

Statement of Teaching Philosophy

Scott W. Russell

I enjoy teaching and find helping others grasp something they thought was unfathomable very gratifying. Making teaching my vocation will allow me to participate in these kinds of interactions on a daily basis while helping students learn in the liberal arts tradition. Becoming a teacher is also a way for me to give back to a system of higher education from which I have benefited both personally and professionally.

My role as a teacher is to facilitate and encourage student learning. When teaching English conversation to shy Japanese students of all ages this meant engaging and relaxing them. I also used this approach as a teaching assistant at Boston University, and continue to use it in the introductory computer science course I am teaching at Colby. Students are more likely to learn when they are at ease and actively involved instead of passively listening. Consequently, I try to engage students in a dialog by frequently prompting them for input and occasionally making intentional mistakes. I also encourage them to memorize as little as possible and, instead, concentrate on developing a mental model from which they can derive the needed fact. This technique was particularly useful for the consultants and business people I taught, since memorizing every application feature was impractical. I think the students in my introductory course have also found this to be the case and believe such a mental model will help them continue to learn on their own, troubleshoot problems, and teach others what they have learned long after the course is over. The Outstanding Teaching Fellow award I received from Boston University's School of Arts and Sciences lends credence to these approaches.

Although I believe that critical thinking skills and mastery of a specific discipline are important for undergraduates, I also believe that effective communications skills are just as important. In the workplace I encountered many professionals, particularly technologists, whose sub-par communication abilities hindered their effectiveness. In contrast, because of the communication training I received as a liberal arts student, I was better able to effectively interact with less technically oriented managers and executives. I impart these skills to students by demanding clear and concise assignment solutions, demonstrating how to produce such solutions, and teaching them how to ask good, clarifying questions.

Additionally, I strongly encourage collaboration among students, since I experienced many situations with clients, fellow project members, trainers, and English instructors where teamwork was integral to our success. Teaching one another and discussing what they do and don't understand reinforces their learning and exposes them to alternative perspectives. I permit a clearly specified degree of collaboration on assignments: less collaboration for introductory courses and more for upper level ones. Collectively resolving assignment ambiguities and discussing various potential approaches is beneficial, since they are likely to encounter imprecise and contradictory requirements in the workplace. However, each student must be able to select a suitable approach on his or her own, work out the details of his or her solution, and argue its merits without any assistance to be an effective contributor.

Finally, I strive to make students aware of the broader role and consequences of technology in society. For example, using a gerrymandering example in a class on greedy algorithms spawned a discussion about the trustworthiness of new electronic voting technologies. By leveraging my diverse personal and professional interests, experiences, and knowledge, I hope to facilitate learning in and out of the classroom now and for the rest of the students' lives.