

## **ASSESSMENT *for* LEARNING**

### **Oral Language Strategies in *Checking for Understanding***

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#### **Accountable Talk**

How often have you assigned a partner discussion topic to students, only to hear the conversation devolve into a chat about weekend activities, a new movie, or the lunch menu? Often these students are not being willfully disobedient, but rather lack the skills necessary to conduct a meaningful conversation about an academic topic. Accountable talk is a framework for teaching students about discourse in order to enrich these interactions. First developed by Lauren Resnick (2000) and a team of researchers at the Institute for Learning at the University of Pittsburgh, accountable talk describes the agreements students and their teacher commit to as they engage in partner conversations. These include the following guidelines:

- Stay on topic.
- Use information that is accurate and appropriate for the topic.
- Think deeply about what the partner has to say.

We consider accountable talk to be crucial to classroom discourse because it creates shared expectations for all academic communication in the classroom. The three principles are equally relevant in a guided reading group, a book club meeting, a Socratic seminar, or a whole-class discussion.

Students are taught how to be accountable to one another and to their learning using techniques that forward the conversation and deepen their understanding of the topic at hand. The Institute for Learning Web site ([www.instituteforlearning.org](http://www.instituteforlearning.org)) describes five indicators of accountable talk; we have added an example after each:

- Press for clarification and explanation: “Could you describe what you mean?”
- Require justification of proposals and challenges: “Where did you find that information?”
- Recognize and challenge misconceptions: “I don’t agree because . . .”
- Demand evidence for claims and arguments: “Can you give me an example?”
- Interpret and use each other’s statements: “David suggested . . .”

These communications skills are invaluable for students using inquiry as a way to engage in active learning. Teachers fostering accountable talk in the classroom can monitor the

use of these indicators by listening to partners exchange information. In addition, the questions students ask of one another should inform the next segment of teacher-directed instruction.

Sixth grade teacher Ricardo Montoya monitors partner conversations to make teaching decisions. During one lesson, he introduced the concept of physical and chemical weathering to students, assigned them to partner groups, and asked the partners to identify examples of the two types of weathering using a series of photographs. As Mr. Montoya listens in on the students' conversations, he noticed that several partners were asking clarifying questions of one another concerning a photograph of acid rain. A few partners felt it was an example of physical weathering due to the acidic quality of the rain. Mr. Montoya asked partners to share their conversations, including their disagreements, with the rest of the class. He then led a class discussion on the possibility of considering acid rain as an example of both chemical and physical weathering. Mr. Montoya's attention to the students' conversations helped him to make the next instructional step in his lesson.

## **Noticing Nonverbal Cues**

Another way that teachers use oral language to check for understanding involves noticing the nonverbal cues which students give. While it may seem a stretch to include nonverbal cues in typical oral language interactions, remember that a significant portion of our communication comes from facial expression, eye movement, and such (see Calero, 2005). Students in our classrooms often let us know that they do or do not understand something through nonverbal cues, which may be as simple as the look on one's face or as complex as throwing one's hands in the air (in triumph over a math problem or in agony over a reading assignment). As a teacher, you can use nonverbal cues to determine if your students look puzzled, harried, or bored. With practice, you will find yourself noticing and responding to these nonverbal cues while teaching.

Fifth grade teacher Amanda Chavez uses a daily shared reading lesson to model her thinking and comprehension strategies for students. She knows that her modeling will provide students with increasingly complex ways of thinking about texts during her shared reading about Sojourner Truth from *Americans Who Tell the Truth* (Shetterly, 2005). Ms. Chavez noticed that Angel had a puzzled look on her face. Ms. Chavez paused in her reading and added some background information, watching Angel's face the whole time for signs of understanding. When Ms. Chavez said, "It seems strange now, but during the times of slavery, people could sell children who were born into slavery," Angel's face changed noticeably. It became clear that

Angel couldn't grasp the text about Sojourner Truth's life until she had the understanding that people have sold children.

## **Value Lineups**

Many students master the skill of explaining their own position on a topic, but fewer learn the art of listening to positions that differ from their own. However, this ability is at the heart of meaningful discourse in the classroom and is essential to all learning. In a truly learner-centred classroom, there is a free exchange of ideas that results in arriving at solutions to problems. Active learning results not from a knowledge dump emanating from the teacher alone but from a deeper understanding of the nuances and shades of gray that elevate knowledge. The National Research Council (2000) contrasts experts with novices in this way:

Experts first seek to develop an understanding of problems, and this often involves thinking in terms of core concepts or big ideas. . . . Novices' knowledge is much less likely to be organized around big ideas; they are more likely to approach problems by searching for correct formulas and pat answers that fit their everyday intuitions.

Value lineups help students to develop such in-depth knowledge by enabling them to explore core concepts and understand problems by having them first analyze their beliefs and then listen to the positions held by others. The value lineup is a structure for fostering peer discourse based on students' opinions about an academic topic (Kagan, 1994). Students are asked to evaluate a statement and instructed to line up according to their degree of agreement or disagreement with the statement. After forming a single line, the queue is then folded in half so that the students who most strongly agreed and disagreed with one another are now face to face. Students then discuss their reasons for their positions and listen to the perspectives of their partners. This cultivates a broader understanding of the distinctions of understanding on a topic.

