



Online Course Delivery: **Requirements Document and Wireframes**

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Introduction

Distance learning is a concept that goes back to 1858 when University of London started the first program offering distance education (Wikipedia 2007). In modern times, online learning is a widely accepted method of instruction; online universities are dedicated solely to offering complete degrees online. Brick and mortar universities have the option to offer some or all courses online as part of their curricula.

As part of this increasingly common trend in higher educational curriculum, the Technical Communication department at the Illinois Institute of Technology received funding to offer courses online. Using background primary and secondary research and using current IIT course being offered online as a model, I propose the information architecture and design for a template website that the Technical Communication department can use in support of its online courses.

Purpose of this Document

The Technical Communication program at IIT will begin its online course presence by presenting eight complete courses online. The purpose of this document is to establish standards for developing a website template for delivering these and other courses. This template can then be customized and used across all courses delivered online through the Technical Communication program at IIT.

This document will cover the following:

- Supporting research for the online course delivery website components
- Results from surveying current online instructors
- Proposed elements and taxonomy for IIT's online course website
- Wireframes for each main section

Supporting Research

Taxonomy of Online Classroom Websites

Koszalka and Ganesan (2004) state that web-based online instruction consists of information, instruction, and learning:

- **Information** is basic facts or data to present some unified message.
- **Instruction** is information specifically selected and organized with a deliberate intent of directing procedures or learning activities.
- **Learning** specifically engages participants in active cognitive processing to support the development of knowledge. (p. 245)

According to these authors, common elements of online learning delivering systems include the following:

- *Student presentation area*
A portion of the website that allows students to create a showcase of information about themselves. This section of the site is classified as information and encourages sharing to create a true learning community.

- *Grade books*
Automated grading and feedback. This section could also include personalized audio commentary that an instructor records and sends to a student. This kind of content is classified as information and instruction.
- *Content delivery space*
A page for posting course content and presentations, as well as resources. Content delivery space is classified as instruction and information.
- *Quizzing*
Tools for testing recall and retention of course information. Quizzes are classified as learning since the student is conducting self-assessment, which has been recommended as a vital part of online learning.
- *Shared group workspace*
Tools to allow students to share team-based activity work, such a discussion board or forum as previously mentioned. This kind of content is classified as learning because students participate through a hands-on approach of posting questions and answers.

A specific example of this taxonomy model can be discussed in terms of document design course available through the Technical Communication program at IIT. Once the document design course is offered online, an example of information would be teaching basic principles of design and layout. This information could include a lecture presented on document design principles such as proximity, alignment, repetition, and contrast. The instructional portion could be a real-time or pre-recorded demonstration of a document layout program with which students are shown first-hand how to use a print program and how to layout information in a correct way. The learning portion of the class would take place when students are assigned a project to create a brochure using the layout program and principles of design that was shown to them previously. Students might also attend discussion board forums or chat rooms to generate ideas and ask questions from other students struggling with the same challenges of the project.

Teaching Online Versus Face-to-Face

When five first-time online instructors were interviewed, they displayed little awareness of issues of collaborative learning, students' social presence, or the role of the community in the online learning environment (Sieber 2005). In essence, power distance – one of Geert Hofstede's dimensions to indicate how members with less authority expect and accept power – is shortened between the student and the instructor in an online classroom.

To elaborate further, if one considers Hofstede's power distance index in terms of a traditional classroom, the power distance index between the students and the instructor is quite high. The instructor commonly stands in front of the classroom while the students sit in rows facing the instructor. Such a classroom was first described by Jeremy Bentham, an eighteenth century English philosopher and social reformer who invented the concept of Panopticon, a structure one person can survey and control the work or activities of many individuals. (Scollon and Scollon 2001, p. 124) Modern day lecture halls, in fact, are mostly structured in this exact manner, thus automatically increasing the power-distance - literally and figuratively - between the instructor and the student. Scollon and Scollon, in a discussion of communication that applies to communication in a learning environment, label this type of lecture as Utilitarianism. In a utilitarian environment, communication should be highly focused with one or few participants (i.e., Teacher and teaching assistant) controlling the activities of many (i.e., students); topics should be introduced deductively in a style that is clear, brief, and sincere; all participants should participate as "public" entities subject to constraints of being implied but not real communicators (Scollon and Scollon 2001, p. 125).

