

## Dan Cosley: Teaching statement

Back in 2003, I told my PhD advisor, John Riedl, that I wanted to go to a small school so I could focus on teaching. He pointed out that working on research with grad students was teaching, too, which was a bit of a bombshell and a major influence on my winding up at a place like Cornell where research is integral to the mission. So to some extent, I find the split between teaching and advising artificial, and the way I will deal with it in my statements is to focus on classroom teaching here and focus on one-on-one mentoring in my advising statement.

Most of my classroom teaching has been to larger-sized undergraduate classes, so I will primarily address that, although I think most of the ideas apply well to seminar-style teaching as well. My main goal in classroom teaching is to get students to care enough to engage with the material and motivate themselves to do the work, then provide structures that give them the support and flexibility they need to get there.

A main way I encourage engagement is through projecting genuine enthusiasm while teaching. I openly show enthusiasm for the material I teach, the act of teaching, and the students themselves, and I express this openly through the way I interact; and often, students respond with enthusiasm and engagement. I also increase engagement and caring through addressing “why” questions: why a given topic is important in both educational and practical terms; why I chose a particular reading, assignment, or learning technique; why an assignment was graded the way it is. Knowing why helps students see the value of and reasoning behind what we’re doing, which also increases students' engagement. Finally, I give them as much interaction outside of class as I can, given other constraints of the job. I am open for office hours, responsive to email, and provide online forums for discussion and questions through tools like Piazza.

Another technique I use to build engagement is choosing teaching strategies that involve students. This includes a generally interactive lecture style and frequent use of non-lecture activities such as small group discussion. It includes preferring constructivist activities around critiquing, designing, and building software or interfaces over straight testing of material through quizzes and exams. It involves doing much of their work in groups, which provide both social and learning support and allow students to experience group work dynamics that most will find in their careers post-graduation. It involves large projects that take a substantial portion of the semester, requiring planning, organization, and execution over a longer scale than a typical assignment and giving them opportunities to do deep and interesting work. Finally, it involves providing more freedom than average in terms of assignment topics and formats, giving students flexibility in choosing work that advances their goals. All of these give students more involvement in and control over their education, and when I help them understand why we use these techniques rather than standard lecture-homework-quiz-test models, they respond well.

I also work to provide structure to help students manage this flexibility. I choose and order course topics to create coherent wholes and emphasize relationships between topics. Readings are chosen to fit both topical and assignment goals, then annotated with suggestions for getting the most out of them. Assignments, though open-ended, come with plentiful advice and, as I have matured as a teacher, increasingly detailed rubrics. They are also scheduled so that students

work with topics as or immediately after they encounter them in class and readings. Larger assignments also come with milestones that are generally ungraded, allowing students to rework assignments after getting feedback but before grading and in turn reducing student stress and increasing performance. Information about all of these activities is regularly passed along and discussed both in class and online.

To structure the group assignments, I carefully assign groups to balance skills, experience, work styles, available meeting times, and preferred group members to maximize their chances of success, and spend at least some course time on how to be an effective group. The combination of guided progress, frequent feedback, and focus on groups means that students on balance have good group experiences in my classes. I know this because students fill out self-evaluations, group evaluations, and instructor evaluations at least twice during the semester to help them, and me, reflect on how the course is going and on how to improve it. These structuring elements help students turn their caring and engagement into useful learning outcomes.

I have a few main weaknesses as a classroom teacher. I get feedback sometimes that larger connections between topics don't come out as clearly as they might, although I've been working on this and I think it has gotten better. Particularly in design-based classes, students sometimes ask for more concrete examples to be covered in class; I've been working on this too. I've also had to work hard on facilitating discussions, because my natural tendency is to react immediately to a student's thoughts, leading to a kind of "star-shaped" discourse pattern. I'm trying to adopt habits that encourage students to respond to each other more. Finally, though my informal style plays well overall, some students would prefer a more formal style, while others read me as sarcastic and find it uncomfortable. These are minority opinions, at least as directly expressed on evaluations, but I take them seriously and work on this as well.

Still, on balance I'm an effective classroom teacher with consistently high evaluations from both students and other faculty. I regularly hear from former undergraduate students about the value of classes they've taken with me in advancing their career goals. Likewise, graduate students and some undergrads take advantage of the flexibility afforded by my course assignments to do work that furthers their research goals, leading to (at least) the following publications.

- Davis, P. M., Connolly, M. J. L. (2007). Institutional Repositories: Evaluating the Reasons for Non-use of Cornell University's Installation of DSpace. *D-Lib Magazine* 13(3/4).
- Khovanskaya, V., Baumer, E., Cosley, D., Volda, S., Gay, G. (2013). "Everybody Knows What You're Doing": A Critical Design Approach to Personal Informatics. In *Proceedings of CHI 2013*.
- Rieger, Oya Y. (2009). Search engine use behavior of students and faculty: User perceptions and implications for future research. *First Monday* 14.12-7.
- Wang, H.-C., Cosley, D., Fussell, S. R. (2010). IdeaExpander: Supporting Group Brainstorming with Conversationally Triggered Visual Thinking Stimuli. In *Proceedings of CSCW 2010*.
- Wu, S., Liu, S., Cosley, D., Macy, M. W. (2011). Mining Collective Local Knowledge from Google MyMaps. Poster at *WWW 2011*.
- Zhao, O. J., Ng, T., Cosley, D. (2012). No forests without trees: particulars and patterns in visualizing personal communication. In *Proceedings of iConference 2012*.