

Fusion Teaching: Utilizing Course Management Technology to Deliver a Multimodal Pedagogy

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Fusion Teaching is the merging of several pedagogies into a unified whole that will result in higher levels of student engagement, satisfaction, and learning. Class size and diversity has been increasing. Therefore, developing an efficient teaching strategy is essential since student age, gender, ethnicity, personality, and learning style vary within the same class. Course management technology allows instructors to implement a variety of pedagogies that will directly involve students in learning that is more exciting and effective.

Course management systems have become an increasingly important mechanism to deliver coursework in higher education. Today most course management systems include course content organization, presentation, communication, assessment and grade book tools along with other functions to manage class materials and activities. We believe that course management systems have been underutilized. By moving more assignments to an asynchronous environment we are able to incorporate a greater variety of pedagogical modes while releasing in-class time to active learning activities. The use of multiple pedagogies online may exceed what is pedagogically possible in the classroom alone and may go beyond what is typically familiar to some instructors.

We have implemented Fusion Teaching in our Principles of Economics courses by pulling together narrated PowerPoint slides, video cases, discussion boards, hyperlinked texts, audio lectures, pre and post testing, short answer questions, essay questions, objective testing, breaking news, RSS feeds, Web links, and interactive graphs into a range of graded assignments available through the course management system. As a result, students regularly spend more time on the coursework, are more engaged with various learning activities, and comprehend the material more thoroughly. Moreover, the level of communication increases not only with the instructor but also among the students. Consequently, student satisfaction and learning improves.

Fusion Teaching transforms the way learning occurs as well as allows students to connect with pedagogies that are helpful to their understanding. The evidence reveals that when students are actively involved in a self-driven learning project, they learn more and remember it longer than when they are passively sitting and listening. Alternatively, the instructor may deal less with routine inquiries becoming more of a supervisor of the learning process rather than a source of information. Furthermore, the instructor may devote more class time to apply economics to real life. We have developed a series of active learning activities to connect economics to everyday decisions and give students a hands-on experience. One can only look at the evolution of computer games to realize the potential for engaging students through multimodal pedagogies in a digital environment.

Fusion Teaching is based on evidence. Students enrolled in fusion taught classes spend on average 6 hours a week with the required online course components in a typical three semester hour class that also meets three hours a week for lecture-presentation. The number of questions that can be used to assess student performance have risen from 300 in a paper and pencil in-class testing environment to approximately 2,100 in a digital environment. Student comprehension has increased with more than 80 percent of the class correctly answering questions covering concepts like: elasticity, equilibrium, economic welfare, international trade and finance, costs of production, externalities, marginal costs and benefits, and savings and investment among some of the concepts tested.

Therefore, by devoting less time to lecturing we more fully engage students during the class period, deepening their knowledge while provoking more interest and desire to understand important and complex economic issues. Student satisfaction as measured by student course evaluation comments as well as numerical scores has improved for professors using the fusion method.

The poster will be delivered in billboard format, one poster sheet, probably three foot by five foot (space permitting), and designed using graphic visual aids to attract and engage participants. A reduced version of the poster will be available as a handout and will include suggestions for applying the Fusion Teaching model within a course. The poster will be organized into the following sections:

- Definition of Fusion Teaching
- Research on the use of digital technology for course delivery within higher education
- Connecting pedagogical modes with a course management system
- Adapting Principles of Economics to the Fusion Teaching model
- Quantitative and qualitative evidence that the Fusion Teaching model enhances and optimizes student engagement, satisfaction, and learning given increasing class size and student diversity
- Next Steps: How to implement Fusion Teaching and overcome barriers

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