

Teaching statement

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I used to joke that our family had a genetic condition called “Doctorate” that invariably manifested itself in all adults in their late twenties, and that at least five people would jump up if anyone called for a “Dr. Steinke” at a family gathering. Growing up in a rural area of Germany, I of course realized that access to higher education, or even support with basic education and homework problems, was not a given for every student, like it was in my family.

It was a painful lesson at first - being the stereotypical “egghead” rarely wins any high school popularity contest - but the silver lining appeared when I started tutoring other students, and was able to help most of them pass classes where they were close to failing. I typically tutored 1-3 students over the course of the school year, and continued doing so into the first years of college.

My home town also has a history of accepting large numbers of refugees at the local military base, and with the fall of the Iron Curtain and collapse of the Soviet Union we got new classmates who needed a tutor for German and also English, which was often not taught in eastern European schools.

I therefore had plenty of one-on-one teaching experience even before starting university, and I still find tutoring students one of the most enjoyable ‘jobs’ I had. It is extremely rewarding when I see a student “get” a concept he initially struggled with, or when students I teach to do measurements in the lab reach the point where they can develop their own – and sometimes quite creative – solutions to new experimental problems.

My first experience with classroom teaching was a physics tutorial for mechanical engineers, where I would work with 30-40 students for 2 hours every week, discussing homework problems and explaining concepts from the main lecture. Even though this particular lecture was not very popular and the homework problems often contained errors, I invariably got good reviews from the students in my tutorial, so the experience was a great confidence boost for me as a teacher.

Having more experience with individual teaching and mentoring until now, I am looking forward to teaching my first classes as an Assistant Professor, and to develop efficient strategies to give students in a larger class the individual attention they need. I am particularly interested in using technology like online based learning tools, and I plan to set up an online forum for each class I teach, where I would act as the moderator and answer questions daily. At the same time, students would be encouraged to try to answer other students’ questions. This would save many individual e-mails answering questions about lecture content, and leave more

time to attend to individual students' needs. Seeing the students discuss among themselves on the forum would also give me valuable insight how well the students understand the lecture, and which concepts may need more explanation.

My general philosophy is that teaching inside the classroom is just as important as mentoring students outside their classes, and it is my ambition to involve students in active research as early as possible. I consider this the best way to teach them practical, transferrable skills like critical search and evaluation of literature, clear presentation of their research results in talks and papers, and effective teamwork with other students and senior researchers.