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Teaching philosophy

I realize that teachers literally have the ability to shape a students academic trajectory, and this is very exciting for me, as I enjoy computer science and want to help students excel as they pursue this course of study. As a student myself, teachers have on many occasions shaped my education dramatically. In elementary school my fourth grad teacher decided that I was a gifted student and had me tested to begin a high level reading class. Before this, no teacher had given me any special attention or notice. I believe that if she had encouraged me I would not have began striving for academic excellence. Again, as a college student I was not sure at first if I should pursue computer science or liberal arts. I took a Data Structures course, and the professor was so enthusiastic and motivating that during the course of the class I decided to definitely pursue computer science. I felt that it was necessary to begin this statement with an explanation of what motivates me as a teacher. Now on to pragmatics:

1) Class time should be interactive, as students tend to tune out, if there is no back and forth between the professor and class during a lecture. In addition, if there is interaction between the professor and student, then the professor can better gauge whether the students understand the material. As much as possible I try to ask students questions, have students work problems out on the board, and also have students work on problems during the class as I observe their work.

2) I feel that homework is important, especially in regards to computer science where "practice makes perfect". I try to give frequent small assignments, with a large project at the end of the course. Frequent small assignments keep students from being overwhelmed while also allowing me to closely monitor students' ongoing understanding and performance. In regards to final projects, I also try to give several small homework assignments that pertain to the final project to help the student learn how to break up large projects into smaller and more manageable sub projects.

3) I try to give real world examples in class and homework assignments. This especially pertains to final projects, as these projects are more time intensive and it motivates the student if they can easily see the applicability of the project. If possible I also try to find real world clients for the projects, as this provides even more motivation and also teaches students how to interact successfully with the client.

4) I feel that in regards to computer science, it doesn't just matter that a program/project works, but also that it is implemented well. If a program is not implemented with reuse in mind, then it is not a successful project. Therefore when I teach computer science students, I emphasize judicious use of commenting, readable variable names, modularity and object oriented programming.