

Becoming a Better College Teacher (If You're Lucky)

Harry Brighthouse

This contribution is a narrative of how a professor attempted to improve as a teacher over time. The narrator noticed the need for improvement through teaching a new class badly, and learning that he had no reason to trust that he, or many others, were teaching other classes better. The contribution describes in some detail the steps he took, and continues to take, including observing colleagues, hiring a coach, reviewing videos of his classes, and participating in department workshops. There is no empirical evidence that he has improved, but the narrator provides some reasons for optimism.

Imagine that you call a plumber.

The plumber, a new hire, has never done any plumbing. She has never read any books about plumbing or attended any classes about how to fix pipes or faucets or toilets or garbage disposal units. The house she grew up in had running water, so it's not as if she knows *nothing* about plumbing. And, incidentally, she has been in the same room with some professional plumbers when they were working. Unfortunately, she never saw the *results* of their work; she always left before the water was turned back on, was not privy to reports about whether the pipes and faucets subsequently leaked, and didn't ask the clients how satisfied they were with the outcomes. On further questioning, though, she reveals to you that she is actually a highly skilled baker.

On calling the firm you discover that they *routinely* hire new plumbers with no experience or training, and don't seek evidence about their potential to become good plumbers. You learn that all the frontline employees are experts at something else: they are trained as electricians, ice-sculptors, coopers, roofers, literary critics, physicists, and more. But not as plumbers.

The firm does not assess employee performance based on results. Clients fill in a short "customer satisfaction" form before the water is turned back on. But, unless a plumber regularly receives truly awful ratings, they just file the forms away. Pay raises are related to neither the results of the plumbing nor the customer satisfaction ratings. After six years of employment, the firm fires

some of the underperformers and gives unparalleled job security to the others. Curiously, the main criteria for promotion, pay raises, and even job security concern excellence in whatever they are actually trained in. Not plumbing.

You then discover that, far from being an outlier, this firm has exactly the same hiring and promotion practices as all the other plumbing firms. You ask your neighbors about their plumbers. Some have only had terrible experiences, though many blame themselves. Several report one plumber for whom they have the greatest praise because the drinking water was mainly clean and nothing leaked again for days. And, rather surprisingly given the circumstances, a few can identify a single plumber whose work was impeccable and whom they expect to remember for the rest of their lives.

Now imagine that you are the plumber. If you are a professor in a research university, it shouldn't be too much of a stretch. I certainly identify with her predicament. Of course, the analogy is highly imperfect. Baking is *entirely* unrelated to plumbing, whereas knowing how to *do* philosophy is a prerequisite for being able to *teach* philosophy, and at least I was trained in *that*. I had been the target of numerous attempts, many of them successful, to get *me* to learn. So professors at least have something to build on. But being able to do philosophy is only a prerequisite for being able to teach it, and being a student does not automatically give one insight into teaching.

Most professors in research universities teach. Even the small proportion whose research funding generates consistent "buy-outs" are hired on a tenure line, which, at least after they get tenure, provides security; they keep their jobs and salaries even if they don't win grants. Most professors have received little to no training as teachers, were hired for their potential not as teachers but as researchers, and receive promotions and pay raises mainly for their performance in research rather than in teaching. Once someone has tenure, their teaching must generate numerous complaints in order for it to have negative professional consequences of any significance. Few professors engage systematically in ongoing professional learning as instructors: they don't read books about teaching and learning, they don't seek out more successful teachers and observe them, and they don't engage colleagues or professional observers to help them improve their own instruction. Ask ten professors in research institutions – those who are expected to split their efforts equally between teaching and research – how many of the last ten conferences and workshops they attended and how many of the last ten publications they read were primarily concerned with teaching rather than research. I predict that of those two hundred conferences, workshops, and publications, fewer than one hundred will be about teaching. I'd be surprised if the number were as high as ten.

To state the obvious, the plumber's incentives are all wrong: she is rewarded for her performance in something other than plumbing, despite the fact that plumbing is her job. Professors in research universities are paid to research and teach, but they, naturally, take the research more seriously because they have trained in it and know they will be rewarded for it. Administrators should change the incentives, thus creating self-interested reasons for professors to take teaching more seriously.¹

But assume they don't. Most professors already have *non*-self-interested reasons to take teaching more seriously: both their students and the public suffer from the effects of suboptimal teaching. And many professors like to think of themselves as capable of making choices that align somewhat with the general good, rather than entirely with their own self-interest. How can they improve?

