

Teaching Statement

Assane Lo

Introduction. My personal involvement in teaching at a formal level started in 1999 when I entered the “Ecole Normal Superieur” in Dakar. I received intensive teaching training which has contributed to my pedagogical skill and my enthusiasm for teaching. I also have to mention the impact several teachers have had in my life. These teachers were caring, personable, and enthusiastic. Being in their class gave me the opportunity to not only learn the material in question, but, more importantly, to observe and learn the techniques they used to transmit their knowledge. Now that I am an instructor, I strive to incorporate these characteristics into my teaching.

I believe that good teaching is a product of **preparation, effort, technique**. Also there are issues of **attitude, patience** and **respect**.

Preparation, effort, and technique. Before I walk into a classroom, I make sure that I am confident enough to answer questions and be able to modify the lecture to suit circumstances. I put effort in speaking and writing clearly, and I have a good blackboard technique. My objective when I walk into a classroom is to deliver the lecture as clearly and effectively as possible. I introduce and illustrate concepts through examples to help the students fix the ideas. Students learn in many different ways. It is my responsibility to find a balance between various methods of teaching, and to adapt them to the student’s learning style. For this I combine discussions and group activities, and I get students to go to the blackboard when appropriate.

Before I introduce a new concept in class, I give the students motivational background to help them relate to the new material. After I introduce the new concept, I illustrate it through a carefully chosen example that will help them understand and fix the ideas related to that new concept.

Good teaching also requires good techniques as well as good time management skills. When I give a lecture, I put effort to cover the scheduled material in the allotted time. I also prepare extra material to fill up extra time. There are many technology resources that can be used to facilitate student’s learning. For instance, using the graphing calculator view screen and calculator-based laboratory attachments, you can help the students graph functions more quickly. This gives them more time to explore other properties of the functions and draw connections between equations and graphs.

When assigning homework, I make sure that the homework is not too long or too short for the amount of time allotted and that it touches on all of the most important topics. I also believe that the homework should drill the students on the material that you want them to learn and the material over which they will be tested. The exam should consequently be based only on the material that the students have seen in class and in the homework. However, I believe that the student’s creativity should also be tested by designing especial handout problems or projects and giving them reasonable time, based on the level of difficulty, to work on them.

I hold regular office hours and meet with students who can’t make it by appointments. Office hours are great opportunities to get to know my students personally as people and

to give them the opportunity to know me as well. I believe that the office hour is a way to step out of your role as instructor and let the student know that you are a person. Office hour may also help you get a feeling for how the class is doing and what problems and concerns have arisen.

Attitude, patience, and respect. I believe that to be a good teacher you must respect yourself and your students. You must want to be a teacher, believe that you are well qualified to do so. A good teacher must treat the student's questions with respect. By showing the students respect and genuine interest, you give them comfort and confidence to ask questions, raise objections, and discuss ideas without fear of making mistakes. This requires a great deal of patience. I endeavor to make my classroom a comfortable environment where student can explore new ideas without fear. The students need to perceive that you care. If they do well on a test congratulate them and celebrate with them. If they do poorly, give them encouragement and advice that could eventually help them in the future.

Specific experience. In addition to being the primary instructor for several undergraduate mathematics courses at the University of Arizona, I had the opportunity to run weekly recitation and review sessions for graduate core courses and advanced undergraduate courses in analysis. I believe that the teaching problems that arise in an advanced course are rather different from those in a lower division course, because the students are more mature. However, the advanced undergraduate students may not have the experience and background in rigorous thinking as the instructor did when he or she was a student. A hard theorem should be suitably motivated with the examples that seem necessary. I believe that extra effort should be made to help advanced undergraduate students in mathematics to be enthusiastic and interested in learning mathematics.

The initiative of having the advanced undergraduate students to work on research projects involving mathematical modeling is a way to keep them interested by showing them the usefulness of mathematics in solving problems from other disciplines. Being a mentor for the mathematical **modeling** class at the University of Arizona gave me the opportunity to get involved in **undergraduate research** and help the students in my team to learn to model real life phenomena with mathematical symbols.

I also got involved in the mathematical **orientation** of the freshmen students at the University of Arizona. As a member of the teaching team for the Pathways program at the University of Arizona, my duties included helping the newly graduated high school students to update their mathematical knowledge through practice problem solving sessions, this helped them gain confidence.

Conclusion. Mathematics has deep and stunning applications, but the student cannot begin to appreciate them until he has mastered a large number of the preliminary steps. Our job as instructors is to provide those steps and to encourage the student to stick to them and to spend a proper amount of time on each. We set a pace for the students, teach the students to read mathematics, and help them to become engaged in the learning process.