When Deborah Chin's 10<sup>th</sup> grade biology students were beginning a unit on the use of cloning, she asked them to consider their values and beliefs about cloning in reaction to this statement: "Scientists should be allowed to pursue research in cloning." Ms. Chin's class then placed themselves on the wall of the classroom where the numbers 1 through 5 were displayed in a Likert-type scale. She reminded that that a 5 meant they strongly agreed, 4 meant they agreed, 3 meant they were not sure, 2 meant they disagreed, and 1 indicated that they strongly disagreed.

The students spent the next two minutes lining up according to their opinions. Ms. Chin then located the 18<sup>th</sup> student in line (the halfway point in this class of 36) and folded the line in

half. Now the first student spoke to the 36<sup>th</sup> student, the second spoke to the 35<sup>th</sup>, and so on. Ms. Chin walked the line, listening to their conversations about why they agreed or disagreed with scientific research on cloning. She heard Anne, who strongly agreed, explaining to Paul, who strongly disagreed, about her recent trip with her family to Yosemite: “There’s this project to clone the champion trees of the country so that they can be planted in other places, especially in cities.” She went on to explain that champion trees are the largest of their species and possess unique genetic features that make them more durable. Paul remarked that he never thought of cloning trees, only of humans, even though Ms. Chin’s question did not mention this.

After several minutes of conversation, Ms. Chin instructed students to return to their seats. The lively debate continued, but important information from multiple perspectives was shared in the discussion. A number of factors were introduced to the problem of cloning, including benefits and moral and religious objections. By using the value lineup, Ms. Chin was able to assess preconceived notions, background knowledge, and gaps in information. In addition, her students were challenged to consider other perspective on the topic.

## **Retellings**

Retellings are new accounts or adaptations of a text that allow students to consider information and then summarize, orally, what they understand about this information. Retellings require that students processing large segments of text think about the sequence of ideas or events and their importance. Inviting students to retell what they have just heard or read is a powerful way of checking for understanding (Hansen, 2004; Shaw, 2005).

Gambrell, Koskinen, and Kapinus (1991) examined the use of retellings with 4<sup>th</sup> grade proficient and less-proficient readers. They found that students who employed this technique made significant increases in the number of propositions and story structure elements recalled as well as the overall number of comprehension questions answered correctly. These authors note that students needed at least four practice sessions with retelling to become comfortable with the strategy. Like Cambourne (1998), Gambrell and colleagues argue that retelling is a more effective postreading activity than teacher questioning.

As noted above, students need to be taught the procedures of retelling. Understanding these processes helps establish purpose in reading and guides students’ attention to key information from the text that they can use in their retellings. Figure 2.4 provides a number of variations on retellings, some of which, also known as summaries, will be discussed in the next

chapter using writing to check for understanding. In introducing the retelling technique, teachers should do the following:

1. Explain that the purpose of a retelling is to re-create the text in your own words.
2. Ask students to discuss the ways in which they talk about the favourite movie or CD.  
Make the connection between talking about the movie or CD and talking about a piece of text.
3. Model a retelling from a short piece of familiar text for students. If students know the piece of text well, they can compare the original with the retelling.
4. After the modeled retelling, ask students to discuss the similarities and differences between the original and the retelling.
5. Select a new piece of text, read it aloud, and create a retelling as a group. Again, ask students to discuss the similarities and differences between the original and the retelling.

As students become increasingly familiar with retellings, they can be used to check for understanding.

<b>Figure 2.4</b>	<b>Variations on Retellings</b>
Oral to Oral Oral to Written Oral to Video	Listens to a selection and retells it orally Listens to a selection and retells it in writing (summary) Listens to a selection and creates a video or movie of it
Reading to Oral Reading to Written Reading to Video	Reads a selection and retells it orally Reads a selection and retells it in writing (summary) Reads a selection and creates a video or movie of it
Viewing to Oral Viewing to Written Viewing to Video	Views a film and retells it orally Views a film and retells it in writing (summary) Views a film and creates a video or movie of it

Fourth grade teacher Aida Allen used the story retelling rubric found in Figure 2.5 to check her students' understanding of fiction and story grammar. She introduces the rubric after reading aloud *Walter, the Farting dog* (Kotzwinkle & Murray, 2001). As a class, they created a retelling. Ms. Allen then facilitated the students in a discussion of the rubric, and they evaluated their group retelling using this tool. Next, Ms. Allen gave each group of four students different picture books. Their task was to read the book together and create a small-group retelling using

this tool. Next, Ms. Allen gave each group of four students different picture books. Their task was to read the book together and create a small-group retelling. The books she selected were all from the Walter series: *Walter the Farting Dog Goes on a Cruise* (Kotzwinkle, Murray & Gundy, 2006), *Rough Weather Ahead for Walter the Farting Dog* (Kotzwinkle, Murray & Gundy, 2005), *Walter the Farting Dog: Trouble at the Yard Sale* (Kotzwinkle, Murray & Gundy, 2004), and *Walter the Farting Dog Farts Again* (Kotzwinkle & Murray, 2005).

