



## Building an Online Course through Social Networking and User-Contributed Content

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### Introduction

Before we have online courses, teachers deliver and share their ideas and knowledge with student in classroom. The communication channel is the most effective, most direct, face to face communication. A teacher's knowledge, experiences, planning efforts and personality all go directly into the "moment of truth." The effectiveness of student learning is achieved through a series of lectures, assignments, and interactions over a semester. Nowadays, online learning has becoming a part of the overall portfolio of educational choices. Teacher's role has changed from a lecturer to a facilitator, a project managers, and a content editor. Many success stories about online courses and programs have affirmed the effectiveness of online learning.

Recently, the applications of Internet in education have entered a proliferate stage. Many web 2.0 technologies are used sporadically for education purpose. Podcast, blogs, wiki, and many social network applications are adopted by educator everywhere to improve the learning experience. The overall result is a trend to reshape online teacher's role from the earlier mentioned facilitator to a connector and a cheerleader in a social network.

There are many success stories about using various web 2.0 technologies in online courses. Obviously, web 2.0 technologies will have its role in the future of educaiton. However, it is hard to find a unified theory guiding us to use these technologies for course design. In fact, with the pace of technology evolving today, it maybe impossible to derive such a theory. Thretherefore, when we are using any new technology in the course design, the best strategies is following certain best practices and making adjustments along the way of students' learning process.

This paper describes an online course design and teaching experience in an MIS minor course delivered in the Spring 2008 semester. This course is usually taken as the second MIS course after an required introduction course in the business school. Students taking this course are from various diciplines such as marketing, accounting, and management. They usually do not have fomal training in information technologies. The topics covered in this courses are indepth technology management issues. Many Web 2.0 technologies are deployed in the pedogogy. With the ideas of emphasizing socialization in mind, these technologies are applied based on the social constrictivism's recommendation in course design. Students' responses, and my personal experiences are all documented in this paper and hope to inspire educators in other discuplines.

### What does the literature says?

The phenomenon of using web 2.0 technology is evident by the number of educational conferences discussing Web 2.0 technologies. Campus Technology 08 even use Web 2.0 as the main theme to emphasize the importance of web 2.0 in education. The question is how should we design web 2.0 in

our online courses. Is there any differences between online teaching technologies that we have been using for a long time and the new web 2.0 technologies?

Long ago, at the dawn of World Wide Web, Stan Davis and John Botkin in their book „The Monster Under the Bed“ tried to argue a methodological changes for the education in the United State. Let me cite one paragraph from their book about how they perceive the role of a teachers in the new educational paradigm (Davis & Botkin, 1994).

*“The industrial approach to education ... [made] teachers the actors and the students the passive recipients. In contrast, the emerging new model [of business-led education] takes the market perspective by making students the active players. The active focus will shift from the provider to the user, from the educat-ors (teachers) to learn-ors (students), and the educating act will reside increasingly in the active learner, rather than the teacher-manager. In the new learning marketplace, customers, employees, and students are all active learners or, even more accurately, interactive learners.”*

For many years, online learning community has advocate that teacher should play an facilitator role in online classroom. It seems more appropriate to say that online teacher should interact with students in like a elderly friend. Here, interaction is the keywords. Both constructivism learning theory and recent research about knowledge management all point to this direction (Doolittle, 1999; Alivi & Leidner, 2001).

According to Dr. Doolittle, if you want to design an online course based on constructivism, there are a list of eight principles (Doolittle, 1999). Let me list these principles here.

1. Learning should take place in authentic and real-world environments.
2. Learning should involve social negotiation and mediation.
3. Content and Skills should be made relevant to the learner.
4. Content and skills should be understood within the framework of the learner’s prior knowledge.
5. Students should be assessed formatively, serving to inform future learning experiences.
6. Students should be encouraged to become self-regulatory, self-mediated, and self aware.
7. Teachers serve primarily as guides and facilitators of learning, not instructors.
8. Teachers should provide for and encourage multiple perspectives and representations of content.

Of course, principles are all look rational. However, implementing these principle is another story. Interaction is no doubt a good thing. Making timely and relevant interaction does require a lot of efforts. Many teachers are afraid of valuable time being wasted during the interaction process. To remedy this potential worries, Sloan-C best practices have suggested the following (Pelz, 2004).

1. Student-led discussion
2. Student find and discuss web-resources
3. Students help each other learn

In other words, a good online pedagogy relies heavily on students. Students should do most of the work, including discovering and organizing course contents. Just like an old Chinese proverb says about teaching: Teaching and learning should grow together. Instructor in an online environment should grow together with students and absorb contents discovered by the students. Another important question still need an answer to design an online course based on the constructionism and Sloan-C’s best practices. This question is why would student be willing to give up

their old method of learning and embrace the new role being an proactive learner? The answer may lie in the Community of Inquiry model of online learning (Anderson, Rourke, Garrison, & Archer, 2001). In the community of learning model, student learning requires interactions with three main parties: peers (social presence), contents (cognitive presence), and instructors (Teaching Presence). Based on this line of thinking Instructors in this model need to do at least three things: Interact with students socially (Setting Climate), Interact with students through instruction (Supporting Discourse), and interact with students by managing contents (Select Content).

The community of inquiry model actually coincide with many web 2.0 concepts as proposed by Tim O'Reilly (O'Reilly, 2005). These web 2.0 concepts include: web as a platform, usercontributed and managed content (the rise of amaturism), collectivism, and searching instead of organizing etc. Based on these generic concepts, I derive the following guidelines to facilitate the web 2.0 pedagogy design.

