

### **3b Questioning and Discussion Techniques**

Questioning and discussion are the only instructional strategies specifically referred to in the framework for teaching; this fact reflects their central importance to teachers' practice. But in the framework it is important that questioning and discussion are used as techniques to deepen student understanding are being used rather than serving as recitation or a verbal quiz. Good teachers use divergent as well as convergent questions, framed in such a way that they invite students to formulate hypotheses, make connections, or challenge previously held views. Students' responses to questions are valued; effective teachers are especially adept at responding to and building upon student responses and making use of their ideas. High-quality questions encourage students to make connections among concepts or events previously believed to be unrelated, and arrive at new understandings of complex material. Effective teachers also pose questions for which they do not know the answers. Even when a question has a limited number of correct responses, the question, being nonformulaic, is likely to promote thinking by students. Class discussions are animated, engaging all students in important issues and in using their own language to deepen and extend their understanding. These discussions may be based on questions formulated by the students themselves.

Not all questions must be at a high cognitive level in order for a teacher's performance to be rated at a high level; that is, when exploring a topic, a teacher might begin with a series of questions of low cognitive challenge to provide a review, or to ensure that everyone in the class is "on board." Furthermore, if the questions are at a high level, but only a few students participate in the discussion, the teacher's performance on the component cannot be judged to be at a high level. In addition, in lessons involving students in small-group work, the quality of the students' questions and discussion in their small groups may be considered part of this component.

In order for students to formulate high-level questions, they must have learned how to do so. Therefore, high-level questions from students, either in the full class, or in small group discussions, provide evidence that these skills have been taught. Elements of component 3b:

#### **Quality of questions/prompts**

Questions of high quality cause students to think and reflect, to deepen their understanding, and to test their ideas against those of their classmates. When teachers ask questions of high quality, they ask only a few of them, and provide students with sufficient time to think about their response to reflect on the comments of their classmates, and to deepen their understanding. Occasionally, for the purposes of review, teachers ask students a series of (usually low-level) questions in a type of verbal quiz. This strategy may be helpful for the purpose of establishing the facts of a historical event, for example, but should not be confused with the use of questioning to deepen students' understanding.

#### **Discussion techniques**

Effective teachers promote learning through discussion. Some teachers report, "We discussed x" when what they mean is "I said x." That is, some teachers confuse discussion with explanation of content; as important as that is, it's not discussion. Rather, in a true discussion, a teacher poses a question and invites all students' views to be heard, enabling students to engage in discussion directly with one another, not always mediated by the teacher.

#### **Student participation**

In some classes a few students tend to dominate the discussion; other students, recognizing this pattern, hold back their contributions. Teacher uses a range of techniques to ensure that all students contribute to the discussion and enlists the assistance of students to ensure this outcome.

Indicators:

- Questions of high cognitive challenge, formulated by both students and teacher
- Questions with multiple correct answers, or multiple approaches even when there is a single correct response
- Effective use of student responses and ideas
- Discussion in which the teacher steps out of the central, mediating role
- High levels of student participation in discussion

### 3b Questioning and Discussion Techniques—Possible Examples

Unsatisfactory	Basic	Proficient	Distinguished
<p>All questions are of the “recitation” type, such as “What is 3 x 4?”</p> <p>The teacher asks a question for which the answer is on the board; students respond by reading it.</p> <p>The teacher calls only upon students who have their hands up.</p>	<p>Many questions are of the “recitation” type, such as “How many members of the House of Representatives are there?”</p> <p>The teacher asks: “Who has an idea about this?” but only the usual three students offer comments.</p> <p>The teacher asks: “Michael, can you comment on Mary’s idea?” but Michael does not respond or makes a comment directly to the teacher.</p>	<p>The teacher asks: “What might have happened if the colonists had not prevailed in the American war for independence?”</p> <p>The teacher uses the plural the form in asking questions, such as “What are some things you think might contribute to . . . ?”</p> <p>The teacher asks: “Michael, can you comment on Mary’s idea?” and Michael responds directly to Mary.</p> <p>After posing a question and asking each of the students to write a brief response and then share it with a partner, the teacher invites a few to offer their ideas to the entire class.</p>	<p>A student asks, “How many ways are there to get this answer?”</p> <p>A student says to a classmate: “I don’t think I agree with you on this, because . . .”</p> <p>A student asks of other students: “Does anyone have another idea how we might figure this out?”</p> <p>A student asks, “What if . . . ?”</p>

<b>UNSATISFACTORY</b>	<b>BASIC</b>
<p>Teacher's questions are of low cognitive challenge, require single correct responses, and are asked in rapid succession.</p> <p>Interaction between teacher and students is predominantly recitation style, with the teacher mediating all questions and answers.</p> <p>A few students dominate the discussion.</p>	<p>Teacher's questions lead students through a single path of inquiry, with answers seemingly determined in advance.</p> <p>Alternatively, the teacher attempts to frame some questions designed to promote student thinking and understanding, but only a few students are involved.</p> <p>Teacher attempts to engage all students in the discussion and to encourage them to respond to one another, but with uneven results.</p>

**Critical Attributes**

<p>Questions are rapid-fire, and convergent, with a single correct answer.</p> <p>Questions do not invite student thinking.</p> <p>All discussion is between teacher and students; students are not invited to speak directly to one another.</p> <p>A few students dominate the discussion.</p>	<p>Teacher frames some questions designed to promote student thinking, but only a small number of students are involved.</p> <p>The teacher invites students to respond directly to one another's ideas, but few students respond.</p> <p>Teacher calls on many students, but only a few actually participate in the discussion.</p>
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<b>PROFICIENT</b>	<b>DISTINGUISHED</b>
<p>Although the teacher may use some low-level questions, he or she asks the students questions designed to promote thinking and understanding.</p> <p>Teacher creates a genuine discussion among students, providing adequate time for students to respond and stepping aside when appropriate.</p> <p>Teacher successfully engages most students in the discussion, employing a range of strategies to ensure that most students are heard.</p>	<p>Teacher uses a variety or series of questions or prompts to challenge students cognitively, advance high-level thinking and discourse, and promote metacognition.</p> <p>Students formulate many questions, initiate topics, and make unsolicited contributions.</p> <p>Students themselves ensure that all voices are heard in the discussion.</p>

<p>Teacher uses open-ended questions, inviting students to think and/or offer multiple possible answers.</p> <p>The teacher makes effective use of wait time.</p> <p>The teacher effectively builds on student responses to questions.</p> <p>Discussions enable students to talk to one another without ongoing mediation by the teacher.</p> <p>The teacher calls on most students, even those who don't initially volunteer.</p> <p>Many students actively engage in the discussion.</p>	<p>In addition to the characteristics of "proficient":</p> <p>Students initiate higher-order questions.</p> <p>Students extend the discussion, enriching it.</p> <p>Students invite comments from their classmates during a discussion.</p>
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