As each group presented their retelling, another group (assigned by Ms. Allen) used the retelling rubric to provide feedback. Ms. Allen reminded her students after each retelling that “we are all learning how to use the story retelling rubric let’s all help each other get really good at this.”

Following several practices with using the story retelling rubric in groups, students were asked to meet with Ms. Allen individually to discuss and retell information from the books they were reading in their literature circles. The focus was on dog stories and included *Shiloh* (Naylor, 1991), *Where the Red Fern Grows: The Story of Two Dogs and a Boy* (Rawls, 1961), and *My Dog Skip* (Morris, 1995). Ms. Allen used the information she gathered during student retellings of the books they were reading to plan individual interventions as well as some whole-class lessons.

Ms. Allen noted that her students rarely used dialogue during their retellings to discuss characters and the problems they faced. In subsequent shared readings, she modeled several retellings using character dialogue to address this whole-class need. Similarly, she noted that one student, Miriam, had difficulty with sequence; she met with Miriam during reading conferences and helped her use a graphic organizer to record events in order.

U.S. history teacher Jamie Ryan used the informational text retelling rubric shown in Figure 2.6 in her class for discussions about the textbook and primary source documents that her students read. During the course of study on the 1906 San Francisco earthquake, students read a number of primary source documents including the proclamation by the mayor dated April 18, 1906. a number of primary source documents can be found on the Gilder Lehrman Institute for American History Web site ([www.gilderlehrman.org](http://www.gilderlehrman.org)). One student correctly noted in his retelling that the mayor had authorized the police to kill any looters they found. He also pointed out that the mayor’s proclamation gave the police “exceptional powers - they could legally kill any person for ANY crime.” The rubric allowed Ms. Ryan an opportunity to check her students’ understanding of the various texts they read and to determine areas of need for each student.

<p><b>Figure 2.5</b></p>	<p><b>Retelling Rubric for Fiction</b></p>			
<p><b>Element</b></p>	<p><b>Exceeds Standards</b></p>	<p><b>Meets Standards</b></p>	<p><b>Needs Improvement</b></p>	
<p><b>Characters</b></p>	<p>Your retelling describes the characters so that others have a good idea of what they are like.</p>	<p>Your retelling names the characters but does not describe much about them.</p>	<p>Your retelling confuses the identity of the characters or does not name them. Think about who was in the story and how they acted.</p>	
<p><b>Setting</b></p>	<p>Your retelling helps others get a clear idea of when and where the story took place.</p>	<p>Your retelling provides some details about where and when the story took place.</p>	<p>Your retelling needs to describe when and where the story took place.</p>	
<p><b>Problem</b></p>	<p>Your retelling describes the problem, why this problem occurred, and how it might be solved.</p>	<p>Your retelling names the problem but not how it occurred or might be solved.</p>	<p>Your retelling needs to describe the problem, how the problem developed, and how it might be solved.</p>	
<p><b>Solution</b></p>	<p>Your retelling focuses on how the characters solved the problem.</p>	<p>Your retelling includes some of the important events that led to the solution and most are in the correct order.</p>	<p>Your retelling needs to focus on the major events and how these events led to the solution to the problem.</p>	
<p><b>Delivery</b></p>	<p>Your retelling uses good rhythm, fluency, expression, and gestures. Your voice changes for different characters.</p>	<p>Your rhythm and expression are good most of the time and you use some gestures. Your voice changes for some of the characters.</p>	<p>Your retelling needs to include expression and gestures. Your voice should change for different characters.</p>	

Figure 2.6	<b>Retelling Rubric for Informational Text</b>			
Element	Exceeds Standards	Meets Standards	Needs Improvement	
Key Ideas	Your retelling identifies all of the key ideas from the text.	Your retelling identifies a number of key ideas from the text.	Your retelling needs to identify and describe the key ideas from the text.	
Details	Your retelling helps others understand the text by providing details for each key idea.	Your retelling provides some details from some of the key ideas.	Your retelling needs to link details with key ideas.	
Sequence	Your retelling identifies a clear sequence of information that helps the listener understand the information.	Your retelling provides information in a sequence, but the sequence is slightly confused or out of order.	Your retelling needs to have a sequence that helps the listener understand.	
Conclusion	Your retelling ends with a conclusion that is directly linked to the information you provided.	Your retelling includes a concluding statement.	Your retelling needs to focus on the major idea from the text and needs to summarize the information gathered.	
Delivery	You use good rhythm, fluency, expression, and gestures.	Your rhythm and expression are good most of the time and you use some gestures.	Your retelling needs to include expression and gestures.	

