

Teaching with open pedagogy using technology.

My teaching and learning delivery methods are based on organizing my students' learning experiences using specific technology and facilities inside and outside the classroom.

In the classroom, as an enhancement to my method of instruction I am using real time coding with repl.it instead of PowerPoint. My account is public, students can access all codes I have written, anytime. Students are invited to remix current codes and create their own new code individually or collectively through collaboration with other students. At the end of each session, I am using kahoot's quizzes to test the knowledge of a topic just explained and to find out which topic is very important/difficult. Sometimes, I use pop quizzes to assess student knowledge and to diversify my teaching methodology to a more interactive and engaging classroom. My definition of open pedagogy thrives outside the classroom, and it relies on four connecting ideas:

1-engaging with students as creators of information: **CoogTube**

2- applying experiential learning in which students demonstrate understanding through creation: **Tiny Learning videos (TLV)**

3- inviting students to be part of the teaching process/participating in the co-creation of knowledge in a real time virtual classroom: **Fun Fridays**

4- utilizing digital tools to connect across time and space: open **Competitions** Kattis and Kaggle, self-paced learning using digital story telling-**Shecodes**, and interactive **panel discussions**.

I have been committed to learner-driven education. I selected a process of shaping my teaching approaches to enable students to contribute to their own learning by creating and sharing learning content. The purpose is dual as to enforce self-learning and to improve future generations of learners. Students create worked examples that provide other students with step-by-step templates of how-to code problems. My ideas of open pedagogy are implemented with technology as:

1-Coogtube: Create a repository (in ROAR at the UH library) of tutorial videos created by students for a particular topic such as teaching specific skills and providing worked examples of coding in C++. Students create their own videos to teach and inform other students. My goal is to leverage their excitement and put it to good academic use.

2-Tiny learning videos (TLV) on Kahoot: Students are creating quiz questions, explaining how principles are studied in class by asking questions in Kahoot followed by a tiny learning video (TLV) to explain the answer. TLV can be used as games to be played by future generations of learners to help them prepare for, or deepen their learning on, data structure topics.

3-Fun Fridays is an Interactive learning experience using virtual classroom where students attend a Fun Friday zoom call to get instructions about a specific problem where students solve the problem with a live assistance regarding implementation and/or for any problem they might encounter. The deliverable is a YouTube video link sent at the end of the session.

4-Competitions: Having a fair balance between allowing students to play to their strengths and to improve upon their weaknesses. Competitions push students to study more efficiently and, through this engagement, help with long-term learning and retention.

5-SheCodes I developed a website <https://shecodes-shetellsstories.com/> with the aim of motivating and enabling young adults to learn coding through digital storytelling.

6-Tech Resilience mentorship program: In collaboration with Microsoft, I initiated a Tech Resilience mentorship program. A series of nine interactive panel discussions to reflect on the necessary non-tech skills needed to ensure a successful and enjoyable study journey.

<https://learn.microsoft.com/en-us/training/paths/tech-resilience/> (e.g. [What are fixed and growth mindsets? - Training | Microsoft Learn](#))