Statement of Teaching

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Teaching Philosophy

I aim to excel in teaching courses fundamental to Computer Science, such as Computer Architecture, Discrete Mathematics, Logic Design, etc. However, my broader vision is to enable human minds to think analytically. I believe teaching is a novel profession that provides knowledge and wisdom to society, and learning is a process of enlightenment.

Learning is often regarded as a positive change in the student's behavior. I seek to facilitate students' learning on three H's, namely Hand (Psychomotor), Head (Cognitive), and Heart (Affective). Teaching conveys conceptual knowledge through standard methods. It encompasses syllabus design, lesson planning, classroom management, content development, and devising appropriate assessments to ensure learning happens. The role of a teacher is to facilitate the complex and dynamic human learning process. Teaching and learning can occur in a self-evolving feedback fashion.

While designing the syllabus for a particular course, I follow the backward course design strategy-I start with an end goal in my mind. The syllabus clearly articulates my expectations and what the students should expect to achieve from the course. Access to information has been so easy and pervasive that we should only load students with a little amount of information. It's the best time we emphasize the higher cognitive domain of Bloom's Taxonomy, like critical thinking. My learning outcomes exclusively focus on students' development of analytical ability. Being a student of exact science (engineering), I design course outcomes that involve students' participation in collaborative projects, which leads to the highest level of cognitive domain: creation. For each course, I teach, learning outcomes for each lesson clearly specify the audience, behavior, condition, and degree of the assessment.

My principal concern for each class is planning a lesson and ensuring the plan is executed accordingly. As a student, I learned best through active learning strategies. From the beginning of the course, I have worked towards building an engaging community in the class. I facilitate maintaining a rapport in the class. Students participate in various classroom activities like concept mapping, flash paper, problem-based learning, etc. Nowadays, the course could be more interactive using services like i-clickers, QR code scanners, flash/popup quizzes, etc. I ensure my students read assigned materials and use class time primarily for logical reasoning, connecting with the existing knowledge, open discussion, and formative assessments. A general approach I follow for each class is called the RPVRP method. It stands for reviewing today's lecture, previewing the last lesson, viewing today's class, reviewing today's lesson, and previewing tomorrow's class. I always remember to ask the students the muddiest point of that class to ensure the essential materials are appropriately delivered. In an online course, I will be available to answer students and follow the best practices for online teachings, such as ensuring students know the expectations, providing maximum availability, and building a sense of connectivity among students and teachers.

As a teacher or learning facilitator, feedbacks are invaluable to me. Students feedbacks are most effective for a class if taken some time between the halfway of the course: mid-term feedback. Therefore, I collect mid-term feedback to evaluate my teaching and adjust as necessary. I always welcome discussion regarding the course delivery and intend to improve incrementally. My teaching activity amalgamates traditional and online teaching resources to bring the best of both worlds. I am open to enhancing my skills as an educator using peer review and reflective portfolio and attending workshops on teaching.

Teaching Experience

I had the opportunity to teach an undergraduate course twice here at the University of South Florida. I taught Computer Architecture (CDA 4205) in the summer of 2022 and 2019. This course aims to

give core knowledge about Instruction Set (MIPS 32/RISC-V) and modern computing architectures. As an instructor, I delivered lectures for a 2.5 hrs session twice a week. There was a SMART (Specific, Measurable, Achievable, Relevant, Time-bound) end goal for every class for me and my students. I have designed both summative and formative assessments for this course. I led weekly discussion sessions, assisted students during office hours, and provided and took timely feedback. My teaching evaluation score is higher in many sections than average in the College of Engineering at USF. I have also worked on exam proctoring, exam/assignment grading, grade submission etc; as a teaching assistant.

A recent (2022) assessment of my teaching can be provided upon request.

Course Development Plan

I worked on course material development, such as lecture slides, projects, and assignments for the courses I taught. I plan to continue improving the course contents so that students are always up to date with the industry and academia. Furthermore, considering the immense demand, I want to introduce new courses on the security aspects of cyber-physical systems. From mobile to edge devices, security threats are pervasive. Therefore, I want to develop a course that integrates system-level security measures with application-level threat mitigation schemes.