The first stage in recovery is to admit there is a problem. The structure of the profession makes the problem rather obvious, when you think about it, but for many years, I didn't. If you have fairly good command of the material you are teaching, are okay at explaining things, have some patience, and have a friendly affect, you can go a long time without realizing you are not teaching well. Add in the English accent at a Midwestern university, and you might never notice at all. I was shaken from my complacency only by the confluence of two events.

First, a friend sent me chapter six of former Harvard President Derek Bok's *Our Underachieving Colleges* to read for a research project we were planning. Here's the passage that made me blanch with embarrassment and immediately purchase the book to read in its entirety:

Teaching by discussion can also seem forbidding because it makes instructors uncomfortably aware of their shortcomings. Lecturers can delude themselves that their courses are going well, but discussion leaders know when their teaching is failing to rouse the students' interest by the indifferent quality of responses and the general torpor of the class. Trying to conduct a discussion with apathetic students is much like giving a bad dinner party.²

I was accustomed to talking a lot in my large lecture classes (with eighty-plus students), knowing that the students (mainly juniors and seniors) could punctuate my lecture by answering my questions, and to presenting material in my smaller classes for philosophy majors, knowing that those students would regularly interrupt with queries. I was used to good student evaluations of my teaching because, well, I am moderately well-organized, I key my talk to the material they should have read, I'm reasonably friendly, and they like my

accent. But the passage hit home because I recognized my own talk as a way of evading responsibility of ensuring they were fully engaged, and it crystallized that the more I talk, the less I know what is going on in the students' heads. I wondered whether my high student evaluations might reflect the soft bigotry of low expectations.³

Still: nothing might have changed had I not, that fall, been teaching, for the first time, a First-Year Interest Group (FIG) seminar. The FIG program induces groups of twenty first-year students to take three thematically linked courses, one of which is a seminar just for them, together in the same semester. I taught the central, twenty-person seminar on "Children, Marriage, and the Family," which attracted students with ambitions to become early childhood educators, nurses, social workers, and clinical psychologists, not philosophers.

The first few weeks of class were . . . awful. The readings were too difficult, I had assigned too much, and while I talked from my carefully prepared notes, the students stared in silence, trying to take notes, and wondering what on Earth was going on. They were aliens who, as far as I could tell, might be thinking just about anything. How could I figure out what was going on in their heads? And, until I did, how could I calibrate my talk to their learning needs?

At last I understood there was a problem.

Even without Bok's book, I would have known something was wrong with the class. It was *that* bad. But I might well have persisted; I'd have had nothing else to do. Knowing something's going badly is good. But it does not, in itself, spur improvement. I was *motivated*. But improvement requires access to knowledge about how to do better. And when it comes to college instruction, gaining knowledge is not straightforward.

How do people learn complex skills? Think about playing the guitar. The aspirant guitarist observes (and listens to) expert guitarists. She seeks out instruction. She tries to mimic some of what the experts do. She gets feedback – some from her own ears and some from other people – then tries again. Then she observes and listens again, mimics again, and gets more feedback. This is roughly what professors do when they are learning to become, and trying to improve as, researchers. As graduate students, they take seminars in which they are inducted into the practices of research, and various skills are modeled by their teachers and advisors. They read vast amounts of research by other, already accomplished researchers and try to emulate their efforts. They present at conferences and get feedback on their work from their colleagues and teachers. As professors, they continue observing other researchers in their field, interact with and learn from them, and continually seek feedback from peers so that they can maintain and improve their skills.

Professional learning needs an infrastructure. Aspiring guitarists have that: guitar teachers, teach-yourself books, videos on YouTube of excellent guitarists, and so on. Researchers, too: graduate school, feedback on grant and paper submissions, specialized workshops and conferences, and department colloquia. But college teachers don't. Unlike guitarists and researchers, college teachers aspiring for excellence can't even readily identify who the existing experts are. Most disciplines lack both rigorous measures of student learning and a systematic practice of trying to evaluate instructor quality. I don't know which of my colleagues are more successful than I am at producing learning among their students over the course of a semester, let alone who is successful at getting students to think better about trolley problems, or to understand the purpose of thought experiments in ethical theorizing. The sparse professional learning resources around instruction are mostly generic: it is not obvious how to apply lessons about pedagogy drawn from physics or mathematics to my own field. I'm a fairly typical professor in that I was enculturated into a specific discipline (philosophy) and mostly teach within my broad field of specialization (ethics, applied ethics, political philosophy). I want to learn how to teach *that* better, to *my students*.

