Guiding Learning: Questions, Prompts, and Cues

Leading students to think through their own misunderstandings is a powerful way to teach.

By Nancy Frey and Douglas Fisher

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Watch the Video!

Watch a video about guided learning:

www.principals.org/pl0111fisher.

When learners get stuck, teachers must respond so that they can improve understanding, correct an error, or address a misconception. The way a teacher responds can leave the students feeling either successful or helpless. We call this phase of the teaching and learning process *guided instruction* because it represents a shared responsibility between the teacher and the students. When guided instruction is done well, students feel supported and teachers feel rewarded.

Observing Systemic Support

Of course, teachers can't spend the entire day correcting mistakes through guided instruction. Hopefully, students are learning while their teachers are modeling and while they are working with peers. But when students do get stuck, teachers can provide systematic support. The system of guided instruction is built on the assumption that teachers know their content well enough to recognize errors and misconceptions. If that is so, teachers can use questions, prompts, cues, and direct explanations to guide learners to increased success. As the instructional leaders, principals should analyze the procedures that teachers use to resolve misunderstandings.

Questions to Check for Understanding

Guided instruction begins when the teacher poses a question to check for understanding. This is not the time to assess students, but rather a time to uncover misconceptions or errors. For example, when a life sciences teacher asked a group of students to explain how they knew whether something was living, she wanted to uncover their understanding of the scientific definition of life. When her students provided her with a number of correct responses, she asked, "So is evolution a characteristic of life?" When several students nodded positively, she knew that she had uncovered a misconception that she needed to address.

There are a number of question types that are useful in checking for understanding, and the type of question asked determines what can be clarified. Asking a knowledge-level question and uncovering an error will not likely help a teacher improve students' ability to synthesize. Accordingly, students should be asked a variety of questions to check their understanding. Teachers should be continually on the lookout for misconceptions and errors.

Prompts for Cognitive or Metacognitive Work

When errors or misconceptions are identified, the first step in resolving them is to prompt the students to engage in mental work, either cognitive or metacognitive. In too many classrooms, teachers skip the prompts and cues when errors are identified and instead provide additional information to students. When that happens, the students have not done any of the work and they likely will not learn anything from the exchange. Teachers can prompt students' background knowledge and experiences, the rules they have been taught, or the procedures commonly used to solve problems.

For example, when a mathematics teacher met with a group of students who were stuck on a problem, he prompted them by reminding them about the order of operations, rather than by telling them where they had made their mistake. Similarly, when a

physics teacher questioned students about their project, he uncovered a misconception about speed versus velocity. In prompting them, he said, "Remember the animation we watched about driving to school? Velocity and speed have some things in common, but...." The students immediately responded with a quote from the animation, "Velocity is speed with direction," and their misconception was resolved.

Cues to Shift Attention

If prompts fail to resolve the error or misconception, teachers can assume a more-directive role through the use of cues. Cues should shift students' attention to something they've missed or overlooked. A simple cue might be, "Take a look at the figure on page 112. Does that help?"

A number of cues are effective, including gestural, verbal, visual, physical, environmental, and positional cues. Teachers use such cues regularly in their initial teaching, but often fail to use the cues again when students are stuck. While meeting with a group of students, a statistics teacher identified an error that was not resolved through prompting. She shifted students' attention by pointing to a graph and using her voice to emphasize a word: "Population *per* thousand." Similarly, a physical education teacher used physical and verbal cues to correct a student's grip on a baseball bat.

Direct Explanations

Sometimes, prompts and cues do not resolve the errors or misconceptions that students have, but students cannot be left hanging. Teachers must ensure that students have a successful learning experience, even if that means providing a direct explanation and giving students the answer. Importantly, direct explanations should come after prompts and cues to increase the likelihood that students can connect this new information to a thinking process in which they were engaged.

Following the direct explanation, the teacher should monitor students' understanding by asking them to repeat the information back in their own words or asking the original question and checking for understanding again. In this way, students are accountable for the information and for processing the experience with the teacher.

The Trouble With Whole-Class Guided Instruction

The process we outlined for resolving student misconceptions and errors works best with small groups of students. It's a difficult process to put into place in a whole-class format. Although checking for understanding can be done effectively with the whole class, some students disengage when the teacher moves to prompt or cue. Some students don't need the information that the teacher is providing, either because it's not helpful to them or because they already understand the concept. When some students disengage, they distract others.

An observer might be tempted to discuss classroom management with the teacher. Improving classroom management, however, won't improve the situation. Unless guided instruction is done quickly and expertly and all students have a task to do while the teacher prompts and cues those who need it, some students will lose focus. It's just human nature. It's better to address misconceptions or errors with small groups of students or

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individually—especially while students work collaboratively, cooperatively, or independently. In those situations, the teacher can scaffold learning through questions, prompts, cues, and direct explanations as needed.

Returning to the life sciences teacher and the definition of living, the teacher used prompts and cues to ensure students' eventual understanding. Here is a conversation we heard in her classroom:

Jamal: One thing for life is breathing.
Teacher: Do all things breathe? Think about that.
Mubarik: Yes. We have to breathe or die.
Teacher: So, I'm thinking about plankton.
Anais: No, some things don't breathe.
Mubarik: Oh, yeah, I forgot. But there is a word for what I'm thinking.
Jamal: Is it *metabolism*?
Mubarik: Yeah, that's it. To be alive you have to have metabolism.
Anais: Yeah, that was in the book. I remember now.
Teacher: Is metabolism the same as evolution?
Jamal: No, but living things have to evolve or die.
Anais: Wait a minute. We said that before, that they will die.
Teacher: Take a look on this page. [She points to a Web site on the monitor.]
Mubarik: It says that living things have to reproduce. It doesn't say nothing about evolution.
Jamal: So, maybe things don't have to evolve to be alive. Maybe that's more long term, not if the thing is alive right now.

As their conversation continued, the students in this group reached greater understanding of the content because their teacher did not simply tell them the missing information, but rather scaffolded their understanding through prompts and cues.

As instructional leaders, principals must ensure that teachers give this type of support to students who are stuck. Without guided instruction, students learn helplessness and become dependent on adults for information. That's not a situation in which students perform better on high-stakes tests—or in life in general. PL

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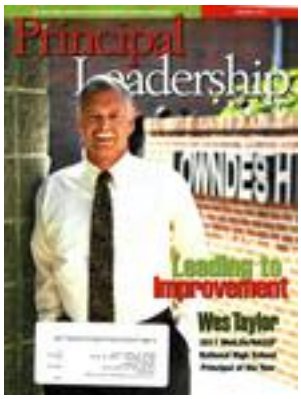

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