

By Kim Hamill



"Paper-and-pencil assessments – they still have their time and place in the classroom. But when you integrate SMART products, kids can really come alive and manipulate and use and touch, so they are much more motivated to learn. Using SMART products keeps the children interested, so I try to do that as much as I can."

– Cara Elliott, Fourth-Grade Teacher, Westwood Elementary School, West Jefferson, North Carolina



Expressing knowledge

Ask people what the word *assessment* means to them, and they'll probably use words like *test* or *achievement* or *standardization*.

And while these words can be used to define more traditional summative assessment methods, educators like Cara Elliott and Gary Aylward are coming up with creative ways to assess understanding during a lesson, inspiring their students to say things like "Can we do that again?" or "That was so fun!"

For Elliott, it was the year she taught sixth grade that caused her to rethink how she was checking her students' understanding of a concept.

"It allows for all students, whether they are a student with special needs or a student still struggling to learn English, to be more successful at showing what they know."

– Cara Elliott

Currently a fourth-grade teacher at **Westwood Elementary School** in West Jefferson, North Carolina, Elliott had often used alternative assessments so her students could demonstrate their knowledge.

"My definition of an alternative assessment would be anything that strays from the traditional pencil-paper assessment method – circle A-B-C-D, write-the-essay assessment," Elliott says. "It allows for all students, whether they are a student with special needs or a student still struggling to learn English, to be more successful at showing what they know."

But when Elliott started teaching a room full of sixth-grade students with lower-level reading skills, she realized she

needed to take her alternative assessments to a new level.

“The lack of reading achievement with that sixth-grade group got in the way of what I wanted to teach. I was constantly dealing with something else, so I had to be very creative that year,” Elliott says.

Elliott, who is a **SMART Exemplary Educator**, incorporated **SMART Notebook collaborative learning software** into her assessments to make them visual, interactive and accessible for all students, no matter their reading levels.

For instance, to ensure her students could understand her directions, Elliott started creating and inserting videos along with her instructions into SMART Notebook files. Using computers, students could open the SMART Notebook file, watch the instructional video and then complete the activity for Elliott’s review.

“That was the year I felt like I took off and I did a better job at alternative assessments, even with my most challenging group of students, and they loved the activities,” she says. “And as time went on, they got so much better in a variety of areas. So that was the year that I realized this works.”

Today, in addition to using her **SMART Board™ interactive whiteboard** and SMART

Notebook software to conduct assessments, Elliott uses the **SMART Response PE interactive response system** to check her fourth-grade students’ understanding of a concept.

Instead of creating a whole quiz, Elliott usually scatters assessment questions throughout her SMART Notebook lesson, and students can quickly answer using their remotes. She prepares her questions in advance, but she’ll sometimes use the *instant question* feature to double-check their understanding, take a poll or review a concept.

She says that her students love the interactive experience of the SMART Response system, but more than that, they appreciate knowing immediately if they answered a question correctly. “They can instantly see if they got that question right. That motivates them to hang in there, to keep doing that lesson and stay with you. That’s the motivation for them.”

When Elliott uses **SMART products**, she says that behavioral problems decrease, because the students are motivated and able to be creative in their learning.

“Paper-and-pencil assessments – they still have their time and place in the classroom. But when you integrate SMART products,

kids can really come alive and manipulate and use and touch, so they are much more motivated to learn. Using SMART products keeps the children interested, so I try to do that as much as I can,” Elliott says.

Visualizing understanding

Just like Elliott, Gary Aylward had an epiphany about assessment and the most effective ways of enabling his students to demonstrate their understanding.

After completing his master’s degree in assessment, this seventh- and eighth-grade science teacher from **Richfield Middle School** in Richfield, Minnesota, wanted to start incorporating formative assessment into his science classes, but he felt the time factor could be an issue.

“When I was looking at formative assessments and researching them, one of the things that concerned me was the time it takes to analyze the information after the students put it down. Even if I have a student write down a sentence and that’s all I want them to do, it takes time to analyze these sentences,” Aylward says.

After reading an article by a Dutch university instructor who had his students use drawings to demonstrate their level of knowledge of a concept, Aylward was inspired to modify that concept and use it for formative assessment

