

Project overview

Project Background

In traditional teaching, people tend to care about what the teacher is teaching, what knowledge should be prepared for today or tomorrow, what students have learned, how many test scores are. However, learning should not be limited to these concepts. Creative Learning Units is a framework used to demonstrate the relationship between teachers and students in learning. It explores what effects one person has on another person during the teaching process and should provide a method in extending and analyzing the relationship between teachers and learners/students.

Backward/Forward Design

There are two traditional methodologies to create a learning unit: backward design and forward design. The establishment of Learning Objectives (a curriculum) is described as backward design. It has three stages: (1) identifying desired results, (2) determining acceptable evidence, and (3) planning learning experiences and instruction based on that evidence to reach the desired goal. Student inquiry is forward design. It also has three stages: (1) tuning in, (2) finding out and sorting out, and (3) reflection and action. These stages are instructional for teachers but refer chiefly to the actions of students. We should consider teacher and student as two occupations of relevance, which interact to bring us the third dimension to the curriculum (what) and pedagogy (how). Upon realizing the value of combining the concepts of what is to be taught/learned, how those things will be taught/learned, and who is involved within this process, we can expand traditional learning into a creative learning unit framework.

In simpler terms: currently, teachers will identify the end-goals of what a student should know by the end of a learning unit/course and construct a curriculum to be used as a plan in how the students should reach that end-goal.

Creative Learning Unit

In adopting the creative learning unit framework, teachers should keep in mind the students' identity when designing their curriculums and identifying end-goals. For example, any learning unit content that teaches people to become software engineers would differ between 20-year-old women and 40-year-old men. Although the end-goal will require similar knowledge for both identities, these two groups should have separate paths in reaching the end goal for what is most efficient in moulding them into high-quality software engineers. Such identity groups could be separated by race, age, experience, gender, or other factors to provide a learning experience best matched for the student.

Project Description

The purpose of this project is to design a web interface that allows teachers to design learning units according to the three dimensions of "what", "how" and "who". Currently, designing these learning units involves teachers manually creating word documents that contain information about the learning unit and how the unit should be taught. Upon successfully creating the project's web interface, teachers will create such creative learning units on a web browser without external assistance or training. These learning units should be self-contained pieces of information (including but not limited to text, audio, video, reference) in guiding teachers. Teachers then can share their recently created learning units with other teachers online and access other learning units to create a community experience for the new Creative Learning Units framework.

System-As-Is & System-To-Be

System-As-Is	System-To-Be
Teachers need to fill in the Word documents manually	A user-friendly web interface that facilitates the creation of learning units
No interaction between teachers	Teachers can create repositories and share them with others
No assistance is provided	Useful information such as text/audio/video/reference will be prompted during the creation of learning units to assist teachers

Project Scope

A web interface will be created, which integrates the concept of the 3-dimensional model and include the following functionalities:

- A platform that allows teachers to create learning units
- Embedded useful tools to help/facilitate the creation of learning units
- The ability to create repositories for learning units
- The ability for teachers to share learning units with others

Additionally, some non-mandatory features are included but lie outside of the core project scope:

- The ability for teachers to talk to/message each other and discuss learning units
- The ability for teachers to monetize their learning unit creation