

THOUGHTS ON
HIGHLY
EFFECTIVE
QUESTIONING

“How can we get students to say, ‘I don’t know’ less often? Can we structure our questioning to help lead students to better understanding (and higher test scores)? What types of questions should we avoid asking? How can we create a classroom of high expectations and meaningful student engagement?” (Ivan Hannel)

“A hinge question is based on the one important concept in a lesson that is critical for students to understand before moving on. It should be used within one topic that you would teach within a one-hour lesson. The lesson should be planned to go one of two ways depending on student understanding, as revealed in their answers to the question.” (Educational Testing Services)

Using Bloom’s Taxonomy to Create Effective Questions

Level	Key Words	Prompts
Knowledge: 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...
Comprehension: 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... That is the main idea of... Make a map of...
Application: 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 if you... Would you have done the same as... If you were there, would you... How would you solve the problem...
Analysis: 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?
Synthesis: 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... 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...
Evaluation: 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... Why? Was _____ good or bad? Why? Did you like... Why or why not?

From *Checking for Understanding: Formative Assessment Techniques for Your Classroom* by Douglas Fisher and Nancy Frey, 2007.

Using Questions to Check Understanding (The Quilt Framework)

Stage 1: Prepare the Question

- Identify the instructional purpose
- Determine the content focus
- Select the cognitive level
- Consider wording and syntax

Stage 2: Present the Question

- Indicate the response format
- Ask the question
- Select the respondent(s)

Stage 3: Prompt Student Responses

- Pause after asking the question
- Assist the nonrespondent(s)
- Pause following student response

Stage 4: Process Student Responses

- Provide appropriate feedback
- Expand and use correct responses
- Elicit student reactions and questions

Stage 5: Reflect on Questioning Practice

- Analyze questions
- Map respondent selection
- Evaluate student response patterns
- Examine teacher and student reactions

Helping Students Who Respond Incorrectly:

- **Cue:** Use symbols, words, or phrases to help student recall.
- **Clue:** Use overt reminders such as “Starts with...”
- **Probe:** Look for reasoning behind an incorrect response or ask for clarity when the response is incomplete.
- **Rephrase:** Pose the same question in different words.
- **Redirect:** Pose the same question to a different student.
- **Hold Accountable Later:** Later in the lesson, check back with the student who responded incorrectly to make sure that he or she has the correct answer.

Providing Nonverbal Support:

- **Eye contact:** Look directly at the speaker and maintain eye contact.
- **Facial expressions:** 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 student 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; honor 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.

Guiding PLC Discussion Questions

1. How can you work together to develop essential questions for lessons or big ideas in the curriculum?
2. Describe strategies you've used successfully to assess student understanding through effective questioning?
3. What resources do you use for developing good questions? Are there websites or tools you can share with the group?
4. How do you handle students who don't respond to questioning? What strategies could you try to engage all learners in the questioning process?
5. How could you use response cards (whiteboards, index cards, signs, etc...) to encourage the participation of all students in answering questions?
6. How can you create and use questions from different thinking levels (Bloom's or DOK)? Work together to create questions on the same topic that are tied to differing levels of thinking or complexity.
7. How do you use the feedback about student learning gained through the questioning process to inform your instruction?

Tips for Improving Oral Questioning Practice

From *Talk about Assessment* by Damian Cooper, 2007.

- Find alternatives to asking questions of the whole class. Your attention needs to be directed toward those students who do not have the answer. Use a Think-Pair-Share strategy to ensure that all students are engaged in thinking. *Yesterday, we learned why the air temperature is higher in the summer months and lower in the winter months. In your notebook, jot down the reasons for this, without looking at your notes. Then, turn to your partner and compare your answers. In two minutes, I shall ask for responses.* You can use this strategy either at the beginning of a lesson to activate prior knowledge or as a check for understanding after teaching new material.
- Try not to always be the “quarterback” at the front of the class. Hand the responsibility for talking over to the students. For example, start the lesson with the following: *Take a moment to jot down a question you have about what we learned in science yesterday. Then work with a partner and take turns asking each other your question. See if you can answer your partner’s question. In five minutes, I’ll ask for volunteers to share their questions with the class.* Yes, the volume in your classroom will increase, but on-task noise is good!
- Conduct frequent checks for understanding of the whole class when you are teaching new material: *We have been talking about the difference between perimeter and area. If you have a clear understanding of this difference, thumbs up. If you sort of understand this difference, but need some clarification, thumbs horizontal. If you don’t understand this difference, thumbs down. Show me your thumbs.* As a follow-up, convene a small study group of the students who showed you their thumbs down or horizontal and work with them until they understand the concept.
- While students are working, move around the room and ask individual students a key question for understanding. On any given day, ask only a sample of the students in your class. Keep a simple log to ensure that you monitor every student’s understanding on a regular basis over the course of a term.
- Build in regular, one-on-one conferences with individual students to check their understanding of key concepts. These may be very brief—one minute or less. This strategy will ensure that there are no “invisible” students in your class.