## Think-Pair-Share

Think-Pair-Share is a cooperative discussion strategy that allows students to discuss their responses with a peer before sharing with the whole class. Developed by Lyman (1981) and colleagues, there are three stages of student action:

1. **Think.** The teacher engages students' thinking with a question, prompt, reading, visual, or observation. The students should take a few minutes (not seconds) just to *think* about the question.
2. **Pair.** Using designated partners, students *pair* up to discuss their respective responses. They compare their thoughts and identify the responses they think are the best, most intriguing, most convincing, or most unique.
3. **Share.** After students talk in pairs for a few moments, the teacher asks pairs to *share* their thinking with the rest of the class.

Naturally, there are opportunities to check for understanding throughout the Think-Pair-Share activity. The teacher can listen in as pairs discuss their responses and can note the ways in which pairs share their responses.

In her 2<sup>nd</sup> grade class, Yazmine Sanchez invited her students to think about a person who made a difference. This introduction to a major 2<sup>nd</sup> grade social studies theme served to activate her students' background knowledge and to help them make connections with the curriculum they were about to study. After a few moments of thinking time, Ms. Sanchez asked her students to turn to a partner and talk about the person they were thinking of. Ms. Sanchez listened in on several students' pair conversations, noting their personal connections to the topic. She then invited pairs to share with the whole class. But she wasn't done yet; she continued this process with several additional questions, including the following:

- What did this person do that makes you think he or she made a difference?
- Who else do you know who made a difference?
- What characteristics are shared by people who make a difference?

With each question, Ms. Sanchez asked her students to think first, engage in a partner conversation, and then share their ideas with the whole class. Along the way, Ms. Sanchez made notes about what her students already know, what misconceptions they had, and how

they used language to express their ideas. Her checking for understanding was used to collect information that she could use in her instruction throughout the unit.

Similarly, high school government teacher Angie Jenkins uses Think-Pair-Share to engage her students in current government issues each day. During a discussion about immigration policy in the United States, students noted the potential changes to the policy. The variation Ms. Jenkins uses with her high school seniors is that they have to share their partner's thinking, not their own ideas. She does this to ensure that her students are listening and thinking as their partner talks, rather than forming rebuttal arguments. In one of the discussions on the changes to the immigration policy, Malik said, "My partner is going to participate in the walk out because she thinks that it's important to send a message and cost the government money. By not being here at school that day, she'll cost people money." Another student indicated, "Arian is going to come to school because she says that her mom came here to make sure she got an education."

## **Misconception Analysis**

Misconceptions include preconceived notions, nonscientific beliefs, naïve theories, mixed conceptions, or conceptual misunderstandings. Most of us have them and are not happy when we're told we're wrong about something, especially if it's something in our basic belief system. Children and youth are not different; they have misconceptions that interfere with their understanding of content or information and often are not readily willing to be challenged in these beliefs. As such, misconception analysis is an important part of checking for understanding.

Misconception analysis provides students an opportunity to discuss, often in small groups, misunderstandings that they have. Typically the misunderstandings or misconceptions are first identified by the teacher. Of course, there are numerous opportunities for students who have been exposed to misconception analysis to use the technique on their own and with peers as they identify topics that need clarification.

Based on her checks of understanding, Colleen Crawford knew that her 5<sup>th</sup> graders believed that stars and constellations appeared in the same place in the sky every night. In effect, they had overgeneralized information about the North Star that they had learned in the social studies unit on the Underground Railroad. Ms. Crawford provided small groups of students with different informational text sources about the night sky. Students were asked to read and discuss the information in their texts. Ms. Crawford asked a number of questions of each group that were specific to the texts the group was reading. Then she asked the whole

class the big question: “What does your source say about star movement?” As each group searched for this information, Ms. Crawford visited different groups and asked clarifying questions. As each group reported what their text sources said about the movement of stars over time, Ms. Crawford began asking other students to repeat the information and to confirm that their source said the same thing. After each group had discussed their response, Ms. Crawford noted, “We know that we can’t believe everything we read and that we should always read critically. But what happens to our understanding when text after text – Web pages, textbooks, trade books, newspaper articles – all report the same thing? Should we change our understanding: should we assume that there are lots of stars and constellations that move and appear in different places at different times of the year?”

U.S. history teacher Ted Clausen was discussing presidents of the United States with his students. The conversation ebbed and flowed in a highly interactive and engaging way. They had read from a variety of sources and were taking notes for the discussion using graphic organizers. At one point in the discussion, a student said, “You said Roosevelt was president, but he wasn’t elected.” Mr. Clausen replied, “Yes, in 1901, Theodore Roosevelt was president of the United States, but he wasn’t elected to that position. How might that happen? Talk in your groups.” After a few minutes, several groups had ideas. One group posited that he was appointed, to which Mr. Clausen responded, “No, we’ve only had one appointed president and it was George W. Bush.” After more discussion, a group said, “Maybe the president dies and Roosevelt was vice president and took over?”