What next? It started with a book. So I read more books about college (and secondary school) teaching and learning in the hopes of finding useful information. I wasn't seeking some master plan that would transform my teaching; I guessed it would be useful to find out what is known about good and not-so-good teaching, generally. No literature provides any precision on how to teach students effectively how thought experiments work, let alone how to teach it to *my* students. But plenty provide useful information about student learning, about the habits of successful college teachers, and, generally, about successful techniques. Shortly after I experienced my discomforting epiphany, my wife became involved in high school improvement, through which I learned that many of the resources produced for high school teachers can also be valuable for college teachers.⁴

It has been well worth devoting a good deal of time to reading about teaching and learning, and I continue to do so avidly. But imagine learning to play the guitar, or tennis, or to bake cakes, or to fix pipes by just reading a book. The next move was to get feedback on my efforts to improve.

The 2007 first-year seminar that forced me to face up to my inadequacies was not a complete disaster. After three weeks or so, I began modifying my instruction considerably and spent a lot of time talking to the students individually and in groups about the class, trying to gauge how

it was going for them, what was working, and what wasn't. I devised in-class exercises to make some sort of discussion happen, and to hold them more accountable for the (too-difficult and too-voluminous) reading. The breakthrough, though, came three years later, when I taught the class for a second time. By then, I knew several of the 2007 students well, and in the summer of 2010, one of them, Emma, asked if there was anything she could do to help with the 2010 version of the class. I knew exactly what I wanted from her.

Roger Federer is, reputedly, the greatest male tennis player of all time. But he still has a coach.⁵ He's not an outlier: top athletes and musicians normally employ coaches to help improve their performance. However good, they need someone to observe them, identifying strengths and helping them address weaknesses. Researchers have coaches, too: A good Ph.D. advisor coaches graduate students. Junior professors typically turn to senior colleagues, who read their work, give feedback, suggest tweaks, help them uncover new opportunities, and advise about publication outlets. Experienced researchers have informal coaching networks of colleagues who routinely read their work, helping them formulate problems and suggesting different techniques. I asked Emma to be my instructional coach.

The director of the FIG program coincidentally knew Emma and offered us a \$500 budget. Emma's job was to observe me once a week, take notes for a report on what was happening in the classroom, and then debrief for twenty to thirty minutes after class. It was the best use of \$500 I've ever made.

The main benefit was the day-to-day criticism. Here are some examples:

- Week 2: "The material you're covering is very challenging for freshmen. It is good you are challenging them, and this is not *too* hard, but it would help them a lot if you would sum up where the lecture and discussion have got to every fifteen minutes."
- Week 3: "Well... you didn't do what we said last week." This was, obviously, the point at which I knew it was going to work well, because she proved she would tell me when I was screwing up.
- Week 3: "You've had six sessions with them and you still don't know all their names. You should know all their names by now." I knew eighteen of twenty-two names but kept confusing two in particular, between whom, by the end of the semester, I could not see the slightest resemblance. By the next session, I knew all of their names.
- Week 4: "It is ok to cold call – in fact I wish more teachers would cold call. But you need to *tell them in advance* that you are going to cold call – Marissa was really put on the spot today. And when you do cold call, you have to make it

clear that if they don't have anything to say that is fine." One of the advantages of her being there only one session a week was that I could refer to her advice during the subsequent session without her being there: so I asked whether they agreed, which they all did. I apologized to Marissa and told them that I would feel free to cold call henceforth.

