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Background



The ITEC 830 course in San Francisco State's Instructional Technologies Department has evolved from a multimedia design course to a course in emerging technologies. Dr. Foreman has embraced emerging technologies and social media and teaches students in ITEC 830 applications for social media in instructional design and distance education.

San Francisco State uses a Moodle Learning Management System (LMS) that is branded as iLearn. While it is a wonderful addition and resource, it does not have enough flexibility for a course like 830. Dr. Foreman has tried to adapt the class by adding a Ning wiki and requiring students to set up a Google website and a blog...either on Ning or any other blogging site. She has also had students join Socialtext, a social networking wiki site, Twitter, delicious, and subscribe to RSS feeds.

While these social media resources give the students exposure to new and valuable resources, they also present challenges both to teaching and learning. It is difficult to log on and off different sites and also causes confusion.

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Project Overview



[learning 2.0 mock-up site](#)

My project is to design a Learning Environment for ITEC 830. This project is currently in the mock-up stage. It is slightly interactive because it is a webpage, but this is not the final form for the actual course. It will be a wiki with portals that will open up the learning process to new possibilities. Students and the instructor will be co-creators and all will learn and grow in this rich learning environment.

The learning environment on the left is the first draft. I already have new ideas I want to implement, and will briefly describe what I am envisioning. There will be a place for students to login and a menu that will take students to their personal web pages, to their gmail accounts, to the iLearn LMS, and to a list of learners who are in the course. There will be an instructor panel with a separate login. The instructor will be able to access a wiki where she can take attendance, change the syllabus, and connect to iLearn for grading. There will be a resource area where students can search topics, articles, presentations, reports and references. This will be a "Knowledge Base" that they will be creating. The RSS feed will connect with the Knowledge

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Purpose and Significance



Figure 1: Overview of the Learning Environment

[eLearning Papers](#)

Web 2.0 Learning Environment: Concept, Implementation, Evaluation: Ingo Bles and Marc Rittberger German Institute for International Educational Research

Base. The diagram to the left shows a robust model of a learning wiki. I like the idea of having a message board and will change the “Project Area” to a message board. I like the idea of having Tags and Folksonomy as part of the environment and also having a learning center.

Learners will be able to move seamlessly between portals. They will be actively inspired to develop and implement the learning environment.

“The model of e-learning as being a type of content, produced by publishers, organized and structured into courses, and consumed by students, is turned on its head. Insofar as there is content, it is used rather than read— and is, in any case, more likely to be produced by students than courseware authors. And insofar as there is structure, it is more likely to resemble a language or a conversation rather than a book or a manual.”

[Stephen Downes, E-learning 2.0 article](#)

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Analysis: Review of Research



I started learning about Web2.0 learning environments by visiting edu2.0. I created a course so I could play with the tools and look around. I found this site to be very well organized and also to have wonderful resources on it.

To learn more about learning environments I read some wonderful articles written by Stephen Downes. The article on the last page was posted in [ELearn Magazine](#). Stephen Downes works for the National

Research Council, Institute for Information Technology, in Moncton, New Brunswick, Canada and specializes in online learning, content syndication, and new media. He has a daily newspaper and a website filled with resources called [Stephen's Web](#).

I also read a wonderful paper called [Web 2.0 Learning Environment: Concept, Implementation, Evaluation](#) which describes their vision of a learning wiki (pictured on previous page). There is also a wonderful article called *Storytelling and Web 2.0 Services: A synthesis of old and new ways of learning* that can be found on the [eLearning Papers](#) website.

I read an article, *Web 2.0 applications as alternative environments for informal learning—a critical review*, Neil Selwyn Institute of Education, University of London, UK. This article talked about Social Network Communities (SNCs) and shared a lot of research findings. It gave me some ideas on how to design a survey to get more information to complete an instructional context analysis and a learning content analysis. I also did a lot of surfing on the web and looked at many Personal Learning Environments (PLEs).

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Analysis: Content Analysis

To determine what content is best for this course design I will create a survey with a few questions to get input from both students and instructors in the ITEC program. Some of the questions I would like to ask are:

What Information and Communication Technologies (ICTs) students feel are most motivating and engaging?

Which ITCs do students feel are inappropriate for a class and why?

Do students have any concerns about Internet safety issues? How can these concerns best be addressed?

I would also design a Training Needs Assessment Survey for the head of the ITEC department and other faculty members to review.

Regarding the content of this learning environment, I have mentioned a few of the portals that are important to support this type of learning. These portals will encourage reciprocity of learning, which is the goal of this learning approach.

This course environment needs to connect to the main university LMS so must have links in place and also have some functions like forums, grades and assignment posting that will be done on this site. The instructor can use the university LMS to provide structure and also to do some tracking and monitoring.

There will be a Syllabus/Manual online to accompany the course. It can be downloaded for free or bought in printed form at the bookstore.

To help students get accustomed to the “learning 2.0” learning wiki, I suggest a pre-instructional training seminar where the learning environment is demonstrated. There will be an opportunity for questions. This might also be done in draft stage to test the product before building it out.

The Academic Technologies department should be consulted also to make sure that we can make the wiki interface well with iLearn. If something is needed to improve accessibility or usability, this should be looked at from the start. The needs of the ITEC department should be considered when developing content.