Mr. Clausen excitedly responded, “Yes, exactly. Who was that person? The president who died? Well, actually, was assassinated?” After a long pause, Mr. Clausen added, “His first name was William.” Michael’s hand shot up and he said, with great earnestness, “Shakespeare!” Mr. Clausen replied, “I appreciate your effort, but that’s not the right person. Groups, let’s explore why that could not be the right answer.” After a few minutes, Mr. Clausen asked groups for their responses, which included the following:

- Shakespeare was British, so he couldn’t be president of the United States.
- Shakespeare lived hundreds of years ago, long before there was a United States.
- Shakespeare was famous for being an author, not a president.

Through his checking for understanding and the trust he created in the classroom, Mr. Clausen ensured that misconceptions were analyzed and clarified. He knew that his students could identify the reasons that answer was incorrect. But more importantly, he created an environment in which students could analyze incorrect answers for misconceptions. As Michael

said afterward, "It's okay to answer in his class 'cus you get to talk about the answers and figure out why they're right or not. Everybody learns; nobody has to get uptight about it."

## **Whip Around**

The whip around is a useful instructional tool teachers can use to check for understanding in a group setting. While the whip around may not provide individual, student-level information about understanding, it is useful in helping teachers determine if they need to reteach content to the group. As such, the whip around is often used as a closure activity at the end of a period of instruction. The procedure is fairly simple. First, the teacher poses a question or a task; typically, students are asked to make a list of at least three items. Students then individually respond on a scrap piece of paper. When they have done so, students stand up. The teacher then randomly calls on a student to share one of his or her ideas from the paper. Students check off any items that are said by another student and sit down when all of their ideas have been shared with the group, whether or not they were the one to share them. The teacher continues to call on students until they are all seated. As the teacher listens to the ideas or information shared by students, he or she can determine if there is a general level of understanding or if there are gaps in students' thinking.

Third grade teacher Mandi Smith uses the whip around technique as her daily closure activity. During her unit of study on insects, she asked her students to make a list of the characteristics that distinguish insects from other creatures on Earth. She said that she has to be very specific or her 3<sup>rd</sup> graders will write comparisons with dinosaurs, space people, and other things not found on Earth. As they completed their whip around, Ms. Smith was pleased to learn that the vast majority of her students understood that insects have three body parts, the head, abdomen, and thorax; that insects have eyes and one pair of antennae and mouthparts; that they all have six legs; that their skeleton is an exoskeleton; and that they have an open circulatory system. Ms. Smith noted, however, that the students did not discuss wings, what the antennae do, or how the mouthparts and legs have adapted. She knew that she would need to review this information the following day to ensure that her students grasped it.

Similarly, health educator Stacey Everson uses a whip around at the end of her classroom discussions. During a 9<sup>th</sup> grade health education lesson, Ms. Everson asked students to identify the risk factors for suicide. After writing individually for several minutes, the students stood up, and Ms. Everson invited them to share on at a time. She analyzed their responses and noted the factors that most students had on their own pages. She also noted areas that were not addressed by students and provided the class with supplemental readings

on the topics as well as a yellow ribbon card (see [www.yellowribbon.org](http://www.yellowribbon.org) for details) which provides students with permission to ask for help as well as tells them what to do if someone else uses the help card.

## **Using Questions to Check for Understanding**

The art of questioning is central to the practice of teaching. Spending a few minutes watching a small child play school gives evidence: the stuffed animals are arranged in rows as the teacher faces them, firing questions all the while. “What’s 2+2?” she asks a teddy bear. “Right!” she exclaims to the answer that only she can hear. Even at an early age, children are socialized to a framework of school that demands that the teacher ask questions and the students answer them.

As such, well crafted questions are a great way for teachers to determine what their students know, need to know, and misunderstand. In this chapter, we explore using questioning to check for understanding. We consider effective questioning techniques as well as instructional practices that promote effective questioning. We also discuss ways to replay to incorrect responses to questions and how teachers use the responses they receive from students to determine the next steps to take in their instruction.

## **Misuses of Questioning in the Classroom**

Durkin’s (1978) research on classroom practices confirmed that teachers rely primarily on questioning to check for comprehension. As noted in the previous chapter, the difficulty in this approach is that the questioning rarely advances beyond the Initiate-Respond-Evaluate cycle (Cazden, 1988; see Chapter 2). In the hands of less-able teachers, questioning can devolve into interrogation, as students struggle to guess what’s in the teacher’s head. Fullan, Hill, and Crévola (2006) assert that teachers from 50 years ago could step into the classrooms of today without much difficulty because so little has changed in the design and delivery of lessons. Undoubtedly, the practice of teacher-generated questions to elicit student responses would be among the most familiar of all.

Traditional teacher-generated questioning is problematic for students. As noted in Chapter 1, gender differences in response rates have a negative impact on girls (Sadker, Sadker, & Klein, 1991). In addition, here is evidence that a vocal minority of students dominate classroom conversations and questioning, while the less-assertive students rarely participate (Brophy & Evertson, 1974). This not only results in behavioural difficulties and marginalized students, but it affects the ability of the teacher to check for understanding. After all, knowing

that six or seven students understand is not the same as knowing that 32 do. Therefore, it is essential to use effective questioning techniques to elicit richer evidence of understanding. These questioning techniques should be coupled with instructional approaches that maximize participation in classroom discourse.

