

Abstract

Online course: A Modern Trend of Teaching and Learning

As academics we have dual responsibilities—doing research and teaching. We know how difficult, if not impossible, it is to do the one to our fullest satisfaction without compromising with the other. My presentation is focused on teaching—how we can make teaching (more) effective and at the same time make more time and energy available for research. Thanks to modern internet technology, a new online avenue of teaching and learning shows promising potential to reach these goals. Online pedagogical methodologies are now globally either complementing or replacing in-class teaching.

An **online course** is basically a course that is offered in part or wholly via the internet. The most important infrastructural component of online course is the LMS (**L**earning **M**anagement **S**ystem) software. The LMS is the online environment which enables the learning to happen. It is the platform where the **teacher creates a course** and the students can interact with the course content in a dynamic manner. Online courses includes means for the students to contact their professor and access most course materials, including online readings, videos, audio files and other resources. This is also where students go to participate in discussion boards to exchange views with fellow classmates, and the instructor can monitor and comment on their discussion. Depending on the versatility of LMS, students can also email and instant message their classmates and instructors.

My objective is to describe how an LMS can be used to create a course. Currently, many Learning Management Systems are available with varying capabilities, costs, and conveniences; and research is ongoing in developing more with varying features. In this presentation, as a case study, I will describe one unique LMS, with brand name **Drona** (<http://drona.netimaginelearning.com/>) which contains an LCMS (**L**earning **C**ontent **M**anagement **S**ystem) that carries several unique user-friendly features as demanded by the world-wide clientele.

Animation is an elegant component of online courses especially to illustrate and explain complex functions and abstract concepts of a phenomenon. However, creating a ‘real-life’ animation with sufficient details of structure and function is a highly-skilled job. In this presentation, I will also show an animation of a biological molecular machine (DNA replication in eukaryotic cells) to demonstrate how the potential of online courses can be harnessed to illustrate highly complex biological phenomena in a dynamic and three-dimensional matter overcoming the barrier of distance.