Teaching Statement

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1 Philosophy

Is the quality of a teacher judged by the material they use or by the lasting intellectual impact they make on students? And do the two really go hand in hand?

There is no question that strong, well-structured, and clear material is a key to effective teaching. However, a teacher should always keep in mind that every student receives the material differently, and that it is not enough to cater for the majority. If we, as teacher, are to be judged on the long term success of our students, it is cynical at best and morally corrupt at worse to let students fail because they do not fit the mould imposed by our teaching strategy.

More than excellence, precision, or rigor, teaching should be a malleable practice guided by compassion. The value of teaching, and to some extent that of universities, is to be found in personalized—or personal—education. Universities should therefore not act as sieves or uniformizers but as social and intellectual levers, allowing one to flourish at their pace, on their term.

2 Computer science

Courses in computer science are singularly multi-faceted and I believe it is critical to reflect this while teaching. Putting the topics in multiple contexts is indeed integral to both understanding and remembering the concepts. Accordingly, it is in the students' interest to blur the lines between theory and practice: these should not only be viewed as inseparable, but also be considered on a continuum.

This however should not be a distraction from the goals of the course or, as importantly, should not hinder its structure. Using carefully delimited detours allows to keep the structure of the class clear, while still being engaging. As much as linearly-built classes can appear soporific, it is still essential to keep a natural driving force to the development of ideas. Clear detours allow the students to have a second take on the covered material, all the while stimulating their curiosity and their memory.

One silver lining of online teaching, as imposed by the 2019-20∞ pandemic, is that lots of instructors have been developing recorded versions of their classes. As many colleagues, I took that opportunity to *flip* one of my courses. By having the repetitive, technical material put as a homework assignment, I can focus the classroom experience around putting the abstract concepts into practice. For instance, in a course such as Computer Systems, it is easy to exemplify the main concepts by going through source code of well-known software, including the Linux kernel or the GNU C library.

In summary, I am dedicated to making connections with the full spectrum of computer science while teaching. Seizing this opportunity is at the heart of my teaching strategy, with the aim of making each class engaging and thought-provoking.

3 Diversity

I first specialized in engineering and computer science 20 years ago. These 20 years made me acutely aware of both the lack of diversity that can be found in our field and the barriers that people from less represented groups face. I act on two levels to help break these barriers.

First, I take part in outreach efforts. As an engineering student, I volunteered multiple times to represent my school. I contributed to an important effort to promote engineering to a female audience; I am proud to say that my *alma mater* won an award in 2014 for being France's most active school in that regard.[1] While working at the University of Oxford, I took part in Open Days and in the recruitment process for students in Computer Science. Indeed, Oxford suffers from a reputation of elitism that deters students in underrepresented groups with outstanding academic potential from applying. It was an integral part of my participation in these events to encourage applications from these groups by making a stand against socioeconomic elitism. More recently, I have been acting as mentor and judge in Hackatons around Illinois, encouraging a wide array of young students in pursuing a career in computer science.

Second, I abide by these principles in the classroom. No student should feel pressured into silence, be it by the teacher or by their peers. I have participated in a series of training to better understand my own unconscious biases. This naturally helps me in better identifying bias and microagressions, and equips me with tools to fight and denounce them in the classroom. As the person with authority in that setting, I believe it is part of my duties to do so, so that each student feel that they belong, that they are valued, and that they are respected.

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[1] Ingénieuses 2014 prize: `http://www.epita.fr/2014/06/23/`