School Learning

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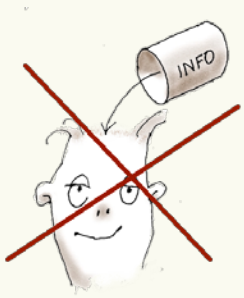
Engaging the Material

Learning

For classes, you can read, memorize, talk, and write, but you still may fail to learn much. In some courses, you can get an "A" without learning anything!



By the same token, you can study very hard and get poor grades. Obviously learning is hard. But it's a mistake to think that hard work is necessarily learning. This is because learning is a specialized sort of work. Like any specialty, it's important to learn exactly what learning involves.

What, really, is learning? First, it is not pouring information into a brain. This is an extremely misleading picture. It leads teachers to be content with talking, in the hope that their words will land somewhere in brains out there. This simply does not work. It also leads students to take copious notes, hoping they can funnel it all into their brain later on.

But the brain is not the mind. What's the difference? The brain is a material object located in the head; the mind is a non-material process by which we ask and answer questions for knowledge.

> A good analogy is physics: The brain is to the mind as an apple is to law of gravity. One is a material object; the other is a process that governs what the material object will do.
>
> Another analogy is the double meaning of *heart.* We can mean the physical fluid pump in the chest or the non-physical process by which we ask and answer questions for values.[1]

Earlier we pointed out how intelligent people envision learning not only as memorizing facts and understanding facts but also as paying attention to their own curiosity, trusting their own wonder. They aim to express their curiosity/wonder in well-formulated questions. They rely on these questions to pursue answers. And as they reach good answers, the questions dry up and their curiosity/wonder is satisfied. So there are three steps in learning:

> Wonder ➔ Questions ➔ Answers

Everyone wonders. Curiosity may have killed the cat but it liberates the human. What good teachers and good writers do is stimulate our curiosity by using images and examples. They may also express a well-worded question, but unless your curiosity is active, the question is not really yours yet. You may be intelligent enough to realize what *questions* the teacher

thinks are important, and what answers are expected on a test, but if his/her questions do not touch your own *curiosity*, then you have only learned something about your teacher, and not about the issues being discussed.

Moreover, you may be unaware of your curiosity. This happens when we read or hear something we don't understand. But instead of noting this fact—"I do not understand this"—we go on reading or listening in a vague hope that some light will dawn about something or other. We repressed the fact that we don't understand some specific part. We don't let it bother us. What is crucial to learn here is simply this: *I don't understand this*. To notice where we don't understand is an act of learning. We learn that we don't understand some particular set of words. At this point, we don't even know how to formulate a good question. We're just intellectually bothered. Practically speaking, when you come to a text you don't understand, "flag" it. If it's in a book you own, write in the margin—words like *What?* or *I Don't get this* or *How does this fit in?*—anything that will help you learn what parts you do not yet understand. If it's in a conversation or a class discussion, get in the habit of saying, *Wait, I'm missing something here!* or *Professor, something bothers me about what you said.* The habit of noticing what we don't understand is the fast track to coming to full understanding.

Course Material

What, then, is “course material”? Again, beware of imagining this as a bunch of facts stacked and ready for transportation to your brain. If learning is letting your curiosity ask and answer questions, then the “bunch of facts” image is entirely misleading. “Course material” is a set of questions that wondering men and women before us have asked and the answers that some have reached.

Think of it this way. The purpose of education is to pass on to newcomers what others have learned first hand. If a generation of youngsters is poorly educated, then our civilization is being invaded by ignorant barbarians. In other words, “course material” is hard-earned wisdom from others. At least it ought to be.

Examples

Once our curiosity/wonder is formulated in a question, and we feel its relevance, then we are open to finding an answer. So we almost automatically gather information that can lead us to answers. Notice, then, that to “gather information” means being quite selective. We aren’t gathering everything in sight but only what answers our questions.

Here’s an example. Suppose, in the U.S. Declaration of Independence, you read this: “We hold these truths to be self-evident, That all men are created

equal, …" I assume you understand these words, but do you have any curiosity about this sentence? Do you know what "equal" means? Now don't jump to conclusions; it's one thing to get *your* idea of what the signers meant by "equal," but quite another to get *their* idea. So your curiosity may produce questions: "What sort of equality did they mean? And why was a statement of equality so important to them?"

I hope you see how important it is to pay attention to your own curiosity and the questions that flow from it. People who are not alert to their own curiosity and questions will try to "learn about the Declaration" by reading every word, hoping to project on a mental screen what the words are. There is nothing remotely like a screen and a projector in your mind.

Here's another example. I'm sure you have heard about people who hope to learn about the Bible by reading it cover to cover. Frankly, I've never met anyone who was successful at this. It is far more effective to notice something that bothers you, something you really wonder about. Then move from this intellectual discomfort to formulate at least one important question. From there, let the question guide you in finding an answer. As you know, one question leads to another. And as you build up answers, you reduce the relevant questions and eventually come to a well-rounded view about the subject of your questions. Suppose you are curious about King David. You might wonder how he rose to prominence, what his pride did to him, what he loved, how later Hebrews revered him, how Christian writers regarded him, and how the "David and Goliath" story affects people facing gigantic odds.