- The course devotes a couple of weeks to the tensions between multiculturalism and feminism. Two of the readings discuss specific practices within the Hmong community as illustrations – and judge them quite negatively. The subsequent year's class, when I employed Emma again, had five Hmong students, and she anticipated my anxiety about teaching those papers. My inclination was just to drop those readings. *Hers* was to assign three of the Hmong students to present (everyone had to do a group presentation in class). I followed her advice. The Hmong students had not been vocal participants, but when presenting on these readings, they were the experts in the room. The other students knew even less than I did about Hmong culture and practices; the Hmong students knew a lot. Incidentally all five Hmong students said the readings represented their culture accurately, and that the judgments about the practices in question were fair.
- The 2011 class was 25 percent Hmong, more than 50 percent non-White, and more than 50 percent low income/first generation. The students would sit in a crescent formation that was, after a week, more or less a rainbow, with all but one of the Black students on one end, then Hmong, then Latina, then White (and at the far end one Black man). Most class sessions involved small-group discussions of four or five students. I would assign students randomly to groups so that they would not always be discussing with their friends. But the consequence in this class was that the loquacious White students were taking up nearly all of the discussion time within each racially mixed small group, and then *all* of it in the full class discussion (because they always volunteered as group reporters). Emma was able to think through the problem with me and convinced me that the solution was to create racially homogenous small groups. Indeed, this led to much more talk – and much more connection to the class – from the non-White students. (You might ask why I didn't group the students according to how well they would work with and learn from one another. That's a good question and I have a good answer: I didn't think of it. Nor was I yet skilled enough to have learned which students would work well together.)

Emma provided two things that made a big difference. One was a student-centered perspective: she was only thinking about *their* learning and how *they*

were reacting, so when I was talking with one student, she could be observing the others and *their* responses to what was happening. Lacking the content expertise, she could make judgments about how well they were learning. The other was just a sounding board. I could pilot a new practice – cold-calling, new discussion prompts, even new readings – confident that someone was observing and would actually tell me how well it succeeded or how badly it failed, helping me think about whether to abandon it or modify it, and if so, how.

Before you try this at home, here's some background. Emma majored in nursing, not philosophy: like the students in the class, she was not an expert, she had no interest in dazzling me with her own brilliance, and we both knew that if we fell out it wouldn't affect her professional or academic prospects at all. She was one of the first students I spoke with when the 2007 class was not going well, and in the intervening period, we had discussed her experiences as a learner, both good and bad, in other classes.

But Emma was only an undergraduate student and not herself a great teacher. Surely Roger Federer wouldn't hire a twenty-year-old with limited experience to coach him?

I am not, regrettably, the Roger Federer of college teaching. He is (I'm told) the greatest (male) tennis player ever, whereas I was, at best, mediocre. Of course, if I had the option of getting a professional instructional coach to observe me regularly, I'd jump at it. But I didn't. Emma was not an expert teacher, and had no experience coaching, but – like many of our students – she was well-positioned to deliberate usefully with me about instruction. As a senior, she had taken twenty-four college classes, with different instructors of record, many of them with teaching assistants as well. In those same three years, I had observed just four teachers, in each case for just a single session, rather than several times a week for fifteen weeks; she had seen, and thought about, more teaching in the previous three years than I had in the previous twenty-five. Since then, several other students have coached me and, starting in fall 2015, a coach observed every single class I taught for a year. Their feedback has been invaluable; indeed, so has the built-in requirement to stop and reflect on what has happened.

Ideally, deans would invest in creating a cadre of skilled instructional coaches. Alternatively, training a cadre of students to provide the service throughout the college would help improve instruction, and would be an investment in those students' futures. If you are a dean, consider those two options. If you are an instructor, though, don't wait for the dean to act. Find one or two thoughtful students with whom you have a good relationship and pay them (out of your own pocket, if you are in a position to do so) to do for you what Emma, and others, have done for me.

I regularly get students to observe me now. Someone observed every single class session I taught during the 2015–2016 academic year. Sometimes colleagues say, “It’s very courageous of you to ask for feedback.” It isn’t. I want to improve. They’re undergraduates. I have tenure.

I was also influenced by pedagogy scholar Tony Wagner’s *The Global Achievement Gap*.⁶ In one chapter, he describes a workshop for K–12 teachers. Wagner (or one of his colleagues) led small-group discussions of video-recordings of classes. The aim was for previously unacquainted teachers to develop a common language for discussing instruction, and to come to some sort of interpersonal agreement on standards of practice. Like most teachers (and nearly all professors), his participants had spent very little time observing other teachers and were not practiced in rigorous, detail-oriented discussion of what works and what doesn’t. Initially, the reactions to what they were observing were very diverse; there was no agreement about whether what is being done is good or bad teaching. But over the course of the workshop, the participants would develop a common understanding, and a language for expressing it.

