


# THE LAST LECTURE

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## *A Recovering Jerk*

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IT is an accepted cliché in education that the number one goal of teachers should be to help students learn how to learn.

I always saw the value in that, sure. But in my mind, a better number one goal was this: I wanted to help students learn how to judge themselves.

Did they recognize their true abilities? Did they have a sense of their own flaws? Were they realistic about how others viewed them?

In the end, educators best serve students by helping them be more self-reflective. The only way any of us can improve—as Coach Graham taught me—is if we develop a real ability to assess ourselves. If we can't accurately do that, how can we tell if we're getting better or worse?

Some old-school types complain these days that higher education too often feels like it is all about customer service. Students and their parents believe they are paying top dollar for a product, and so they want it to be valuable in a measur-

able way. It's as if they've walked into a department store, and instead of buying five pairs of designer jeans, they've purchased a five-subject course-load.

I don't fully reject the customer-service model, but I think it's important to use the right industry metaphor. It's not retail. Instead, I'd compare college tuition to paying for a personal trainer at an athletic club. We professors play the roles of trainers, giving people access to the equipment (books, labs, our expertise) and after that, it is our job to be demanding. We need to make sure that our students are exerting themselves. We need to praise them when they deserve it and to tell them honestly when they have it in them to work harder.

Most importantly, we need to let them know how to judge for themselves how they're coming along. The great thing about working out at a gym is that if you put in effort, you get very obvious results. The same should be true of college. A professor's job is to teach students how to see their minds growing in the same way they can see their muscles grow when they look in a mirror.

To that end, I've tried hard to come up with mechanical ways to get people to listen to feedback. I was constantly helping my students develop their own feedback loops. It was not easy. Getting people to welcome feedback was the hardest thing I ever had to do as an educator. (It hasn't been easy in my personal life, either.) It saddens me that so many parents and educators have given up on this. When they talk of building self-esteem, they often resort to empty flattery

rather than character-building honesty. I've heard so many people talk of a downward spiral in our educational system, and I think one key factor is that there is too much stroking and too little real feedback.

When I taught the "Building Virtual Worlds" class at Carnegie Mellon, we'd do peer feedback every two weeks. This was a completely collaborative class, with the students working in four-person teams on virtual-reality computer projects. They were dependent on each other, and their grades reflected it.

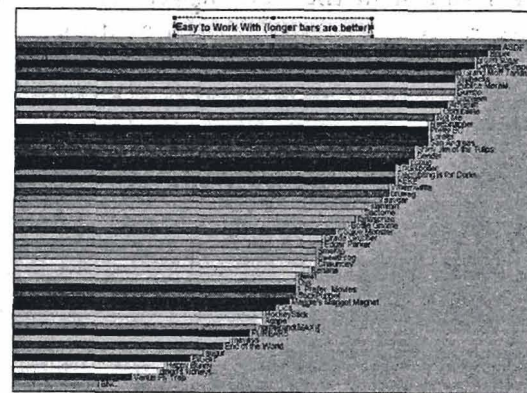
We would take all of the peer feedback and put together a spreadsheet. At the end of the semester, after each student had worked on five projects, with three different teammates on each, everyone would have fifteen data points. That was a pragmatic, statistically valid way to look at themselves.

I would create multicolored bar charts in which a student could see a ranking on simple measures such as:

- 1) Did his peers think he was working hard? Exactly how many hours did his peers think he had devoted to a project?
- 2) How creative was his contribution?
- 3) Did his peers find it easy or hard to work with him? Was he a team player?

As I always pointed out, especially for No. 3, what your peers think is, by definition, an accurate assessment of how easy you are to work with.

The multicolored bar charts were very specific. All the students knew where they stood relative to their forty-nine peers.



The bar charts were coupled with more free-form peer feedback, which was essentially specific suggestions for improvement, such as "Let other people finish their sentences when they're talking."

My hope was that more than a few students would see this information and say, "Wow, I've got to take it up a notch." It was hard feedback to ignore, but some still managed.

For one course I taught, I'd had students assess each other in the same way, but only let them know the quartile in which they ranked. I remember a conversation I had with one student whom others found particularly obnoxious. He was smart, but his healthy sense of himself left him clueless about how he was coming off. He saw the data ranking him in the bottom quartile and remained unfazed.

He figured that if he was ranked in the bottom 25 percent, he must have been at the 24 percent or 25 percent level (rather than, say, in the bottom 5 percent). So in his mind, that meant he was almost in the next higher quartile. So he saw himself as "not so far from 50 percent," which meant peers thought he was just fine.

"I'm so glad we had this chat," I told him, "because I think it's important that I give you some specific information. You are not just in the bottom 25 percent. Out of fifty students in the class, your peers ranked you dead last. You are number fifty. You have a serious issue. They say you're not listening. You're hard to get along with. It's not going well."

The student was shocked. (They're always shocked.) He had had all of these rationalizations, and now here I was, giving him hard data.

And then I told him the truth about myself.

"I used to be just like you," I said. "I was in denial. But I had a professor who showed he cared about me by smacking the truth into my head. And here's what makes me special: I listened."

This student's eyes widened. "I admit it," I told him. "I'm a recovering jerk. And that gives me the moral authority to tell you that you can be a recovering jerk, too."

For the rest of the semester, this student kept himself in check. He improved. I'd done him a favor, just as Andy van Dam had done for me years before.

## *Training a Jedi*

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IT'S A thrill to fulfill your own childhood dreams, but as you get older, you may find that enabling the dreams of others is even more fun.

When I was teaching at the University of Virginia in 1993, a twenty-two-year-old artist-turned-computer-graphics-wiz named Tommy Burnett wanted a job on my research team. After we talked about his life and goals, he suddenly said, "Oh, and I have always had this childhood dream."

Anyone who uses "childhood" and "dream" in the same sentence usually gets my attention.

"And what is your dream, Tommy?" I asked.

"I want to work on the next *Star Wars* film," he said.

Remember, this was in 1993. The last *Star Wars* movie had been made in 1983, and there were no concrete plans to make any more. I explained this. "That's a tough dream to have because it'll be hard to see it through," I told him. "Word is that they're finished making *Star Wars* films."