

STATEMENT OF TEACHING PHILOSOPHY

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There are two prominent features of the best teachers that make them successful; **first**, they care most about the teaching and, **second**, they struggle for finding interesting ways for the presentation of the course material. The first feature is strongly linked with their passion for teaching. Preparing attractive presentations with good eye-catching examples are only possible with the continuous passion for teaching. However, the best teachers should also be able to adapt to the changing environments, recognize the reaction of the students to his teaching style and adjust his attitude based on this reaction. The main goal is to communicate the state-of-art technology to the students in a joyful manner, while making sure that this teaching style retains students' attention at both the group and individual levels. In my teaching experience, I have seen students engaging themselves with the core aspects of the material in formal lecture hours, and practice what they have learned in discussion sections. In addition, their effective learning process is complemented by extra problem sessions.

Formal lecture hours is when the students are first exposed to a list of new information organized in easy-to-learn preliminaries to more advanced topics. The logical order of the presented material is crucial in order to maintain a captive audience. The provided information must be neat and organized so that the students can easily follow the instructor. Particularly in engineering courses, teachers often provide answers for simple examples in formal lectures, and leave harder questions for students to get their hands dirty later. In fact, in many cases, it is usually preferable to ask students to take a leap of faith when they are learning the new material. This approach not only maintains the student involvement but also encourages them to learn how to manage their autonomy in their life-long learning process. Complex concepts, whether they are fundamental or superfluous, should be taught in simplistic form in order for the students to see the big picture. As the lecture proceeds, the details are given if needed. For example in an introductory communication systems course, the lecturer must first explain the interaction between the basic building blocks of a communication system instead of spending time on each individual building block. Diving into details without seeing the big picture often leads to a loss of student concentration. On the other hand, starting from the very basics motivates students to grow a sense of understanding and a gradual trust for the lecturer. Later, this will enable the teacher to dig into broader concepts such as modulation and coding concepts and easily move on to the new material with confidence. Students will be able to see the course framework with broader perspective while developing their background. It is true that not every student will feel the same excitement and therefore show the same amount of willingness to learn about these details. Therefore, the audience should not be given the impression that they need a solid background about the material. The teacher should always reflect the passion for learning as if he is learning the material for the first time with his fellow students. This will not only motivate the students for more questions, but also they will feel ambitious for learning. The teacher must also have a solid background as well as a strong impression in the eyes of the students so that they will never question about how knowledgeable the teacher is.

In discussion and problem sessions, students learn how to work together in order to explore the details of the presented material in formal lecture hours. Many questions arise during discussion sessions and students learn to figure out the answers to those questions, maybe through using

Date: Feb. 10, 2014.

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some hints. Hints are almost always useful to force students to go through the thought process for the answer. In my own experience, teaching the material is one of the best ways of the learning process. For example, the group discussion leader identifies the students in the group who are able to answer the questions correctly. Next, those students might be given the chance to explain the way they obtain the answer for their friends in the same discussion group. This will lead to a self confidence to develop new tools to work through a more general problem and saves students from memorizing the answers. In the first few discussion sessions, students may feel timid about asking too many questions. It is the lecturer's responsibility to make sure that the discussion leader has the ability to stimulate conversations so that the discussions progress on tangents rather than a linear narrative. It is also of crucial importance to inquire about student's name or a piece of information about his background or interests. In my opinion, calling a student using his name shows that the teacher is excited about the class, interested in knowing the students, and is more than willing to help them. It is also very useful to invite students to the office and prepare the warmest conditions for them to feel comfortable and ask as many questions as needed.

In the past, I have been lecturing and as well as performing the problem sessions together in many different occasions while i was a graduate student in University of California, San Diego (UCSD) and a researcher in Quantum Corporation. Primarily inspired from my advisors, Prof. Pamela Cosman and Prof. Laurence Milstein in particular, who has received an Academic Senate 1999 UCSD Distinguished Teaching Award, I decided to volunteer and apply for various teaching assistant positions. I have been lucky enough to work as the teaching assistant of several classes during my graduate studies. I have found the opportunity to enhance my experience with students and improve my teaching abilities using interesting methods to boost students' participation. For example, before the final exam of "Fundamentals of Electric Circuits" (a core sophomore level class in the department of Computer science), I have prepared and set up new review sessions in order to help students get a flavor of the questions that possibly may appear in the exam. Our goal was to make sure that students are ready to apply their accumulated knowledge to final exam questions as well as to the real life problems where their answers maybe useful. In those sessions, when the students have hard time, it was then my responsibility to provide clues or lecturing that will put them to the right trajectory. Also, I have been a teaching assistant for graduate level courses such as "Digital Communications" in which I have organized office lectures to help professional students develop a feel of research and a motivation for innovations. Their aspiration for research has been a motivation for me to offer newer classes. For example, in order to meet the rising trends of today's technology, I believe it might be interesting to develop graduate level courses about coding&reliability theory, imaging and associated algorithm developments as well as their simulation using parallel processing tools such as Graphical Processing Units (GPUs). Novel and efficient algorithms are of interest to not just the academia but also the industry together which can generate the future technology. An instance of this I have experienced in Quantum Corporation, where i was lectured about coding theory and reliability fundamentals in 2013. For more information, please see [1].

In all of my experiences, I enjoyed to see the clear flashing light in students' eyes while they try to find a workaround for the completion of a problem. It is an amazing feeling to watch them grow their interest and ask more about the subject to the extent that their questions begin inspiring me to think about more interesting topics. In essence, my enthusiasm for teaching translates into an appropriate method of instruction, while students' enthusiasm to learn translates into a quest for achieving their educational goals, but at the same time an entertainment opportunity for both sides that we will enjoy during this process.

REFERENCES

- [1] Suayb S. Arslan, Teaching/Articles, Available Online: <http://suaybarslan.com/blogs.html>