These concepts do not translate very easily when a traditional classroom migrates online. No longer can an instructor stand in front of a group of students and lecture while students passively absorb the information. Utilitarian communication as defined by Bentham is close to impossible to convey via a website no matter how sophisticated the website's functionality, such as inclusion of a discussion forum or an online chat room. Instead, communication becomes more egalitarian in which each person, whether the observer or the observed, is more or less equal to others. Thus, the instructor transitions from the role of a teacher to the role of a facilitator where the power-distance index is very low.

This transition in practice is supported by research done on the social domain of online learning. The roles of both the instructor and the student change in an online classroom. The instructor changes from being a lecturer to being a consultant, guide, and resource provider. The student changes from passive receiver of knowledge to builder of his or her own knowledge. The instructor no longer provides answers and instead questions the students. Students switch from being memorizers of information to becoming problem-solvers. The instructor moves from total control of the teaching environment to sharing with the student as a fellow learner. Students, in turn, become more autonomous, independent, and capable of managing their own time and learning. (Sieber 2005, p. 331)

All these concepts can be used in developing a template for an online learning classroom that facilitates teaching in a new medium instead of simply trying to recreate a traditional classroom online.

Online Instructor Feedback

In order to understand better what features of an existing online classroom work best and worst, I contacted a small group of instructors who currently teach online. I sent out a short 6-question survey (*Appendix 1*) that allowed me to focus on aspects of an online classroom website which can be improved for the IIT design.

My sample group consisted of:

- Claire – teaches Web Design at Kaplan
- Elena – teaches Web Design and Development at the Art Institute Online
- Valerie – teach criminal justice at CTU Online
- Moshe – teaches English at CTU Online

Results of Survey

Although each instructor has varied experience based on the subject and the university where he or she teaches, there is some common ground in everyone's response and point of view. *Table 1* features the questions on the survey and the response of each instructor.

Table 1 – Survey Results				
Survey Question	Claire B.	Elena M.	Valerie M.	Moshe M.
Challenges in teaching online	Poor course design; lack of time; students can be rude	Not seeing students face to face; lack of self motivation	Disrespectful students, students expecting easy grades	Students fall into anonymity and their grades suffer
Recommendations to meet challenges in online teaching	Design courses better; communicate underlying instructional theory	Don't expect traditional classroom experience, be open-minded	Change recruiting methods; have better orientation	Clearly communicate requirements in the beginning and enforce them consistently
Online platform used	eCollege, Angel and IntraLearn	eCollege	proprietary	proprietary
Improvement for material presentation on platform?	Include more streaming media	less linear structure, more flexibility searchable options; interactive components	Allow both students and instructors the ability to use microphones during discussion	Two way communication between instructor and student via microphone
Usability issues with the platform?	Lack of aesthetic appeal; embrace user-center design	Unavailable student roster	Technical glitches; grade book freezes; discussion board deletes entries	Servers get overloaded; new system updates introduce bugs
Unique ways to connect with students?	Available by phone and record personalized videos	Utilize Adobe Connect or Elluminate to share the software applications	Create separate discussion board for each unit so that the student can feel connected	Try in personalize interaction and get to know students on a first name basis; maintain phone line for students to call

As the responses in *Table 1* show, one of the biggest obstacles to teaching online is not having a more personal relationship with students and thus more communication challenges arise. All instructors surveyed reported that students fall into anonymity and behave rudely in some way. It seems that if each student does not feel a connection with the instructor, he or she will eventually

become disenfranchised and even treat the instructor with little respect. Each instructor has his or her own methods to meet these communication challenges, such as finding ways to connect with students other than via online discussion boards and using additional software to create personalized feedback and tutorials. These methods can certainly be standardized once Technical Communication begins to offer more courses online. In this way, the program can ensure that instructors do not feel that they are teaching in a silo with no support from the department or the online platform.

