

# Teaching Statement

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In high school, I had an AP Biology teacher who was obsessed with pedagogy. She knew huge amounts of educational theory and was constantly talking about the importance of recognizing different learning styles; during our unit on the nervous system, she brought in a grad student to discuss the connection between neurobiology and education. She was the chair of the science department, the chair of the district's science curriculum committee, and president of the state science teachers' association. She was deeply interested in teaching, and yet she was widely regarded as being quite bad at it. For all her love of teaching, her ability to actually explain the material in a coherent way was nonexistent.

And so I have to admit that I am fairly skeptical about the idea of teaching statements. Being able to explain how to teach well is very different than being able to teach well. Analysis and thought is good, but I suspect there is a strong intuitive component that is hard to articulate. In writing teaching statements, one runs the risk of delving too deeply into theories of teaching and learning and positing them as universals, without realizing that the wide range of teachers, subjects, and students means that methods that may work perfectly in one setting may be disastrous in others. This, essentially, is the thesis of my two favorite essays on teaching, both written by University of Chicago English professors. Wayne Booth demolishes nearly every common assumption about good teaching, including assumptions that contradict each other, and when he's finished you realize that there's no space left to define good teaching as anything<sup>1</sup>. Norman Maclean (the author of *A River Runs Through It*) says that he thinks he wasn't all that great of a teacher when he started, had been on the decline when he retired, and that all he really knows about what makes a good teacher is the advice his mentor at Dartmouth gave him: wear a different color tie each day of the week<sup>2</sup>.

Maybe they're right. But I'm going to ignore their advice and discuss explicitly what I strive for in my teaching. And before I do that, I'm going to make a theoretical distinction that will put my ideas into some context. So here we go. You could probably divide teaching into two categories: teaching that has the purpose of imparting a set of knowledge or skills ("explanatory teaching"), and teaching that has the more ephemeral goal of helping students learn to think independently ("inductive teaching"). By explanatory teaching I mean the kind of teaching that often occurs in introductory math and science courses, perhaps some survey courses in history, and the like. By inductive teaching I mean the kind of teaching done in high school English classes, which, for me at least, were not so much about learning literature as about using literature as a starting point for learning how to think. I'm not trying to make a hard and fast distinction with these two extremes; I don't think they're mutually exclusive; I don't think that teaching can only be one or the other and I certainly don't think this is the only way to think about teaching and learning. American culture places these categories into a clear hierarchy; we admire creativity

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<sup>1</sup> "What Little I Know about Teaching," online at <http://teaching.uchicago.edu/tutorial/booth.shtml>

<sup>2</sup> "This Quarter I Am Taking McKeon": A Few Remarks on the Art of Teaching." In *The Norman Maclean Reader* (University of Chicago Press, 2008)

and independence and abhor memorization and regurgitation, as well we should. As one progresses in a subject, teaching generally becomes more inductive<sup>3</sup>.

But for my purposes the division is helpful, because the teaching I've been doing most recently—TA'ing the University of Chicago's precalculus class—has been solidly in the category of explanatory teaching. And if there is a fundamental principle to that sort of teaching it is this: **Just because it's easy for you to understand doesn't mean it's easy for them to understand.** In the realm of explanatory teaching, this axiom is probably the most crucial. I'd be willing to bet money that I can factor any (factorable) polynomial in the Larson & Hostetler's *Precalculus* in less than thirty seconds and without writing anything down. But that's because I've been doing it for ten years. It's second nature. It's not second nature to students who are seeing it for the first time. If it were easy, there would be no need for teachers.

This gives a corollary: **You have to know what you're doing.** Back, forward, inside-out, and any other preposition that could be used as a separable verb modifier. You have to know it well enough that you can put all of your energy into explaining it to your students, and none into explaining it to yourself. You have to know it well enough that you can explain it in an entirely different way if students don't understand the first way—or the second way, or the third. Patience is necessary, and nothing discourages a frustrated student more than a frustrated teacher.

Which reminds me of a third principle: **You have to like what you're doing.** Enthusiasm is contagious. If you don't enjoy the subject, why should the students? My first experience teaching was at a summer camp, and I think it helped me develop a sort of "stage presence," for lack of a better word, with which I can turn off all my other thoughts and concerns and become focused and enthusiastic as soon as I step inside the classroom.

I could probably go on. Showing students respect is important, as is recognizing that there are many different learning styles and many different ways to accomplish the same broad ends. I try hard to motivate the material that I've taught in precalc, since when I was studying it in high school, it seemed more like a bunch of facts about symbols than a coherent curriculum. Since the tutorial sessions I've led have been small (less than 10 students), I've tried to minimize my own lecturing (which is a challenge, since I like lecturing!), and encourage participation by calling on students at semi-random, as well as having them work out problems on the board. And, of course, there is the perennial challenge of making students comfortable enough that you can push them out of their comfort zone and help them grow.

Obviously, these ideas are all based on the type of teaching I've been doing most recently. My teaching experience is quite limited, and there are many different varieties of teaching that I would like to do in the future. Even though the students in my precalculus sections have had struggled a lot with math, they're still University of Chicago students. I've never had any discipline- or motivation-related problems with them (to their credit, not mine), and I think that having more difficult students would be a good challenge. And I've never had the equal challenge of teaching students who are at a very high level. Hopefully graduate school, at some point, in some discipline, will eventually enable me to do this as well.

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<sup>3</sup> One of the best classes I ever took was an honors freshman seminar in molecular biology that was structured as a journal club. There was no content per se; the only point was to learn how to read journal articles not to the point where we could understand what the authors did but to the point that we could understand what the authors did wrong.