding for

To learn more

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Formative assessment: What do teachers need to know and do?
Margaret Heritage. Phi Delta Kappan, 89(2), 140-146.
<https://bit.ly/3yvGOPJ>

What do we mean by formative assessment?
ALN Learning Point (Michigan Assessment Consortium, 2016).
<http://bit.ly/LP-FormativeAssessment>

What are learning progressions?
ALN Learning Point (Michigan Assessment Consortium, 2018).
<https://bit.ly/LP-Progressions>

Learning targets: How students aim for understanding in today's lesson.
Connie M. Moss and Susan M. Brookhart. (ASCD, 2012)
<http://www.ascd.org/Publications/Books/Overview/Learning-Targets.aspx>

Using formative assessment to enhance learning, achievement, and academic self-regulation
Heidi Andrade and Margaret Heritage (Routledge, 2018)
<https://www.routledge.com/>

a particular learning target, so that the information can be used to guide instructional decisions and support student learning. When students have opportunities to recall what they already know, their prior knowledge

can help to support current and future learning.

References

Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: principles, policy & practice*, 5(1), 7-74.

KWL Chart	
Fill in the first two rows before new learning or research. Fill in the last row after new learning or research.	
Topic: _____	
K: What do you already know about this topic?	
W: What do you wonder or want to know?	
L: What did you learn about this topic?	

Anticipation Guide		
Directions:		
1. Read the statements below and decide if you agree or disagree. Record your prediction in the left-hand column.		
2. At the end of the lesson, answer the same statements again. Record your answers in the right-hand column.		
3. Compare your early predictions with your final conclusions.		
Before (Agree/Disagree)	Statement	After (Agree/Disagree)
Reflection on Learning:		

The Michigan Assessment Consortium's Assessment Learning Network (ALN) is a professional learning community consisting of members from MI's professional education organizations; the goal of the ALN is to increase the assessment literacy of all of Michigan's professional educators.