FEATURE ARTICLE

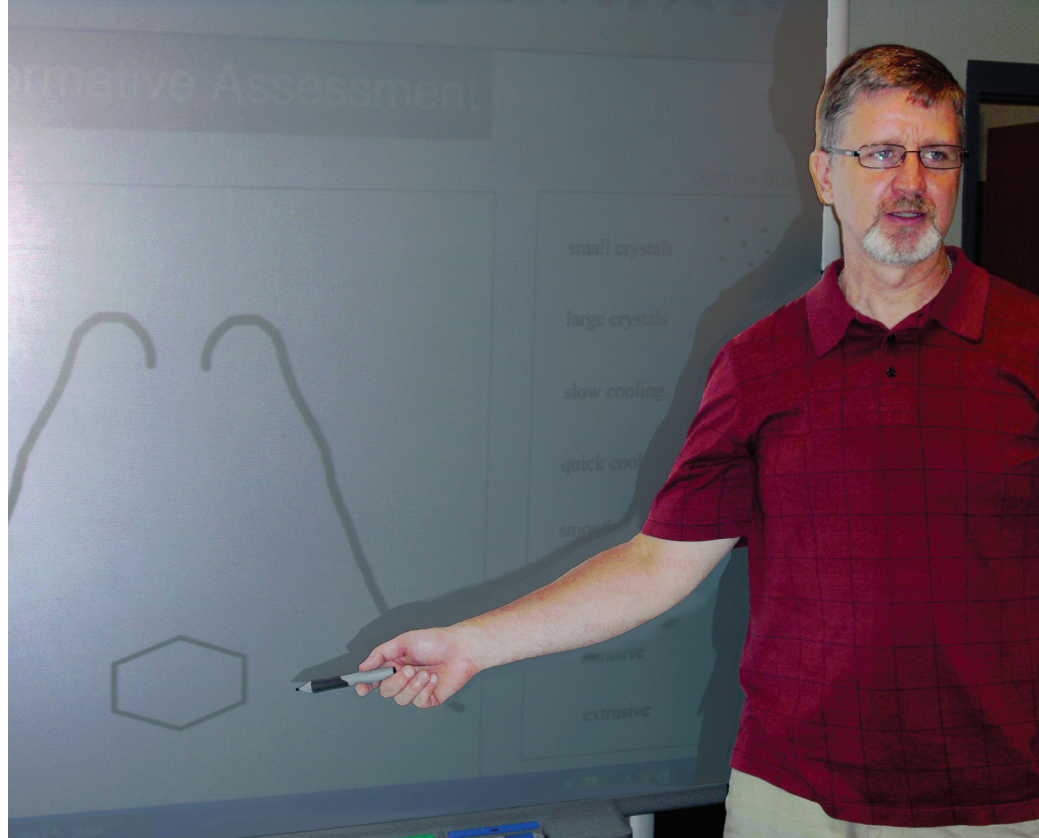
– and the idea of visual formative assessment (VFA) was born.

Aylward, who is a SMART Exemplary Educator, came up with VFA as a quick, illustrative way for students to show their understanding of a concept and as an easy way for him to analyze the assessment.

A VFA has two main elements – an options box and a visual response grid. The options box contains a series of simple images that students use to demonstrate their understanding of a process or concept, and the visual response grid is where they draw that process or concept.

Aylward uses the SMART Board interactive whiteboard to display both the box and the grid, but students usually will draw only the grid in their notebook and use the interactive whiteboard for reference. For his students to complete their VFAs, Aylward asks guided questions that enable students to draw and arrange the simple images to complete the diagram in the visual response grid.

For instance, if Aylward is assessing his students' understanding of igneous rock formation, he would draw a very simple volcano in the visual response grid on the interactive whiteboard. Then, in the options box, he would have simple drawings or symbols that



Read Aylward's article, Visual formative assessments: The use of images to quickly assess and record student learning, which originally appeared in *Science Scope* magazine.

represent the characteristics of intrusive and extrusive igneous rock formation, such as texture, size of crystals and cooling rate.

Students then use the images in the options box to show where each process happens on a volcano, while Aylward guides them.

“By the time I have given them that instruction, I have walked around the room and I have seen each student's response, and I know which students are on target and which students are struggling a little bit,” Aylward says. “I will have a student who is showing me a high level of understanding come up to the SMART Board and demonstrate for the other students.”

He says that with VFAs, he can record the responses of all 30 of

his students in just a few minutes. “I don’t have to assimilate text and interpret that text. I’m just looking at that picture and recording the information.”

Not only do VFAs enable Aylward to quickly check for understanding, but they have enhanced the assessment experience for English language learners and visual learners.

“As far as the help for English language learners and visual learners, it allows them to not have to worry about efficiencies in language skill when they are simply manipulating or drawing a picture. It frees them up from having to worry, ‘Am I pronouncing this word right, am I spelling it correctly? I can simply draw a picture and show my level of understanding of this topic,’” Aylward says.

“So it kind of forces them to coalesce their thinking into this diagram without worrying about text,” he adds.

Sometimes, Aylward will have a student use the **SMART Slate™ wireless slate** to complete a VFA. As the student draws on the wireless slate, it appears on the interactive whiteboard, enabling all the students to see the diagram.

Another way Aylward displays student VFAs is with the **SMART Document Camera** – a good way of showcasing when a student has

expressed a deeper understanding of the concept or offered an alternative way to complete the assessment.

Over time, Aylward has noticed that VFAs have improved how his students use their notes and prepare for summative assessments. He teaches the same students in both seventh- and eighth-grade science and says that the VFAs keep the engagement level high.

“I have my students as both seventh and eighth graders, and they are just as engaged at the end of the eighth-grade year as they are at the beginning of the seventh-grade year as we are going through the visual formative assessments,” Aylward notes.

Both Aylward and Elliott say that formative assessments are an important way to check their students’ in-development progress and understanding of a concept or topic.

Aylward likens formative assessment to making a soup. It’s important to continually taste and check the soup before it’s done to get the result you want when you serve it.

And by cooking up formative assessments that are creative, enlightening and engaging, both Aylward and Elliott are enhancing the experience for the most important people they serve – their students.

Aylward’s Tips for Creating a VFA

Whether you teach industrial technology, health or any subject in between, VFAs can be beneficial in your classroom, especially if you follow these simple tips from Aylward.

- Include essential elements from the unit and key ideas from your state and provincial standards
- Use simple, cartoon-like graphics to keep students focused on the assessment and not their drawing ability
- Demonstrate creating the visual response grid to help students organize the format of their responses
- Limit the response to seven or fewer pieces of information to make it easy for you to assess
- Have an easy way to record your students’ responses
- Include time for re-teaching