Not content with only funding Emma, the director of the FIG program facilitated biweekly discussions of teaching and learning among instructors from the program. Typically, five to ten instructors would discuss a problem of practice such as grading, prompting discussion, or whether to disclose one’s opinions about the controversial issues one is teaching. These discussions went well but, inspired by Wagner’s book, I wanted to get concrete and discuss actual instruction. If you propose something like this, you must be the first volunteer. A professional videographer recorded part of a lesson. More than twenty colleagues attended the discussion (I also invited two students from the class whom I thought could give context, though mainly I wanted them to experience a faculty discussion about teaching and learning). By this stage, I had gained some confidence: all of the students were engaged in the class, I was able to induce all of them to talk, their presentations and written work were of high quality, and I believed that there was a good deal of discussion in the classroom.

I was wrong. Sure, during a twenty-minute segment, nearly every student spoke (even the one student who, when I asked their permission to be recorded, had said “That’s fine, but I won’t talk”). But, as one colleague cheerfully pointed out, it wasn’t a *discussion*. I’d ask a question, someone would answer it (either voluntarily or because they were cold-called), and I’d dialogue with that student. Most of the rest were listening. But the focus was on *me*, not on the ideas, and not on each other. It was like a series of ping pong games, in which each of them was playing with me, but none were playing with each other. And it was easy to see that I was the person preventing discussion from happening. My nonverbal cues encouraged them to focus on me, rather than each

other, and I was too eager to validate what each of them was saying by responding, rather than opening up the discussion to comments from other students.⁷

Again, recognizing a problem is only the first step. I didn't know how to make good, full-classroom discussions happen. If I'd known how to do that, I would have been doing it already!

I was being trapped by the impulse Bok identifies that leads many colleagues to reject class discussion altogether. Professors value rigor and know that the best guarantee of optimal rigor is to use all the airspace themselves. *Our* talk is rigorous, while our *students'* talk is sloppy. But elsewhere in this issue of *Dædalus*, Carl Wieman, echoing former Harvard President Charles W. Eliot, observes:

The most basic principle that every teacher should know about teaching this sort of thinking is that the brain learns the thinking that it practices, but little else. To have students learn to recognize relevant features and make relevant decisions more like an expert in the field, they must practice doing exactly this. The longer and more intense the practice, the greater the learning.⁸

In STEM, problem sets and labs go some way to facilitating the necessary practice. But in the interpretative social sciences and the humanities, students practice only by writing and by discussing. Reading or listening to someone talk about philosophy, sociology, literary criticism, or psychology is not *practicing*, it is just *observing* an expert practicing. Nor is taking (often inexpertly designed) multiple choice tests. Watching Roger Federer play tennis, and answering multiple choice tests about what he does, would not suffice for becoming even a modestly competent tennis player. You have to practice. And then practice more.

We can make students write outside of class and we can make them (pretend to) read. But professors should know that most students will not discuss the material outside of the classroom because they are not in the habit of doing so, and even if they wanted to, they can't because they don't know their classmates. They might come to know their classmates, of course, but only if professors make that happen *inside* the classroom. Classroom discussion is essential for students to master the content and skills we care about; and for that to happen, the professor must be willing to sacrifice some rigor. My impulse to give rigor undue priority over engagement was preventing discussion from happening.

Fortunately, I was able to observe other teachers who *did* know how to run an actual discussion. The first time was rather fortuitous. I invited then-graduate student Paula McAvoy, who had previously been a high school social studies teacher, to teach my class an issue she had written a paper about. They

were assigned the paper, and Paula trusted them to read it. After making them introduce themselves by naming something they loved, she spent ten minutes reviewing the main argument, and then set the students to a complex small-group discussion assignment that required them to engage with and debate the ideas and arguments in the text. Students reported back to the full group, after which Paula led a discussion engaging all twenty students. From observing her, and other teachers, more often, I've learned a great deal about how to make real discussion happen.

