Essential Questions:
Doorways to Understanding

Given particular subject matter or a particular concept, it is easy to ask trivial questions. . . . It is also easy to ask impossibly difficult questions. The trick is to find the medium questions that can be answered and that take you somewhere.

To question means to lay open, to place in the open. Only a person who has questions can have [real understanding].

Any complex unit or course of study will naturally involve many educational targets simultaneously: knowledge, skills, attitudes, habits of mind, and understanding. But, as we have said, if the goal is to help students make good sense and use of what they learn, then the design (and resultant teaching) must explicitly focus on the big ideas that connect and bring meaning to all the discrete facts and skills.

How do we more deliberately stay focused on big ideas? How can we take a mass of content knowledge and shape it into engaging, thought-provoking, and effective work? How can we avoid the twin sins of activity-based and coverage-based design? In UbD, that focus is accomplished in part by framing goals in terms of what we call Essential Questions. (The other approaches, discussed in later chapters, are to specify the desired understandings and key performance tasks.)

What kinds of questions are we referring to? Not just any question will do. Consider the following examples of questions and notice how they differ from ones often posed in daily lessons and textbooks:

- What is a true friend?
- How precise must we be?
- To what extent does art reflect culture or shape it?
- Must a story have a beginning, a middle, and an end?
- Is everything quantifiable?
• Is the subjunctive necessary?
• To what extent is DNA destiny?
• In what ways is algebra real and in what ways is it unreal?
• To what extent is U.S. history a history of progress?
• What is the difference between a scientific fact, a scientific theory, and a strong opinion?
  • Must heroes be flawless?
  • What should we fear?
  • Who is entitled to own what?
  • What makes writing worth reading?

These are questions that are not answerable with finality in a brief sentence—and that's the point. Their aim is to stimulate thought, to provoke inquiry, and to spark more questions—including thoughtful student questions—not just pat answers. They are broad, full of transfer possibilities. The exploration of such questions enables us to uncover the real riches of a topic otherwise obscured by glib pronouncements in texts or routine teacher-talk. We need to go beyond questions answerable by unit facts to questions that burst through the boundaries of the topic. Deep and transferable understandings depend upon framing work around such questions.

Return to the apples vignette in the Introduction to see the benefit of anchoring curricula in thought-provoking questions that suggest fruitful (sorry!) avenues of inquiry. If the proposed string of “fun” activities suffers from a lack of intellectual focus, notice how we can provide better perspective and the impetus to go into depth by framing the unit with a set of provocative questions such as these: How have planting, growing, and harvest seasons affected life in the United States? How have children's roles at harvest changed over time? Compared to other foods, how good for you are apples? Can today's apple farmers survive economically?

These questions implicitly demand more than just a smorgasbord of activities and bits of knowledge in isolated units. They are asked and made central to the unit to engender probing inquiry and eventual transfer. They suggest that uncoverage is a priority, not a frill or an option if time is left over after learning other “stuff.” Such questions, when properly used, thus send all the right signals about understanding as a goal.

**Questions: Signposts to big ideas**

The best questions point to and highlight the big ideas. They serve as doorways through which learners explore the key concepts, themes, theories, issues, and problems that reside within the content, perhaps as yet unseen: it is through the process of actively “interrogating” the content through provocative questions that students deepen their understanding. For instance, the question “How are stories from different places and times about me?” can lead students to the big ideas that great literature explores universal themes of the
human condition and helps us gain insight into our own experiences. Similarly, the question “To what extent can people accurately predict the future?” serves as a launch pad for examining big ideas in statistics (e.g., sampling variables, predictive validity, degrees of confidence, correlation versus causality).

As Bruner (1996) put it, good questions “are ones that pose dilemmas, subvert obvious or canonical ‘truths’ or force incongruities upon our attention” (p. 127). Good questions elicit interesting and alternative views and suggest the need to focus on the reasoning we use in arriving at and defending an answer, not just whether our answer is “right” or “wrong.” Good questions spark meaningful connections with what we bring to the classroom from prior classes and our own life experience. They can and do recur with profit. They cause us to rethink what we thought we understood and to transfer an idea from one setting to others.

In addition to stimulating thought and inquiry, questions can be used to effectively frame our content goals. For example, if a content standard calls for students to learn about the three branches of government, then a question such as “How might a government guard against abuses of power?” helps stimulate student thinking about why we need checks and balances, what the framers of the Constitution were trying to achieve, and other governmental approaches to balancing power.

Try it yourself. Instead of thinking of content as stuff to be covered, consider knowledge and skill as the means of addressing questions central to understanding key issues in your subject. This conceptual move offers teachers and curriculum committees a practical strategy for identifying important content ideas while engaging students in the very kind of constructivist thinking that understanding requires.

In short, the best questions serve not only to promote understanding of the content of a unit on a particular topic; they also spark connections and promote transfer of ideas from one setting to others. We call such questions “essential.”

What makes a question essential?

In what senses should a question be deemed “essential”? The best questions push us to the heart of things—the essence. What is democracy? How does this work? What does the author mean? Can we prove it? What should we do? What is its value? Honest pursuit of such questions leads not only to deeper understandings, but also to more questions.