## Effective Questioning Techniques

### Constructing Effective Questions

Checking for understanding through questioning should not be thought of as a simple two-step process (question and answer) but rather as a complex progression as the teacher formulates and then listens to the response of the learner. In their book *Quality Questioning*, Walsh and Sattes (2005) describe five distinct steps of the questioning process that they use in their professional development activities called Questioning and Understanding to Improve Learning and Thinking (QUILT). The process is described in Figure 3.1.

Figure <b>3.1</b>	<b>QUILT Framework</b>
<p><b>Stage 1: Prepare the Question</b></p> <ul style="list-style-type: none"> <li>• Identify instructional purpose</li> <li>• Determine content focus</li> <li>• Select cognitive level</li> <li>• Consider wording and syntax</li> </ul> <p><b>Stage 2: Present the Question</b></p> <ul style="list-style-type: none"> <li>• Indicate response format</li> <li>• Ask the question</li> <li>• Select respondent</li> </ul> <p><b>Stage 3: Prompt Student Responses</b></p> <ul style="list-style-type: none"> <li>• Pause after asking question</li> <li>• Assist nonrespondent</li> <li>• Pause following student response</li> </ul> <p><b>Stage 4: Process Student Responses</b></p> <ul style="list-style-type: none"> <li>• Provide appropriate feedback</li> <li>• Expand and use correct responses</li> <li>• Elicit student reactions and questions</li> </ul> <p><b>Stage 5: Reflect on Questioning Practice</b></p> <ul style="list-style-type: none"> <li>• Analyse questions</li> <li>• Map respondent selection</li> <li>• Evaluate student response patterns</li> <li>• Examine teacher and student reactions</li> </ul>	

From *Quality questioning: Research-based practice to engage every learner* (p.vi), by J.A. Walsh and B.D. Sattes, 2005, Thousand Oaks, CA: Corwin Press.

The first step is to formulate the question. In particular, the teacher must determine the purpose of the question itself. Is it a recognition question to orient students? For example, the 4<sup>th</sup> grade geography teacher who points to Pennsylvania on a map of the United States and asks, “What’s the name of this state?” is asking a recognition question. This allows the teacher to follow up with questions about geographical features of the area, such as its rivers and mountains. A question can also serve the purpose of recalling information, such as when the same geography teacher asks, “What are the two largest cities in Pennsylvania?” In this case, students must recall what they know about the state, about urban centres, and about cities in Pennsylvania. Both questions are examples of factual knowledge but are not likely to promote enduring understanding. It is necessary, however, for students to possess this information. A third type of questions asks students to apply information in a novel way. For example, the geography teacher might ask, “What are the advantages and disadvantages of locating the state capital in Harrisburg?” In any case, the teacher needs to be clear on the type of knowledge the question assesses and not fall into the trap of confusing recognition or recall for application.

After formulating the question, the teacher must determine the format of the desired response and who will provide it. Will it be a choral answer, where all students respond together? Is it a partner discussion question? If so, the teacher should preface the question itself with information about the response format so that students know what they will do with the question before it is asked. If it is to be answered by an individual student, teachers should announce the student’s name before asking the question. This alerts the learner to the expected response and avoids using the question as a means for classroom management.

Once the question has been asked, students need time to process the answer. Commonly referred to as “wait time”, this questioning technique of pausing for three to five seconds allows learners time to digest the question, retrieve information, and formulate a response (Rowe, 1986). This is particularly useful for English language learners who may still be code switching (i.e., mentally translating the question from English to their primary language, then translating their answer to English).

If a student is unable to respond, consider how the question might be scaffolded so that the student can arrive at the correct answer. It is possible that the student does not understand the question itself or that he or she is unable to retrieve the information needed to replay. In designing online learning situations, Dodge (1998) categorizes scaffolds as tools that prompt

different types of responses, but we find them to be equally useful in thinking about questioning. Reception scaffolds direct a student to information necessary to formulate an answer. For example, the teacher might prompt the student, “Look at the graph on page 252 of your textbook.” Transformation scaffolds provide a way of structuring the information to help students develop an answer. This type of prompt might ask students, “How does the largest bar on the graph on page 252 of your textbook help you to find your answer?” Finally, production scaffolds provide a student with a way of producing an answer. In this case, the teacher might direct the student, “Use the largest and the smallest bars from the graph on page 252 of your textbook to compare the amounts used.”

Once the student has answered, the teacher must use the response to make decisions about what will occur next. Feedback, which includes praise, should be offered to the student; it may include affirmation of a correct response or elaboration on an incomplete answer. It is useful to think about reception, transformation, and production scaffolds as follow-up probes when responding to incomplete or incorrect answers. These follow-up probes serve as a means for teaching students how to use information to formulate answers. Ultimately, the art and science of teaching require the ability to use scaffolds effectively to cultivate student learning. The challenge is to use the right scaffold to assist the learner in doing the cognitive work (Wood, Bruner, & Ross, 1976).

