George Corser

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Teaching Statement

Teaching Philosophy

I call my approach to teaching, ASK, for **attitude, skills and knowledge**. The term implies interactive questioning, by the teacher of the student, and vice versa. The ASK method depends on clarifying feelings and motivations of both teacher and student before presenting abstract concepts. As Teddy Roosevelt put it, "No one cares how much you know until they know how much you care."

1. Attitude. Attitude comes first. It cannot be taught using words. It must be demonstrated by my own actions. Student engagement follows teacher engagement. Do I love what I am doing? Am I digging deeply into subject matter? Am I open-minded to different methods, ruthlessly honest and self-critical, demonstrating to the class by my own actions that I myself have the capacity to challenge my own understandings? Am I a know-it-all, or am I a want-to-learn-it-all? Attitude comes first in my teaching philosophy, and I try to inspire it by living it. I try not to start teaching until I've determined the attitudes of the people I'm supposed to teach. Without a basically good attitude, no teaching will result in learning. Moreover a bad attitude can undermine the best teaching. So, attitude first.

> *"This is my favorite instructor I've had in my educational career. I've never found someone so passionate about the topic, or as passionate about helping others and getting them interested and learning. I've never found someone as laid-back but still firm as George. If you were to ask me to describe my ideal instructor, it would be George. I'm very pleased to have been in the class where George was given the opportunity to teach it. This is my favorite class at OU thus far by a mile." ~One anonymous student evaluation of my class, CIT 448, fall 2012*

2. Skills. Curricula traditionally present theory and fundamental principles before presenting examples and practice problems. I reverse this order. Some teachers may ask, "How can you tell students to attempt problems before you've presented the method to solve those problems?" My response is this: Have you ever sat through a long lecture knowing you could figure things out if you just had an example? People are smart. Engineers especially can infer the theory even if not explicitly stated. And if not, they will have better questions at lecture time if they've tried a few exercises beforehand.

A skills-before-knowledge approach solves another teaching problem: it helps identify where classmates have divergent ability levels. Some people might already know the material. Why make those people endure unnecessary review? Knowledgeable people usually do not mind additional practice, new problems with interesting twists, but they detest pedantic repetition. If problems are presented early, people who do not know the material will pay better attention when later the theory is presented. Many times students think they know something, but do not. Up front skills exercises prove this fact to the students themselves, achieving better attention at lecture time.

In my experience, most class grades to not exhibit a bell curve. At least initially, they present a two-humped curve. One half of the students get it, other half doesn't. So when I do the skills-before-knowledge technique, I identify people who can help me develop the curricula. In one of my classes the top cluster of students prepared YouTube videos, lesson plans and quizzes for the rest of the students in the class. We effectively updated the textbook. The result: advanced students got to show off, and even learn more deeply because they were teaching, and regular students didn't feel behind because they

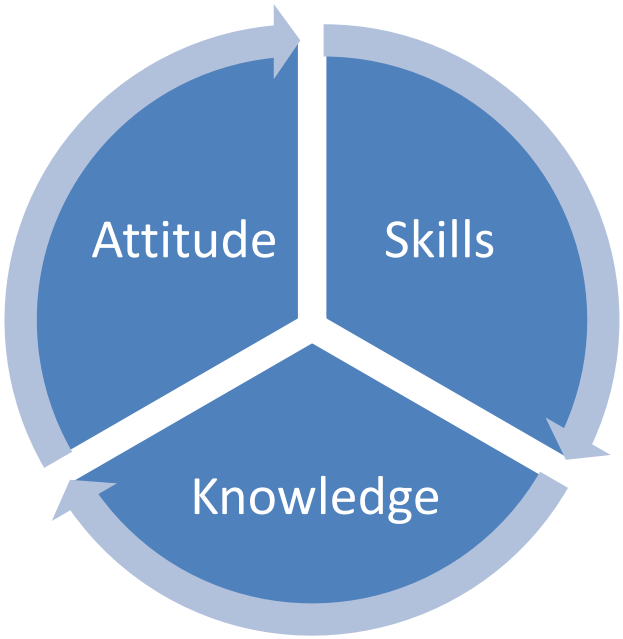
were doing the same basic activities as the advanced students. I think the students felt more respect for one another, too, because instead of competing for grades they were cooperating to learn.

Confucius said, "I hear, I forget. I see, I remember, I do, I understand." Especially for engineering students, doing should precede hearing or seeing. So, skills before knowledge.

3. Knowledge. When I say knowledge, I mean abstract concepts, fundamental principles, usually presented with PowerPoint slides, whiteboard drawings, handouts, etc. I try to present such information after a class's attitude and skills have been established.

I still try to maximize student engagement with as much "doing" as possible. (See demonstration: gcorser.weebly.com/teaching.html.) I try to get people physically involved in learning, in the material being presented. Even during presentations, get them to talk, move around, or write something. I try to make knowledge transfer a participatory exchange. I try to get everyone in the class to talk at least once, and I try to use their names when I talk to them in class. (That really wakes them up.) I try never to ask questions people might get wrong. Once a person answers incorrectly in public he may never talk in class again. The questions to ask should be subjective, like: What is your opinion of this so far? What problems do you see here? Or even, what questions are on your mind at this point?

Education requires thinking, but thinking is not the only requirement. Motivation, feeling, is every bit as much a driver of education as thinking. The Dalai Lama suggested, "When educating the minds of our youth, we must not forget to educate their hearts." I further suggest we address feeling issues before thinking issues. First, motivate students (attitude), with emotional feeling. Second, show them how to do real work (skills), physically feeling the keyboard and mouse. Then, third, reflect on concepts, insights, equations and other abstractions (knowledge). So, knowledge last. But when the "aha" moments of knowledge come, they inspire improved attitude, and the virtuous cycle repeats!



Courses Taught

SVSU

- CIS 255, Client Side Web Development (HTML, CSS, JavaScript, jQuery)
- CIS 355, Server Side Web Development (PHP, MySQL)
- CS 116, Computer Programming I (C++)
- CS 403, Mobile App Development (Android, Java)
- CS 461, Theory of Computation

Oakland University

- CRJ 341, Cyber Crime (Linux/Windows)
- CIT 448, Information Security Practice (Linux/Windows)

ITT Tech

- CS 280, Web Security and Ethics
- IS 3340, Windows Security (IS3340)
- IT 104, Introduction to Programming
- CS 111, Client Side Web Scripting
- IT 219, Programming in Java II
- CS 250, Open Source Programming
- CS 140, Business Concepts for Application Developers

Courses Assisted

Oakland University

- CSE 337, Software Engineering
- CSE 343, Theory of Computation
- CSE 361, Design and Analysis of Algorithms
- CIT 122, Computer Animation
- CSE 120, Introduction to Computers and Programming with Excel
- CIT 349, Advanced System Administration

YouTube Channels

- OaklandCSE: 100+ videos, 400+ subscribers, 100,000+ views
- VanetPrivacy: 105 subscribers, 14,164 views (One video has over 10,000 views)
- George Corser: 29 subscribers, 14,892 views (One video has over 8,000 views)