Teaching Philosophy
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I have dedicated much of my professional life to becoming an effective educator. After years of practice, reflection and study I have come to a few considered opinions about what principles underlie effective teaching:

• The primary role of an effective teacher is serving his students.
  
  o As an outgrowth of my personal ethic, I have a responsibility to serve my student, because they are my fellow human being, and because I am responsible in part for their education.

  o I resolve to maintain a “servant’s heart,” to humbly discharge my responsibilities to my students with a cheerful and generous spirit.

• Truth is essential.

  o I am persuaded that there is an objective reality that can be known, albeit, imperfectly. Science and its methodology are valuable tools in attaining reliable knowledge about the world and the way it works. I subscribe to an epistemology called “Critical Realism.” As a teacher, therefore, I attempt to be faithful to the truth as I see it, striving to be aware of the reasons for my convictions and aware of my limitations of knowledge. I encourage my students to seek the facts, the truth, the reality of experience and to ask questions of reality that will establish the validity of each hypothesis.

  o I resolve to be truthful, honest and open to examine critically other positions not my own, and in turn to be ready to share the reasons for my persuasions.

• Each student is intrinsically valuable.

  o Whatever a person’s aptitude or accomplishment or pedigree or for that matter, failure and disappointment, he or she has worth and is worthy of my respect as a fellow human being and as a seeker after knowledge.

  o Therefore, I resolve to treat each student with dignity and respect, giving them my best effort, wisely treating them with kindness and understanding as I would like to be treated.

• The great teacher is characterized by insight and the ability to communicate effectively to his students the facts, the concepts and the skills of his discipline.
- Effective teachers communicate complicated and subtle concepts with clarity and simplicity. They have found the means of making the almost incomprehensible accessible.

- *I resolve to reflect deeply on my discipline with the goal of articulating its profound subtleties with precision and clarity.*

- **“Without learning no teaching has occurred, only talking.”** (attributed to Tom Angelo)

  - I now begin from the outset to think of what will produce those thoughts and mental states in my students that will result in their most effective learning. If my students do not learn, then I have not been effective in instructing them.

  - *Therefore, I resolve ever to seek and to employ better means of instruction, assessing the effectiveness of my practice and adapting to the cognitive needs of the various student populations.*

- **A teacher is a mental trainer, an intellectual coach, a cerebral guide not merely a purveyor of information.**

  - Using every technique available to me, I attempt to motivate the student, engaging his or her mind, and inviting whole-hearted participation in activities that I know from experience and research will produce learning. It is, however, the student’s responsibility to use the tools that I provide to construct his or her own knowledge, notwithstanding the previous principle. Ours is a partnership of learning. We must become a team. As the captain, I must lead and inspire them to follow.

  - *I resolve to motivate, to guide, and to assess their learning to produce both lasting knowledge and life-long self-teaching behaviors.*

- **Teaching requires integrity and moral courage.**

  - There are student populations that are more challenging than others; for example, courses required of resentful students that lie outside of their interests do not generally produce highly favorable course evaluations. An instructor of such a class must exhibit integrity and avoid allowing the prospect of potential student dissatisfaction to cloud his judgment.

  - *I resolve to be courageous, ethical, fair and professional in my execution of my responsibilities, even in the face of student recalcitrance. I will attempt to maintain appropriate expectations while encouraging the student to his/her maximal achievement.*
• Each student is unique and rarely does he or she think or learn as I do.

  o University professors often forget or never realize in the first place how different from most people they are. This is understandable since only those with a passion and aptitude for the subject pursue advanced degrees. Thus, I must remember or imagine where the stumbling blocks might be; I must observe what misconceptions students bring to my course that will inhibit their learning; I must use all the sensory modalities I can to communicate and inculcate the information of my curriculum.

  o I resolve to use the tools available to me—pre-tests, in-class assessments, pedagogical research, student course evaluations—to peer into the thinking of my students and to devise ways of communicating to their understanding.

• Students come to every subject with pre-existing mental constructs.

  o Nearly everyone engages a subject with some prior conception of it. Often their mental construct is uncritical, illogical or just plain wrong, i.e. “contrary to the facts on the ground.” To dislodge such constructs is often a difficult task that is rarely accomplished by simply lecturing to a student. Learning will be impeded until erroneous “knowledge” has been replaced with truth.

  o I resolve to overturn and replace mis-information and “false knowledge” by use of every technique available to me, including critical thinking, meta-cognition, prediction and experimentation, and cognitive dissonance.

• The effective teacher must also be a perpetual student himself.

  o Teaching by example is very effective at instructing students; by modeling a style of perpetual learning and an affect of enthusiasm one can communicate what is (almost) ineffable, most difficult to articulate. I want my students to catch fire about physics and its elegant and powerful description of reality. I want them not to stop learning when they leave my class. I want my course to be live-altering.

  o I resolve to search out and create new knowledge both in my discipline and in methods of instruction.

• Everything in the curriculum, presentation and assessment should have a reason to be there with a legitimate educational goal or purpose behind it.

  o Typically in a three semester hour course we have only from approximately 2100 to 2400 contact minutes of instruction (15 weeks x 50 minutes/session x 3 sessions/week or 15 weeks x 80 minutes x 2 sessions/week). Every minute is precious, both in opportunity and in expense. Indeed, in my class of 300, our
meetings represent an aggregated expenditure of approximately **$120 per minute** in tuition and fees by the students.

- **Therefore, I resolve to provide meaningful instruction from start to finish, not wasting a minute, not encroaching on another instructor’s time, connecting everything—including apparently incidental humor and peregrinations—in an intentional way to enhance the learning.**

- **Humans are social animals; consequently, teaching and learning are social activities.**
  - I am learning that individuals rarely learn best in isolation. Indeed, the current population of American students is one of the most socialized in history. Even in a large lecture-hall setting it is imperative that I foster a sense of a learning community where individuals can relate to one another in groups in a wholesome and constructive way. I am presently exploring the use of in-class activities and out-of-class virtual connectivity to accomplish this goal.

  - **I resolve to create a genuine, healthy and vibrant learning community among my students, to be available to each one (at least electronically) and foster among the students a sense of connectedness and shared enterprise.**

- **Instructors can help one another improve in a community of excellent practice.**
  - I have learned from other teachers and colleagues over the years and I share readily what I have learned with willing collaborators. Effective instruction is a craft that can be learned but rarely is perfected. Consequently, I can also continue to grow and to become more adept at teaching by observation, reflection, conversation, experimental and assessment.

  - **Therefore, I resolve to share with peers and junior colleagues what I have learned and to learn from them; in so doing we will all benefit and create a community of excellence in instruction.**