And a third example: Why did the US suffer a huge credit meltdown in 2009? Answers vary, but they will mean nothing to people who aren't curious about it because they won't bother posing a relevant question. But learning includes learning to formulate a good question, even if we have no clear answers yet. The point is that to be an effective learner means taking to heart our wonder and questions that have yet to be answered.

This is "learning." This is engagement. In other words, to "engage the material" is to link your curiosity and questions with questions raised and answers reached by others.

What you learn, then, is not just facts, not just information. You are learning why and how and what for about reality. Recall, here, the difference between being knowledgeable and being intelligent. It's one thing to possess information but quite another to possess explanations.

OK. One final example. You are assigned a paper on either "Toxic Cosmetics" or "Buying Bonds." And you know nothing about cosmetics but a little bit about bonds. Which topic should you choose? If learning is filling empty buckets in the brain, it's logical to choose cosmetics; that's your

empty bucket. But if it's asking and answering questions, it's intelligent to choose bonds; you already know at least a few good questions.

Engaging your Teachers

Your overall attitude toward your teacher is also important. It is easy to feel resentful toward teachers you do not like, and toward courses you'd rather not have to take. Even if you like a teacher and a course, you still may be shy by nature and want to hide in the back row. You also will have poor teachers (especially those who imagine teaching as pouring information into brains).

Still, no matter how you feel toward a teacher or a course, I recommend that you aim to get your money's worth. You are the employer. Your tuition pays their salaries. So you have every right to ask your questions and expect some attempt at answers.

Some Guidelines

Here are some guidelines from my own experience on both sides of the desk:

> Don't hide from your teachers. Seek to work with them to learn the material as best you can.
>
> Credit to your teacher for helpful insights. (Teachers teach better when they feel an engagement.)
>
> Stop your teachers when things aren't clear.
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> If you have trouble formulating a question, just say, "Something bothers me about that, but I can't quite put it into a question." Speaking as a teacher, statements like this are highly engaging. They convince me that the person who said this is quite intelligent. I am eager to deepen my own own understanding by engaging aspects of an issue I never thought of.
>
> Provide "directive" criticism. For example, if your teacher doesn't explain things clearly, suggest more effective ways. (When teachers receive an evaluation that says only how bad they are, they feel unfairly attacked, they feel discouraged that they didn't help some students exercise their intelligence, they are offered no concrete alternatives, and consequently they don't change a thing.)
>
> Try to identify how your teachers regard themselves. Aim to gain from what they do well. Be patient with their shortcomings, but be courageous in asking their views even in areas where they are uncomfortable. For example, here are four types of self-images you will find among teachers, along with a "But" about each shortcoming:

Explorers love taking off on tangents. They are willing to devote class time to highly interesting topics that arise spontaneously. They assume that their own life experiences are more valuable than textbook lessons. They are engaging teachers of field work (counseling and social work) and the arts. *But* they often give impractical assignments and vague directives on due dates.

Engineers pride themselves in solving problems. They are logical and decisive. They follow their lesson plans to the letter. You will find them teaching geometry, drafting, and computer programming. *But* they sometimes solve the wrong problem or close themselves off from creative alternatives. They can be impatient with students who talk in order to think.

Psychologists focus on what goes on in people. They make good teachers of history and literature—the disciplines that delve into the richness and messiness of human affairs. *But* they find it difficult to come to final conclusions or make clear summaries of course materials.

Architects prefer to design models and develop theories. They are creative and analytical. You find them in departments of math, architecture, or philosophy, and on the curriculum committee. *But* they are poor in making practical applications and in giving concrete examples of their theories.

When your teachers give assignments or tests that are particularly difficult for you because of *format,* suggest an alternative for dealing with the same *content.* No use being penalized on format when you know the content. Here, in pairs, are examples of two different formats that can be used for the same content:

A 20-page essay	or	Two 10-page essays
A timed essay exam	or	An extra paper
A PowerPoint presentation	or	Lead a class discussion
Use APA style in essays	or	Use MLA style

Learning what's important

Everything is not equally important.

But it's very important to understand the *relative importance* of various topics, principles, examples, issues, concepts, etc. Some teachers provide a Study Guide, and some textbooks provide Study Questions. These are valuable resources for understanding where you need to focus. I recommend that you read study guides *first*—before diving into the lecture, reading,

discussion, etc. It gives you a good overview. To know where the gold is saves a lot of digging.

If the teacher provides no study guide, ask for one. Explain that you need to know not only "the course material" but also the "relative importance" of things. Be sure to add that you recognize that preparing a study guide is no picnic. (It isn't. Teachers who provide them must align all tests with them; it takes a lot of editing.) If a teacher cannot provide a study guide, then ask, "Would you comment on a study guide I make for myself prior to the test?" Again, add something like, "…because I need to know the *relative importance* of the many good things you are touching on."

— Tad Dunne © 2015

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1. Unfortunately, while we have words that distinguish the physical *brain* from the non-physical *mind* when speaking of knowledge, we use the same word—*heart*—for both the physical organ and non-physical process of when speaking of values. (A woman receiving a heart transplant does not wake up with new values.) Still, in both cases, the non-physical processes of knowing and evaluating rely on the physical organs of brain and fluid pump, but have higher-order purposes that cannot be understood by studying only the physical organs.