

TEACHING PHILOSOPHY

My philosophy of teaching has been heavily influenced by teachers who have impacted my life. Upon reflection, I have realized that these teachers demonstrated four essential principles that have become the core of my teaching philosophy. These four principles have not changed, and in fact I have come to believe them even more deeply, since I started teaching at the University of Florida nine years ago.

1) Effective teachers take responsibility for their students' learning.

The secret to being a successful teacher is . . . to accept in a very personal way the responsibility for each student's success or failure. Those teachers who do take personal responsibility for their students' successes and failure . . . produce higher achieving students.

— Shirley M. Hufstедler, former U.S. Secretary of Education

Imagine if Tim Tebow's only concern as the quarterback of the University of Florida football team was with throwing passes and not with whether or not they were received. He would have little chance of being considered for the Heisman Trophy. It is tempting to approach teaching from the same perspective, that is, as merely "passing" information. However, true teaching has not occurred unless the pass has been both thrown and received. This view does not relieve students of their responsibility, but rather it extends my responsibility as an instructor to understanding how best to motivate students and stimulate their learning. At times, this principle has meant presenting lecture material a second time, but from a different perspective, when it was clear that students were having difficulty grasping the concepts. At other times, this principle has meant calling individual students into my office to discuss why they were having difficulty in my course and what we both could do about it.

2) Effective teachers make their students active participants in the learning process.

Knowledge cannot be passed like a material substance from one mind to another. . . . Ideas must be rethought, experience must be re-experienced.

— John Milton Gregory, *The Seven Laws of Teaching*

There are three primary avenues for learning: hearing, seeing, and doing. Most university courses employ just the first two, but only the third leverages the direct correlation between involvement and learning. Research studies have shown that "active learning," where students become actively involved in the learning process, significantly increases the ability of students to learn new material. In practice, active learning can take a variety of forms, depending on the class material and class size. In smaller classes, I like to break students up into teams and give them questions on the course material in a "game show" format, with the winning team receiving a small prize (usually candy). In larger classes, I have small groups of students work on directed mini-problems to force them to interact with the lecture material and identify concepts that are still confusing. Regardless of class size, I almost always pose a "Question of the Day" to help students see the value of the material to be covered that day and to give them the big picture perspective for understanding that material.

3) Effective teachers are continual learners.

I would rather have my students drink from a running stream than from a stagnant pool.

— an unknown teacher

One of the great challenges of teaching is how to make old material new. The only way I know to do this is by being a continual learner. As long as I am growing, my teaching will be fresh, since I will have fresh perspectives to bring to it. In contrast, if I am not growing, then I will not have enthusiasm for the material, and my students will not either. In an academic setting, one of the best ways to be a continual learner is through research. Research gives the teacher the opportunity to make new discoveries, and discovery keeps the learning process alive for the teacher as well as the student. I have found that bringing my research into the classroom wherever possible has significantly increased the interest of my students in my course material. For example, in the first lecture of a large undergraduate course I teach, I present animations of computational walking models that my lab has used to develop a new treatment for knee

osteoarthritis. I point out that creating these computer simulations required using almost every concept that we will cover in the course.

4) Effective teachers care about their students.

Teachers impact more by their character and commitment than by their communication.

— Bruce H. Wilkinson, *The 7 Laws of the Learner*

Most of us have had at least one teacher who knew the course material well but showed little interest in his students. In my opinion, such an attitude misses a teacher's broader responsibility - to teach students how to think and to prepare them for life after graduation. It is easier to produce students who can answer exam questions than it is to produce students who can think independently and critically. Effective teaching extends beyond the course material into the broader intellectual and personal development of the student. As an instructor at the University of Florida, it has been my privilege and joy to counsel students in my courses on academic, professional, and personal issues. I have had numerous discussions with students in my courses on how graduate school admission and funding works. As one of the few professors in my department who worked in industry before pursuing a faculty position, I have also provided many students with input on the job search process, what to look for in a company, how to prepare for job interviews, and how to negotiate job offers. It is always a pleasure to receive notes from former students thanking me not only for the material they learned in my course but also for the additional assistance I was able to provide on broader issues.