Walsh and Sattes (2005) advise that the final step to effective questioning involves analyzing the techniques used as well as the content of the students’ answers. One tool to determine equitable distribution of questions is charting who answers and how often. We have done this using a seating chart inside a clear binder sleeve. As students answer, we place a check on the chart using an overhead marker. This is also useful for identifying students who are not participating. Using this technique may identify patterns such as favouring one section of the room over another or calling on boys more frequently than girls. The content of the questions is important, too, and an audiotape of a lesson can assist in determining whether the range of questions a teacher asks reflects the types of knowledge taught.

Perhaps the most important practice is analyzing students’ responses. Again, an audiotape can be useful for engaging in this reflective practice. It is easy to be lured into thinking of students’ answers as dichotomous – either correct or incorrect. However, it is essential to keep in mind that a student’s answer reflects everything he or she knows and does not know at that particular moment. In other words, an incorrect answer is completely logical to the learner, even if it seems irrational to the teacher. The challenge is to analyze the incorrect

answer to hypothesize what the student understands and does not understand, because then the teacher can determine what needs to occur next.

As you listen to a tape of one of your lessons, note the answers your students supplied and how you handled incorrect responses. How often did you scaffold their answers? Were there times when you rephrased a question to clarify understanding? Were there times when a clue would have been more useful? Sometimes a student is not able to answer even when supports have been offered. In this case, it may be wise to ask another student the question and then return to the first student to ensure understanding. These strategies for responding to incorrect answers are described in figure 3.2.

Figure 3.2	<b>Helping Students Who Respond Incorrectly</b>
<p><b>Cue:</b> Use symbols, words, or phrases to help student recall.</p> <p><b>Clue:</b> Use overt reminders such as “Starts with . . .”</p> <p><b>Probe:</b> Look for reasoning behind an incorrect response or ask for clarity when the response is incomplete.</p> <p><b>Rephrase:</b> Pose the same question in different ways.</p> <p><b>Redirect:</b> Pose the same question to a different student.</p> <p><b>Hold accountable later:</b> Later in the lesson, check back with the student who responded incorrectly to make sure that he or she has the correct answer</p>	

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## Providing Nonverbal Support

In addition to the dialogic support teacher offer in helping their students construct answers, nonverbal cues can promote or discourage learner response. You have probably been asked a question by someone and started to respond, only to find that he or she does not appear to be listening to your reply. The person may be looking over your shoulder or may turn away from you to complete a task. It’s likely that you immediately thought, “Now, why did he even bother to ask?” It is also likely that you were not inclined to continue the conversation. This type of interaction occurs in classrooms each day. Busy teachers attempt to multitask, posing a question while distributing papers. Or another student catches the teacher’s eye, and she turns her back on the student who is attempting to offer a reply. This is usually inadvertent, and yet the effect is the same: “Why did she bother to ask?” Of even more concern, the student may think, “I won’t bother to answer again.”

**Nonverbal cues convey a tone of respect for the respondent and encourage the target student and other to continue to participate. Kindsvatter, Wilen, and Ishler (1996) identify seven components of listening that teachers can and should use to communicate with students that their ideas and participation are valued. They suggest that these seven components indicate to students that the adult is interested and that the student is worthy of attention:**

- *Eye contact.* **Look directly at the speaker and maintain eye contact.**
- *Facial expression.* **Use a variety of appropriate facial expressions, such as smiling or demonstrating surprise or excitement.**
- *Body posture.* **Use gestures such as hand signals; maintain body posture that signifies openness to students' ideas.**
- *Physical distance.* **Adjust your position in the classroom according to your condition of instruction; for example, move closer to a student who is speaking (or to a student who is less engaged).**
- *Silence.* **Be quiet while a student is speaking; don't interrupt; honour wait times after a student stops speaking.**
- *Verbal acknowledgments.* **Use brief, appropriate verbal acknowledgments such as "Go ahead," "Yes," or "I understand."**
- *Subsummaries.* **Restate or paraphrase the main ideas presented by students during lengthy discussions.**

**These simple techniques convey respect for the speaker and provide the questioner with the opportunity to analyze the response and make decisions about scaffolds and feedback. By attending to the respondent and the response, the answer can be used as a means to check for understanding. A distracted teacher is incapable of engaging in anything beyond a superficial awareness of whether the answer was correct or incorrect.**

### **Providing Nonverbal Support**

**As we have noted, teachers are going to ask questions of students. Questions are a great way of checking for understanding. The important thing is to ensure that the questions engage students in deeper thinking and not merely prompt them to recall information that they have read or been told.**

**One way to make certain that the questions we ask engage students' creative and critical thinking is to plan them in advance using an organizational structure such as Bloom's (1956) taxonomy. Figure 3.3 provides a review of Bloom's taxonomy and descriptive words and prompts related to each level. It is important to keep in mind that a taxonomy is not a hierarchy,**

and that Bloom never discussed so-called “lower order” and “higher order” questions. Rather, a taxonomy is a way of classifying information, in this case, types of knowledge. Therefore, knowledge and comprehension questions are directed at gathering a specific type of input. This information is necessary to apply, analyze, synthesize, and evaluate. The criticism of knowledge and comprehension questions concerns the extent to which they are used at the expense of others. As we discussed earlier, recognition and recall are requisite skills, but they do not encompass the limits of understanding. Bloom’s taxonomy is an excellent tool for developing questions that represent the range of knowledge that should be taught in the classroom.