I now give very explicit instructions to students, making clear the expectation that they address *their classmates, not me*, even though I will usually be the one setting the agenda and facilitating. Until this is the norm, I frequently stand behind the student who is speaking so they're forced to look at other people as they talk. Discussions usually focus on some problem or prompt that I have devised, which relates to a problem that arises in the reading, or is directly about the reading itself, and which is either on a handout or (if it is short) on a slide. The questions are usually very specific but sufficiently open-ended that reasonable people can disagree (and about which I anticipate disagreement in the class). I use "think, pair, share" and, in smaller classes, cold-calling liberally, to ensure that all students participate. (Emma was right about cold-calling; my students seem fine with it after they have come to trust that it really is okay to say they don't want to speak just now. One student told me at her graduation that after the first class session of freshman year, she called her mother and said "I *hate* Brighouse and I'm going to drop the class because he says he's going to cold-call." But by graduation, she no longer went bright red when talking in class. Another student recently told me that cold-calling was "life-changing" because, having made exactly the same phone call in her own first week, she now contributes confidently to all her classes. Voluntarily.)

I have to curb my tendency to jump in with either interrupting reassurance or some interesting, pedagogically valuable comment. So I've engineered some sort of gestalt switch in my head. When a student speaks, instead of thinking that I am depriving her (of assurance or of some valuable thought) by *not* responding, I think to myself that I am depriving her precisely *by* responding: preventing interaction with her peers, the reasons they can give to her, and the opportunity to surprise and be surprised by them. If the conversation ebbs, or if some particular strand is, in my opinion, played out, I step in to prompt the discussion with further questions, and often with low-pressure cold-calling. My rule of thumb is that, on average, at least four students should speak before I contribute again.

Running a discussion this way – that is, running a *discussion* – is more mentally taxing than engaging in twenty-one separate consecutive conversations.

The instructor is simultaneously trying to read twenty-one minds, keep everything on track, interpret what the students are saying, remember what needs to be highlighted at the end, and be sensitive to the needs of each student (some of whom need drawing out, others reining in). It's especially difficult with first-year students who are, at my institution and others like it, disposed to be deferential and, just because they know less and are inexperienced, have less to say than their older peers.

Since 2016, my department has held monthly “brown bag” meetings on teaching and learning. In the wake of an uptick in reported racist incidents on and around campus, our chancellor called for departments to discuss initiatives around diversity and inclusion. Our response – instituting the meetings about instruction – is not as orthogonal to the call as it may seem. Instructional quality is the most neglected – and perhaps the most serious – equity issue in higher education. Good instruction benefits everyone, but it benefits students who attended lower-quality high schools, whose parents cannot pay for compensatory tutors, who lack the time to use tutors because they have to work, and who are less comfortable seeking help more than it benefits other students. Philosopher Jennifer Morton, also a contributor to this *Daedalus* volume, emphasizes the importance to her first-generation and low-income students at City College of embodied and engaged interaction with the professors and with each other in a well-managed classroom:

I often require that my students defend a position in front of the classroom. For many, this is the first time they have spoken in front of a crowd of students from differing socioeconomic and ethnic backgrounds. The experience is terrifying, but as one Latina student told me, even though her face still “lights up red” when she speaks, she is now able to raise her hand and contribute to class discussions. By the time that student graduates and walks into her first job interview, she will have learned to manage her fear of speaking her mind. For students from low-income families who manage to overcome the tough odds, college is the first place where they will be asked to defend a position and to engage in vigorous intellectual debate. It is also likely to be the first place where they have to consistently engage with middle-class students and professors and navigate middle-class social norms.⁹

More generally, lower-income, first-generation, and minoritized students are more vulnerable to harm from low-quality instruction because they have fewer academic resources to fall back on.

The idea behind the faculty discussion group and the brown bag is encapsulated by this comment by former University of California, Berkeley, Education Dean Judith Warren Little on K–12 school improvement:

School improvement is most surely and thoroughly achieved when: Teachers engage in frequent, continuous and increasingly concrete and precise talk about teaching practice (as distinct from teacher characteristics and failings, the social lives of teachers, the foibles and failures of students and their families, and the unfortunate demands of society on the school). By such talk, teachers build up a shared language adequate to the complexity of teaching, capable of distinguishing one practice and its virtue from another.¹⁰

My department is small: there are about twenty faculty and some thirty active graduate instructors. Most of my colleagues, like most professors, see their department as the home of their professional life on campus; professors are generally skeptical that disciplinary outsiders can provide useful insights about how to teach our content well. And few professions are more status-conscious than academia: if you want systematically to change faculty behavior, you need to operate in the discipline, and colleagues with high status must be involved.¹¹ In the typical meeting, one or two people (often one faculty member and one graduate instructor) present some ideas about a specific problem of practice (for example, how to make discussions more inclusive, how to incorporate discussion into large lectures, how to reach absentee students, or what sorts of comments are useful when grading papers) and moderate a whole-group discussion. Attendance is voluntary, but the meetings average about fifteen participants, including graduate instructors, junior professors, and tenured professors as well as highly respected researchers. Until the brown bags, my department had, like most departments in research institutions, no formal forum for discussing instruction. Coordinating the meetings is now recognized as committee service. What we have instituted is imperfect, but attendance has not declined over time.

