

Beyond the Classroom Learning From Students

Rebecca Saxe

I HAVE A PARTICULAR IDEAL of teaching at university. In it, the student and professor are working together, one-on-one, on a problem. The problem is central to the student's deepest passions and life ambitions. It is a hard, multi-dimensional problem, and both the student and professor are fully intellectually engaged. There are no grades, no fake incentives; the student decides how much to work, how much help to seek, and when to stop. The professor's role is to probe the student's reasoning, to provide perspective, and to challenge the student to reach for greater clarity, sophistication, and originality. The standards are not the standards of the classroom, but of real life and adult minds. If the solution is a new kind of bridge, the standard is that you would let those you love drive on it.

Every year, I have this kind of interaction with a small handful of the best undergraduates at MIT. Perhaps unsurprisingly, it happens outside the classroom. I meet them through my service on the Distinguished Fellowships Committee. The students are applying for elite fellowships: Rhodes Scholarships, Marshall Scholarships, Truman Scholarships, Fulbright awards, etc. In their application essays and interviews, the students must articulate their personal, professional, and intellectual goals: the problems they aim to solve in the world. The Committee's job is to goad, challenge, and provoke them to do it better, to coach them to stand up for themselves while standing out from a crowd of the best students at the best universities in the world. My dream job.

Of course, I learn as much as I teach in this job. I am a professor of Brain and

Cognitive Sciences, but I have mentored students working on DNA synthesis, cyber security, cheap and robust wheelchairs or NICUs or blood glucose monitors or smoke-free ovens, the morality of national defense, geodesic domes, fuel cell engineering, chronic pain, and the economics of education reform, among other things.

And in addition to learning from the students, I am inspired by them. These students are not just academically successful, they are also athletic, creative, and compassionate. . . . What can I do for these students? I can question their assumptions. I can add complexity, or force them to get up to date, or point them in new directions. I can be hard to impress.

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can be hard to impress. All of these students are good at finding the right answer, so I ask them questions that don't have right answers. All of these students are good at solving toy problems, so I give them real problems.

I like the work so much that I recommended serving on this committee to my best friend.

Of course face-to-face, individually tailored interactions cannot fulfill all of the goals and values of a university. In particular, my ideal is antithetical to a MOOC. It cannot be parallelized, and so can only be delivered to a handful of the lucky few who live on campus. It is idiosyncratic, and an inefficient way to transfer the content of our expertise.

But we all know that teaching must go beyond transferring content. I believe we grow into adults, and grow as adults, by participating in serious intellectual conversations, with high standards and high stakes and no holds barred, one-on-one with a person we admire. These conversations teach us what to aspire to. I believe these conversations are fundamentally what a university is for. ■

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