Sixth grade teacher Alexandria Ollendorff uses Bloom’s taxonomy with her students to encourage them to ask and answer their own questions. She introduces prompts like the ones listed in Figure 3.3 to guide her students. They play a daily game in which groups of students create questions based on the information they are studying that day. The questions they create are used for a Jeopardy-type game, with the number of points determined by the level of the question according to the taxonomy (knowledge is 1 point; evaluation is 6 points). During a unit of study about ancient Egypt and their gods, some of the questions one group created included the following:

- Who was Ra? (knowledge)
- Why do some gods and goddesses have animal heads? (comprehension)
- How do you feel about mummification? (evaluation)
- Compare and contrast Isis, Ptah, and Horus in terms of their importance to the Egyptian people. (analysis)
- What role should gods play in setting rules for people? (evaluation)

This process allows the teacher to check for understanding twice – as students create their questions and when they play the game.

Second grade teacher Heather Jennison also uses Bloom’s taxonomy in her planning. For example, during her interactive read-aloud of *Nana Upstairs and Nana Downstairs* (dePaola, 1973), Ms. Jennison prepared the following questions:

- *Knowledge:* What were the names Tommy used for his grandmother and great-grandmother?
- *Comprehension:* How did Tommy feel when he went to visit them each Sunday?
- *Application:* What would you have said to Tommy’s older brother when he called Nana Upstairs “a witch”?
- *Analysis:* How were Nana Upstairs and Nana Downstairs alike and different?

## Using Oral Language to Check for Understanding

- *Synthesis:* add a new last page to the book. What might the two grandmothers say to the adult Tommy when he looks at the stars to remember them?
- *Evaluation:* did you like this story? Why or why not?

### **Conclusion**

There are a number of ways that teachers can use oral language - speaking and listening - to check for understanding. Through careful planning and analysis of student responses, teachers can close the gap between what students need to know and what they already know

Figure 3.3	<b>Bloom's Taxonomy</b>	
<b>Knowledge:</b> Recall data or information	Define, describe, identify, know, label, list, match, name, outline, recall, recognize, reproduce, select, state	Where is . . . What did . . . Who was . . . When did . . . How many . . . Locate it in the story . . . Point to the . . .
<b>Comprehension:</b> Understand the meaning, translation, interpolation, and interpretation of instructions and problems	Comprehend, convert, defend, distinguish, estimate, explain, extend, generalize, give examples, infer, interpret, paraphrase, predict, rewrite, summarize, translate	Tell me in your own words . . . What does it mean . . . Give me an example of . . . Describe what . . . Illustrate the part of the story that . . . Make a map of . . . What is the main idea of . . .
<b>Application:</b> Use a concept in a new situation or unprompted use of an abstraction.	Apply, change, compute, construct, demonstrate, discover, manipulate, modify, operate, predict, prepare, produce, relate, show, solve, use	What would happen to you if . . . Would you have done the same as . . . If you were there, would you . . . How would you solve the problem . . . In the library, find information about . . .
<b>Analysis:</b> Separate material or concepts into component parts so that its organizational structure may be understood	Analyze, break down, compare, contrast, diagram, deconstruct, differentiate, discriminate, distinguish, identify, illustrate, infer, outline, relate, select, separate	What things would you have used . . . What other ways could . . . What things are similar/different? What part of this story was the most exciting? What things couldn't have happened in real life? What kind of person is . . . What caused _____ to act the way he/she did?
<b>Synthesis:</b> Build a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure.	Categorize, combine, compile, compose, create, devise, design, explain, generate, modify, organize, plan, rearrange, reconstruct, relate, reorganize, revise, rewrite, summarize, tell, write	What would it be like if . . . What would it be like to live . . . Design a . . . Pretend you are a . . . What would have happened if . . . Why/why not? Use your imagination to draw a picture of . . . Add a new item on your own . . . Tell/write a different ending . . .
<b>Evaluation:</b> Make judgments about the value of ideas or materials.	Appraise, compare, conclude, contrast, criticize, critique, defend, describe, discriminate, evaluate, explain, interpret, justify, relate, summarize, support	Would you recommend this book? Why or why not? Select the best . . . Why is it the best? What do you think will happen to . . . Why do you think that? Could this story really have happened? Which character would you most like to meet? Was _____ good or bad? Why? Did you like the story? Why?