1. Instructor should socialize with students through web platform.
2. Web platform should be used as the main media for content creation.
3. Web platform should be utilized for content search.
4. Students and professors should work together on the web to engaging in content creation.
5. Formal assessment should be performed to ensure Instructor presences.

## **Pedagogy Design**

The expermented pedagogy is designed based on a 16 week regular semester setting. Technologies used to develop this course including the following.

1. Blackboard: Blackboard is the course management system that students are already familiar with. Student records and sensitive information are kept here.
2. Adobe Captivate: This software packages are mainly used to create tutorial on how to use a particular tool.
3. Elluminate: Elluminate provded an opportunity to interact synchronously with instructor and among students. All Elluminate sessions are recorded. Many technical difficulties are resolved in Elluminate interactions.
4. Podcasts: The most basic student contributed contents are in the format of podcast. Some students even generated Video podcast to enhance their presentations. Also, instructor can use podcast to deliver certain course contents to create „instructor presence“ in the learning process.
5. YouTube and other multimedia social web sites: These web sites are used as the main sources for student to search and organizing contents.
6. Meebo gadget: meebo is a web application integrating most popular Instant Message (IM) applications including MSN, AIM, Yahoo, and Google Chat. The meeb gadget go one step further, it provide an plug-in object that can be inserted to a web site. The targeted web site can be trun into an IM client. In this experiment course, meebo gaget are implemented on instructor's web site. The instructor use this tool to interact with student. Office hours are also supported through this service.
7. Google Tools: Google Documents, Spreadsheet, and Presentations are the main platform
8. Facebook: Facebook is the main social utility used outside the formal Blackboard environment.

Throughout the semester, students are engaging in the following activities: self-reading, discussing, content searching and discovering, content creation, and finally create content through collaboration. In a sixteen week semester, 8 assignments are planned to facilitate and assess student learning. These assignments are summarized in the table below.

Assignment Description	Web 2.0 Technologies
Group discussion: each week, students are divided into groups. Each group is assigned a topic for discussion. Discussions are graded based on a formal grading rubric.	Facebook Group
Video search assignment: students are asked to search on the web for multimedia sources. Their search is limited by a weekly assigned question. For example, students may be asked to search for Sarbanes-Oxley act and try to explain what it is about. Once a video or audio source is identified, they will share these resources with the class through Facebook. Other students are asked to comment on these sources. Both posting and comments are graded. This video search assignment is also used as sources for midterm and final exams.	YouTube, Google Video, Facebook Sharing.
Podcast assignments: Students are asked to generate one episode of podcast per person. Each week, 2 or 3 students will identify a good relevant article relating to the topics being discussed. Then, they will produce a podcast and share the podcast through iTunes U to other students.	Podcast, iTunes U.
Google Document Assignment: Students are given a sample document in PDF format. This document includes texts and pictures. Students, then, are asked to answer their assigned essay questions that are similar in format in Google Documents.	Google Documents Adobe Captivate generated Flash Movie
Google Spreadsheet assignment: This assignment asks students to generate data representation using Google Maps and Motion Chart to create interactive, multimedia presentation inside Google spreadsheet.	Google Spreadsheet, Google Chart, Motion Chart, Google Map.
Test bank compilation assignment: Every week, each student is asked to contribute one question in multiple choice format. These questions are pooled and edited by all students. A large portion of the exam questions is selected from this pool.	Wiki
Google Group Online Presentation Assignment: Students are divided into groups to make an online presentation using Google presentation. In general, the Google Docs environment combined with Google Chat can generate a close to web conference experience for a small group. This is one of the last assignments for this course.	Google Presentation, Audio recording tools, Google Chat.

## Lesson Learned and Conclusions

Students are in general happy and excited in using web 2.0 tools described earlier. I find the following experiences are worth to share with others.

1. All the tools used in this pedagogy design are free.
2. Social utility (Facebook) maintains student-instructor relationship well beyond the limit of a semester. It is possible to maintain long term relationship with students through this method.
3. Professor and students are interact more in a less formal social environment. Some students tend to talk more in this format.

4. Google Docs environment has similar functionalities as Microsoft Sharepoint. It can almost be used as a collaboration tool and project management tool for a project team without other technologies.
5. Podcast generated by students creates the atmosphere of „competition.“ Students were trying to impress their peer by devoting a lot of time generating their podcast.
6. According to students, multimedia content search is the most fun part in this semester. The content shared and critiqued inside facebook make students feel relevant.
7. Students like to have the option of both synchronous and asynchronous communication with instructors. The use of Elluminate office hour, in particular is very welcome. The meebo chatting gadget provides a pleasant surprise for students.
8. Content created in one course can be reused in many other occasion. The preparation efforts can be reduced dramatically.
9. The Google document sharing and publishing function can almost replace Wiki. Students tend to like Google Document compared to other wiki environments.
10. Socializing with students in the Facebook tends to have positive influences (even though there is no data to confirm) on teaching evaluation.

It was anticipated that some students would have technical problem throughout the semester. Surprisingly, the complaint of technology is close to zero. It seems that even non-technical students are comfortable with all these web 2.0

In the web 2.0 world, cost of experimenting is close to zero. The risk for instructor is only the investment of time. So why hesitate, use all these free available tool and make your students as your long-term friends.

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