Judith Little continues:

Teachers and administrators frequently observe each other teaching, and provide one another with useful (if potentially frightening) evaluations of their teaching. Only such observations and feedback can provide shared *referents* for the shared language of teaching, and both demand and provide the precision and concreteness, which makes talk about teaching useful.

We haven't reached *that* point. *Yet.*

I am much more serious about teaching than I used to be. I spend more time talking with students, and have developed strategies for engaging and reaching out to the less-advantaged students who are much less likely to seek my support and help than the students for whom the culture of

academia is a second home. Am I actually a better teacher, though? I think so. But then I would think that, wouldn't I? Whether because the learning we most care about can't be measured, or because (as I suspect) we just haven't bothered figuring out how to measure it, we lack high-quality measures of learning, so I can't go back and compare the learning that was happening in my classes before 2007 with the learning that happens now.

That said, suppose that you were choosing between two plumbers from the remarkable firm I described in the introduction. Here's all that you know about them: Both were trained as terrific bakers, and neither has been trained at all as a plumber. One has simply followed the incentives. The other has read a good deal about plumbing, regularly observes other plumbers, employs a plumbing coach, gets colleagues to observe her, and frequently meets with other smart plumbers who, despite having been hired through a similarly bizarre process, are serious about consciously trying to improve their plumbing skills. If you wanted a really good cake, you might toss a coin. But if you wanted the best chance of getting your pipes fixed, I'm guessing you'd choose the latter.

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AUTHOR'S NOTE

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ENDNOTES

- ¹ See Willian G. Bowen and Michael S. McPherson, *Lesson Plan: An Agenda for Change in American Higher Education* (Princeton, N.J.: Princeton University Press, 2016); and Robert Zemsky, Gregory R. Wegner, and Willian F. Massy, *Remaking the American University: Market-Smart and Mission-Centered* (New Brunswick, N.J.: Rutgers University Press, 2005).
- ² Derek Bok, *Our Underachieving Colleges: A Candid Look at How Much Students Learn and Why They Should Be Learning More* (Princeton, N.J.: Princeton University Press, 2006), 125.
- ³ They did. Maybe they still do.
- ⁴ She has subsequently become an instructional coach, but only after the experiment I go on to describe.
- ⁵ See Atul Gawande, "Personal Best," *The New Yorker*, September 26, 2011.
- ⁶ Tony Wagner, *The Global Achievement Gap: Why Even Our Best Schools Don't Teach the New Survival Skills Our Children Need – And What We Can Do about It* (New York: Basic Books, 2010).
- ⁷ I rewatched it with current students who have recently taken the class and was gratified that they were shocked at how bad it was.
- ⁸ Carl Edwin Wieman, "Expertise in University Teaching & the Implications for Teaching Effectiveness, Evaluation & Training," *Dædalus* 148 (4) (Fall 2019). Charles W. Eliot, in his inaugural address as president of Harvard, explained, "The lecturer pumps laboriously into sieves. The water may be wholesome, but it runs through. A mind must work to grow." Charles W. Eliot quoted in Bok, *Our Underachieving Colleges*, 123.
- ⁹ Jennifer M. Morton, "Unequal Classrooms: What Online Education Cannot Teach," *The Chronicle of Higher Education*, July 29, 2013.
- ¹⁰ Judith Warren Little, *The Power of Organizational Setting: School Norms and Staff Development* (Washington, D.C.: U.S. Department of Education, 1981), 12–13. Warren is not saying that the talking and the shared language are, themselves, sufficient for continual improvement. They are necessary components, and signs, of continuous improvement.
- ¹¹ See Mary Sue Coleman, Tobin L. Smith, and Emily R. Miller, "Catalysts for Achieving Sustained Improvement in the Quality of Undergraduate STEM Education," *Dædalus* 148 (4) (Fall 2019).