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Analysis: Learner Analysis

Learners will be in the ITEC program, working on a masters degree or a certificate. Their ages will be roughly between 22 and 70. They will have computer skills and know the English language. Group characteristics will be a desire to work in elearning, an interest in technology, an interest in teaching, and a desire to learn to use social media more effectively in ID.

Learners must be comfortable using the computer to complete a course. Learners will have varying degrees of prior knowledge. Prior knowledge will be assessed through a survey. Although it is not a requirement for students to have experience in social media, it will be helpful to know what their experiences are with social media and web2.0 applications.

Since the learners are graduate students in ITEC, they will be motivated to do well. This is a course they need to take to graduate.

It is important to learn about prior knowledge. Older students may be apprehensive about Internet safety issues and privacy and these concerns should be addressed early to avoid student discomfort.

Goals and Objectives

Students will use social media to plan and organize project-based tasks.

Students will collaborate with one another to search, evaluate, select, aggregate, and order material for the Course Knowledge Base.

Students will form a Community of Practice that is focused on using social media as an instructional design strategy.

learning 2.0 COP	
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Analysis: Instructional Strategies and Sequencing

This type of instruction is constructivist in nature. The set-up is designed to encourage students to discover principles by themselves. The curriculum should be organized in a spiral manner so students can build on what they have already learned.

Since the instructional design will consist of portals that are modules, this follows the Gestalt theory, both in instructional design strategy and graphic design. Regarding instructional design strategy, Gestalt theory is focused on grouping similar cognitive processes. This makes it easier for learners to interpret information.

Another strategy that will be used in this type of learning environment is chunking. Chunking helps with sequencing and comprehension. Timing is essential. Cognitive overload is counter-productive. The instructor will have to monitor activities to be sure that students have enough time to absorb the knowledge and integrate it into their skill sets.

Vygotsky's Zone of Proximal Development plays a part in the strategy because of the peer collaboration that results from this type of educational setting.

Media Selection

This learning environment will be constructed from a rich collection of materials and media. That is what makes it such an effective solution for all learners. There will be literature and printed materials to download for some learners who prefer to take in information this way. Other learners will be able to access learning materials online or through a video. The Syllabus will be available in both formats.

There will be a course manual that can be viewed online or printed out. This manual will be useful for the learner when at home working on projects or on the job. It will have helpful instructions, examples and non-examples.

Students will be accessing information through portals they have an affinity with. They'll process it in unique multimodal ways. The learning environment will have all media built into it because of the way it is set up. It will accommodate all learners providing the instructor monitors the learning and keeps an eye on the course stats.

Accountability is important and can be traced through software and group participation.

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Instructional Design and Development

Screen Design

The layout was designed with usability in mind. I used large buttons for accessibility. I also wanted to fit certain icons on the buttons and make them a part of the user interface...like the iLearn button and the Gmail button. I wanted the instructor to have a separate panel. I tried to divide the space with different modules on the sides. I do have a new plan after reflecting on the first draft. I will work on that next semester.

I chose colors that are easy on the eyes for most of the background but did choose some brighter colors for the links and headers to make the look fit in with the new web2.0 style. I did not want to distract learners so I applied Gestalt theory principles in the layout, using proximity and grouping elements near one another and putting similar items together. For example, the social media icons and the buttons are each separate groups. I used simplicity in the layout and some symmetry to get the alignment to work.

I chose a name that represents what the learning environment is all about.

Information Design

Regarding information layout, I put the navigation bar on the left. I wanted it to stand out and also to be easy to access. Around the edges are the tools the learner will be using. The center is the content that will be more dynamic. I put text links at the bottom to be sure there are links in two places for ease of use. The iLearn button and the Gmail button are in the main menu to easily transport the learner to other places they will need to go to complete work. Also the Twitter icon and other social media icons are accessible.

Interaction Design

There is some interaction built into this mock-up, but it is not a working model. There will be more interaction when the site is built. I like the way the figure "Overview of the Learning Environment" on page 3 is laid out. This was published by eLearning Papers. It is dynamic and has RSS feeds going into the content to keep things moving. I also like the Journal section and the way things are connected. I would like to learn more about these features and adapt them to ITEC 830's needs.

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Reflection

To best evaluate this learning environment we will need to administer a survey and a usability study. We will need to study both usability and accessibility. Some questions we will ask are:

Can the learner follow the message?

Is the content clear and easy to use?

Are the links and information relevant?

Are the demos helpful?

Is there enough connectivity?

Enough time must be given for students to absorb knowledge and practice using it. That being said, it's important to note that we all learn at different paces. People assimilate knowledge differently. That is the appeal of this type of learning environment. It is not restrictive. It can be customized by students into a Personalized Learning Environment (PLE).

Some monitoring by the instructor is needed to preserve the integrity of a system like this. The instructor's presence must be felt by the students through

consistent feedback to encourage motivation. It is essential that learners are on the same topic and week so they can continually interact and share learning experiences. Their participation needs to be transparent and open. The iLearn LMS will help with this because it can provide the instructor with feedback and stats to follow as they observe their students' learning journeys.

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[edu 2.0](#) for school: the free, easy to teach and learn online.