Teaching Philosophy

Radu Paul Mihail
Department of Computer Science
University of Kentucky
Lexington, KY

March 10, 2013

I seek to provide my students with a high quality instruction. This requires me to adapt and to be life-long learner. Computer science is a young discipline with applications in every aspect of our modern society. Almost every job listing requires proficiency in word processing or similar basic computer literacy tasks. This reality drives educational institutions and instructors to provide students with computer skills as early as middle school. Our role as computer science instructors is therefore an important one, and plays a key role in society. I take that responsibility on and strive to be the best I can and learn from every teaching experience — including those outside the classroom.

Computer science is heavily dependent on mathematics and requires abstract, algorithmic thinking. I believe quality instruction in this field involves the facilitation of overcoming fear of mathematics and instilling confidence in the development process of becoming an algorithmic thinker. If an instructor is effective in helping students overcome these obstacles, the other duties of instruction become easy and enjoyable for both students and instructor.

Adaptation is also important — one has to identify different learner strengths and build on them. From my experience, students **need** to be listened to, and respect an instructor's efforts to adapt teaching strategies from the feedback they provide. Rigidity and "always sticking to what works" alienates a subset of students who would otherwise put more effort and assume greater responsibility in the learning process.

Quality teaching involves much more than effectively delivering material. It involves giving the material life and meaning to which students can relate to and learn to love, in spite of preconceptions or anectodal evidence of the form: "programming is hard and only nerds without social skills do it". Like all well developed disciplines, computer science has concepts that are difficult to understand at first exposure. An effective instructor listens to the students and repeats as needed, fully aware that there always exist improvements in material delivery that could make the difference between an effective learning experience and one that leaves room to desire.

Much of the list of skills a graduate student should excel in are related to

teaching. This is not limited to the classroom. Presenting cutting edge research to a group of scientistis is much like teaching an introductory level class to a group of college freshmen: both are presented with material previously unknown to them. It is my goal to use any strategy in order to maximize the number of students for whom the material and delivery "clicks".

As a graduate student, I am fortunate to work closely with senior faculty who spend countless hours advising me in both research and teaching. Reflecting on my graduate and undergraduate careers, I have seen both highly effective and ineffective teaching. I apply what I learned from my professors in my own teaching. I use methods that worked for me and steer away from behavior that could place me in the ineffective category. Successful strategies involve in-class discussion and the use of distractions as tools to guide conversation such that it leads to the strengthening of students' understanding of concepts and analytic skills.