How Learning Works: Seven Research-Based Principles for Smart Teaching

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Activity for Principle #3–Motivation

**Reflecting on Past Experiences as a Student**
Recall a learning situation (e.g. a course, assignment, etc.) in which you were very motivated and compare it to a similar situation (e.g. same discipline, same course) in which you were rather unmotivated. List at least 2 - 3 factors which seemed to influence your level of motivation. Try to include at least one factor which you think influenced many other students’ motivations as well. (3 - 5 minutes)

**Discuss in pairs and prepare to report:**
After quickly reviewing each person’s examples, identify the common factors across both stories and classify them according to the motivational concepts we discussed (5 minutes)
Activity for Principles #4-5 (Practice and Feedback toward Mastery)

**Write a set of instructions to teach somebody to tie their shoe laces**
End of Story (Principle #6–Development and Climate)

Yesterday in my Economics class, we were discussing an article about the cost of illegal immigration to the U.S. economy. The discussion was moving along at a brisk pace when one student, Gloria, spoke up quite forcefully, saying the reading was biased and didn’t represent the situation accurately.

Another student, Danielle, groaned and responded: “Gloria, why do you always have to bring up race? Why can’t we just discuss the figures in the articles without getting so defensive?”

A third student, Kayla, who had been quiet up to that point in the semester, said that her grandparents were Polish immigrants who had come to the U.S. legally, worked hard, and made good lives for themselves. “But now this country is getting sucked dry by Mexican illegals who have no right to be here. They should be arrested and deported, end of story.”

At that point, the rest of the class got really quiet and I could see my three Hispanic students exchange furious, disbelieving looks. Gloria glared at Kayla and said, her voice shaking: “Those ‘illegals’ you’re talking about include some people very close to me, and you don’t know anything about them.”

The whole thing erupted in an angry back-and-forth, with Gloria calling Kayla entitled and racist and Kayla looking close to tears. I tried to regain control of the class by asking Gloria to depersonalize the discussion and focus on the central economic issues, but when we returned to the discussion I couldn’t get anyone to talk. Kayla and Gloria sat silently with their arms folded, looking down, and the rest of the class just looked uncomfortable.

Finally, Jason, a student who normally doesn’t say much said, with considerable frustration in his voice: “Professor Battaglia, this discussion isn’t going anywhere. Could you just tell us whether illegal immigration is or isn’t good for the economy?”

There wasn’t a chance to respond because we were out of time, which is just as well, because I felt drained. I know I didn’t handle the situation well, but this is an economics course, not a class on race relations! I really wish my students were mature enough to stick to the point and talk about these issues without getting so emotional.

Professor Leandro Battaglia
“Organized knowledge in story and picture”
    confronts through dusty glass
    an eye grown dubious.
I can recall when knowledge still was pure,
    not contradictory, pleasurable
    as cutting out a paper doll.
You opened up a book and there it was:
    everything just as promised, from
    Kurdistan to Mormons, Gum
    Arabic to Kumquat, neither more nor less.
    Facts could be kept separate
    by a convention; that was what
made childhood possible. Now knowledge finds me out;
    in all its risible untidiness
    it traces me to each address,
dragging in things I never thought about.
    I don’t invite what facts can be
    held at arm’s length; a family
of jeering irresponsibles always
    comes along gypsy-style
    and there you have them all
forever on your hands. It never pays.
    If I could still extrapolate
    the morning-glory on the gate
from Petersburg in history—but it’s too late.

--Adrienne Rich
Table to take notes on the case study “End of Story”

<table>
<thead>
<tr>
<th>Character</th>
<th>Intellectual development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloria</td>
<td></td>
</tr>
<tr>
<td>Danielle</td>
<td></td>
</tr>
<tr>
<td>Kayla</td>
<td></td>
</tr>
<tr>
<td>Jason</td>
<td></td>
</tr>
</tbody>
</table>

How would DeSurra and Church Characterize the climate in this class?

- Explicitly Marginalizing
- Implicitly Marginalizing
- Implicitly Centralizing
- Explicitly Centralizing

What affects the climate in this story?
Two Student Scenarios (Principle #7–Metacognition)

1. The “A” Student

I was exhausted from reading and grading 25 papers over the past weekend, but I was glad to be able to hand them back so quickly. It was the first big assignment in my freshman seminar on immigration, and it required students to state an argument and support it with evidence from course readings and supplemental documents. After class, one of the students, Melanie, approached me and insisted that she needed to talk with me immediately about her grade (not about her paper, mind you!). Hers was a typical first paper in this course—it lacked a clearly articulated argument, and there was only weak evidence to support what I inferred was her argument. As we walked across campus toward my office, she began explaining that she was a “gifted” writer who had always received A’s on her high school English papers. She made clear to me that there must be some mistake in this paper’s grade because her mother, a high school English teacher, had read the paper over the weekend and thought it was wonderful. Melanie admitted that she had started this assignment the night before it was due, but insisted that she worked best under pressure, saying, “That's just how my creative juices flow.”

   Professor Sara Yang

2. The Hamster Wheel

After I saw John’s grade on the second Modern Chemistry exam, I couldn’t help but ask myself, “How can someone attend every single lecture—sitting attentively in the front row—and go to every recitation and lab, no less, and still do so poorly on my exams?” I had explicitly told the students that my exams are designed to test conceptual understanding, and yet John seemed to be thrown for a loop. His first exam score had also been pretty low, but he wasn’t alone in that, given students’ first-exam jitters. By this time, however, I thought he would have learned what to expect. I asked John what had happened, and he too seemed perplexed. “I studied for weeks,” he said, flipping open his textbook. I could hardly believe how much of the text was highlighted. The pages practically glowed with neon yellow. He went on to describe how he had re-read the relevant chapters multiple times and then memorized various terms by writing their definitions on flashcards. I asked where he had learned this approach to studying, and he explained that it had always worked for him when he used to prepare for his science tests in high school.

   Professor Gar Zeminsky