But essential questions need not be so global. They can go to the heart of a particular topic, problem, or field of study. Thus we can say that each academic field can be defined by its essential questions. Consider these examples:

- When error is unavoidable in measurement, what margins of error are tolerable?
- In what ways should government regulate the market system?
• How can we know if the author was serious?
• What are the strengths and limits of the big bang theory?
• Who is a "winner" in athletics?
• What is the relationship between popularity and greatness in literature?
• To what extent is "musical" a culture-bound aesthetic judgment?
• What makes a mathematical argument convincing?
• What is the connection between a country’s form of government and the prosperity of its citizens?
• When is it wise in cooking to deviate from the recipe?
• What do "care" and "First, do no harm" mean in the health professions?
• How important is it to listen to our ancestors?

The best such questions are not merely emblematic of their fields but really alive. People ask and argue about them outside of school! The most vital discipline-bound questions open up thinking and possibilities for everyone—novices and experts alike. They signal that inquiry and open-mindedness are central to expertise, that we must always be learners. In the more practical sense, a question is alive in a subject if students really engage with it, if it seems genuine and relevant to them, and if it helps them gain a more systematic and deep understanding of what they are learning.

Questions like “What margins of error are tolerable?” are essential in yet another sense. They offer transferability across disciplines—linking not only units and courses in measurement and statistics, but also subjects as diverse as engineering, pottery, and music. Questions essential in this sense are those that encourage, hint at, even demand transfer beyond the particular topic in which we first encounter them. They should therefore recur over the years to promote conceptual connections and curriculum coherence.

Four connotations

Just as the six facets described in Chapter 4 represent different ways of characterizing understanding, there are four different but overlapping meanings for the term essential when used to characterize questions. One meaning involves important questions that recur throughout all our lives. Such questions are broad in scope and timeless by nature. They are perpetually arguable: What is justice? Is art a matter of taste or principles? How far should we tamper with our own biology and chemistry? Is science compatible with religion? Is an author's view privileged in determining the meaning of a text? We may arrive at or be helped to grasp understandings for these questions, but we soon learn that answers to them are invariably provisional. In other words, we are likely to change our minds in response to reflection and experience concerning such questions as we go through life, and changes of mind are not only expected but beneficial. A good education is grounded in such lifelong questions, even if we sometimes lose sight of them while focusing on content mastery. The big-idea questions signal that education is not just about learning "the answer" but about learning how to learn.
A second connotation for essential refers to core ideas and inquiries within a discipline. Essential questions in this sense are those that point to the core of big ideas in a subject and to the frontiers of technical knowledge. They are historically important and very much alive in the field. "What is healthful eating?" engenders lively debate today among nutritionists, physicians, diet promoters, and the general public (despite the fact that much is known and understood about nutrition). "Is any history capable of escaping the social and personal history of its writers?" has been widely and heatedly debated among scholars for the past 50 years and compels novices and experts alike to ponder potential bias in any historical narrative.

A third important connotation for the term essential refers to what is needed for learning core content. In this sense, we can consider a question essential if it helps students effectively inquire and make sense of important but complicated ideas, knowledge, and know-how—a bridge to findings that experts may believe are settled but learners do not yet grasp or see as valuable. In what ways does light act like a wave? How do the best writers hook and hold their readers? What models best describe a business cycle? Actively exploring such questions helps the learner to arrive at important understandings as well as greater coherence in content knowledge and skill. For example, as noted earlier, in soccer the players must come to understand the importance of repeatedly asking, "How can we create more open space on offense?" (i.e., spread the defense and exploit open space to enhance scoring opportunities) in order to address the more obvious question, "How might we win more games?"

A fourth meaning for the term essential refers to questions that will most engage a specific and diverse set of learners. Some adult questions may be important in the grand scheme of things (as judged by both specialists and teachers) but of no apparent relevance, meaning, interest, or importance to particular students. In this sense, questions are essential if they hook and hold the attention of your students.

To call a question "essential" is thus ambiguous. On the one hand, a question can be essential even if students do not grasp its power upon hearing it for the first time. As we have noted, big ideas are abstract, not obvious—in some cases, counterintuitive. On the other hand, if the question does not soon speak to the learner by signaling interesting or useful inquiries and insights, then a narrow focus on that question may be counterproductive. Yet caution is also needed: A punchy question might provoke lively discussion among your students but not point to big ideas and the goals of the unit. The challenge in design and instruction is to make essential questions (in the first two "objective" senses) accessible, thought-provoking, challenging, and a priority—sooner rather than later. The challenge can be met in various ways: through provocative experiences that "naturally" give rise to the essential questions, or through concrete entry questions, the discussion of which points toward the core of big ideas and issues. In practice, then, this is a Stage 3 problem—the challenge of translating the desired results of Stage 1 into "kid-friendly" terms for teaching. (We provide tips for doing this in Chapter 9.)
• How can we know if the author was serious?
• What are the strengths and limits of the big bang theory?
• Who is a "winner" in athletics?
• What is the relationship between popularity and greatness in literature?
• To what extent is "musical" a culture-bound aesthetic judgment?
• What makes a mathematical argument convincing?
• What is the connection between a country's form of government and the prosperity of its citizens?
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