



Questions Before Answers: What Drives a Great Lesson?

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Recently, I was looking through my bookshelves and discovered an entire shelf of instruction books that came with software I had previously purchased. Yes, there was a time when software was bought in stores, not downloaded. Upon closer examination of these instruction books, I noticed that many of them were for computers and software that I no longer use or even own. More importantly, most were still in shrink-wrap, never opened. I recalled that when I bought software, I just put the disk into the computer and never looked at the book.

I realized that I did the same when I bought a new car -- with one exception. I never read the instruction book in the glove compartment. I just turned on the engine and drove off. I already knew how to drive, so I didn't need a book. The exception occurred when I tried to set the clock. I couldn't figure it out, so I finally opened the glove compartment and checked the book.

This pattern was and is true for every device I buy. I never read the book that comes with a toaster, an iPod, or a juicer unless I have a question. There are some people who do read instruction books before using a device, but with no disrespect intended, those people are a small minority. Our minds are set up to not care about answers unless we have a question. The greater the question, the more compelling it is, the more we want the answer. We learn best when questions come before answers.

The Need to Know

Too many classrooms ignore this basic learning model. They spend most of class time providing

information and then ask questions in the form of a quiz, test, or discussion. This is backward. Too many students never learn this way. It is simply too hard to understand, organize, interpret, or make sense out of information -- or even to care about it -- unless it answers a question that students care about.

Lessons, units, and topics are more motivating when they begin with a question whose answer students want to know. Not only do great questions generate interest, they also answer the question that so many students wonder about: "Why do I have to learn this?" Finally, great questions increase cognitive organization of the content by framing it into a meaningful answer to the opening question.

There is a catch, though, in using questions to begin your lesson. The question must be connected to the content, so that the following learning activities actually answer the question. The question must fit your students' age, ability, and experiences. In addition, the question needs to provoke both thought and curiosity. In fact, it must be compelling enough to generate so much motivation so that students can't help but want to know the answer.

Have you ever forgotten the name of a song and spent hours trying to remember it? It gets under your skin until you no longer want the answer -- you *need* it. That's what a great opening question does for students. Compulsion more than simple curiosity drives them to learn the information that follows. It's what I felt when I finally wanted to read my car manual so that I could set the clock.

10 Questions That Motivate Learning

Questions this powerful are hard to find. I suggest collecting as many as you can (5-10 per year, for example), and after weeding out the ones that didn't work, eventually you'll be able to fill a notebook or computer file with them. I have been collecting these kinds of questions from teachers for years. Here's a sample of some great ones that worked with students in creating enough motivation to drive an entire lesson.

- **Middle school math:** What does Martin Luther King have in common with algebra? (Answer: Both are concerned with equality.)
- **First grade science class studying particles:** What is the smallest thing you've ever held in your hand? (*Warning: Do not use this question in high school.*)
- **Upper-level history class studying the Pilgrims:** Is there anything your parents could ever do to you that would make you run away from home?
- **Elementary art:** If humans could be a color other than any of the colors that they already are, what color would they be? Why do you think this? Draw some people of this color.
- **High school English:** If *Hamlet* were a television sitcom, what would be a better name for it?
- **Elementary English:** What is the best name for a book about your life?
- **Geography:** Why does Israel have more fertile soil than other Middle East countries that share the same desert? (Answer: It has more trees to hold in moisture.)
- **Second grade reading:** We are going to redesign the alphabet. What three letters can be eliminated? (Answer: C, Q, X)
- **Eighth grade physical education:** Why is a soccer ball harder to control inside the gym than on the field? (Answer: Friction)
- **Middle school English:** Why don't *good* and *food* rhyme? Given the definition of *best*, can you have more than one best friend?

Each of these questions was used by teachers to begin lessons that really motivated their students. Can you add any more to the list?

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