Questioning Strategies that Promote Reasoning

From *Classroom Assessment for Student Learning* by Stiggins, Arter, Chappuis, and Chappuis, 2004

When we use personal communication in this manner, we are engaging in assessment *for* learning; we are using the assessment itself to teach and deepen reasoning proficiencies.

- Use questions that go beyond recall. Label the type of reasoning that you are looking for—comparing, analyzing, evaluating, and so forth—and include the specific reasoning verb in the question.
- Ask a question in different ways to maximize student understanding of what is being asked.
- Use questions to summarize or emphasize key points for learning.
- Wait at least five seconds after asking a question before selecting a student to respond.
- Ask students to discuss their thinking in pairs or small groups. A reporter speaks on behalf of the group.
- Ask all students to write down an answer, then collect responses and read out a selection.
- Give students a choice among different possible answers and ask them all to vote on the options.
- Ask students to paraphrase each other’s questions and responses.
- Invite students to elaborate. For example, “Say a little more about...” This encourages students to develop more complex contributions. Pursue a line of questioning with individuals to better understand their thinking.
- Echo what students say. For example, “So you think that...” This helps students clarify their own thinking, and communicates that you value their response.
- Ask clarifying questions. For example, “What do you mean by that?” This sets the expectation that vague answers are unacceptable, and encourages thoughtful, precise answers.
- Let students observe and comment on responses; don’t do all the responding yourself.
- Model the response patterns that you’d like to see from students. For example: (1) Speculate on a given topic. This encourages students to explore ideas and understand that uncertainty is a normal stage in the thinking process. (2) Reflect on topics. For example, “Yes, I sometimes think that...” This encourages students to explore the topic rather than seeking a single answer. (3) Don’t be afraid to say that you don’t know the answer to a question. Follow “I don’t know the answer” with “How could we find an answer?”

Question Stems and Verbs that Elicit Different Types of Reasoning

From *Classroom Assessment for Student Learning* by Stiggins, Arter, Chappuis, and Chappuis, 2004.

Words that elicit recall of information:

Explain, understand, describe, identify, tell, name, list, give examples, define, label, match, choose, recall, recognize, select

Question stems that elicit various patterns of reasoning:

Analyze:

- What are the important components, parts, or ingredients of _____?
- What is the order in which _____ happened? What are the steps?
- What is the main idea of what you read or saw? What are the details that support this main idea?
- What familiar pattern do you notice? (Examples include familiar story structure and numerical sequence.)
- What is this question asking?
- What information do you need to solve this problem or approach this task?

Compare/Contrast:

- Discriminate (or distinguish) between _____ and _____.
- How are _____ and _____ alike and/or different?
- Think of an analogy for _____/_____.
- Can you think of something else that is similar? (For example, what other stories have similar openings, characters, plots, or themes?)

Synthesize:

- What do you conclude from _____ and _____?
- How would you combine, blend, or organize _____ and _____?
- How might you adapt or modify _____ to fit _____?
- How would you describe _____ to someone else?
- How might you formulate a response or answer to _____?

Classify:

- Find an example of _____.
- What is _____ an example of?
- How might you sort _____ into groups or categories?

Infer/Deduce:

- Predict what will happen next.
- Why did the author do _____?
- What are the implications of _____?
- What can you conclude from the evidence or pieces of information? (For example, "What does that tell us about numbers that end in five or zero?")

Evaluate:

- Take a position on _____ and justify, support, defend, or prove your position.
- What is your opinion on _____? What evidence do you have to support your opinion?
- Appraise, critique, judge, or evaluate _____. Support your appraisal, critique, judgment, or evaluation with evidence.
- Dispute or judge this position. Is it defensible or not? Why or why not?
- Is this _____ successful? What evidence do you have to support your opinion?
- Could _____ be better? Why or why not?
- Which is better? Why?