Based on the survey, online instruction appears to have the following challenges:

- Students feel anonymous and can be disrespectful
- Instructors often need to connect on a more personal level above what the online platform provides
- Discussion board is a vital part of connecting with students
- Materials currently presented can be improved by including more interactivity

Recommendations in Online Course Delivery

Thus, the following components are an important portion of an online classroom:

- Self-assessment
- Personalized instructor page and blogging
- Discussion board forum and questions
- Audio commentary on projects and papers
- Interactive recorded presentations
- Optional synchronous live chat sessions

In addition to the user-centered interface, the website must offer functionality that, as opposed to simulating a tradition face-to-face learning experience, will instead reflect the online learning experience into its communicative entity that can be just as effective in teaching students new concepts and connecting them to each other and to the instructor with a real sense of classroom community.

Self-Assessment

Whereas a traditional classroom may meet face to face at the same time periodically, an online classroom may not have such predetermined time with the instructor. Lectures and lessons might be pre-recorded and communication between the instructor and students may be limited to e-mail communication and online chat sessions. Not seeing the instructor face to face presents the challenge of providing appropriate feedback, an essential means for the student to establish his knowledge and understand his grasp of the material being presented. As mentioned previously, in an egalitarian online classroom, the students must build knowledge themselves instead of passively receiving lectures and having immediate feedback from the instructor.

One of the main problems of online learning is students feeling that they are “lost in cyberspace” due to technical problems and delays on getting responses from instructors, as well as delayed communication with other students (El Mansour and Mupinga, 2007). This feeling of being lost will undoubtedly impact that student’s assurance on how well he or she is learning and retaining the new knowledge and information from the course material. In those moments of doubt, a self-assessment exercise will provide quantified proof on how well or poorly he is doing. With such constructive results, the student can then seek out specific help from the instructor or fellow students without the frustration of not knowing where to start.

In this kind of environment, self-assessment becomes very important for both the student and the instructor to understand the student’s progress. Thus, a self-assessment portion must be built

into each unit of the course. Self-assessment may take the form of a quiz or an informal question and answer session at the end of each new topic or unit being presented.

Personalized Instructor Page and Blogging

During traditional face-to-face class time, while there might be a planned agenda to present all material in a timely manner, invariably there is time set aside for an impromptu anecdote told by an instructor or a student. Such rapport propels learning and solidifies examples in the classroom by anecdotes of real-world experience, which only increases the student's potential to remember the material, it also strengthens the personal connection formed between the student and the instructor.

Claire B. mentioned that students have been outright rude to her and that is more likely to happen online as opposed when she teaches face to face. One of the reasons may be that online interaction may feel largely impersonal. By creating a personalized page and the ability to blog, the instructor will allow students to get to know her on a personal level which can greatly change the dynamic of their interaction. Valerie M. also said that to deal with the largely impersonal medium of online course delivery, she begins each new session with a PowerPoint presentation to introduce herself. She said her presentation helps her connect with the students and greatly helps their relationship throughout the course.

Since online course delivery cannot easily facilitate spontaneous rapport between the student and instructor, one way to foster a personalized connection is to establish a detailed instructor page on the course website. This page would be most beneficial if it featured information above and beyond the typical curriculum vitae and contact information. One way to simulate anecdotes of real-world experience would be to introduce instructor blogging into the online classroom. The instructor can set aside time for regular blog entries that may or may not be closely related unit material being covered. Introducing a more personal note via blogging can add a humanistic aspect to online course delivery and strengthen the bond between student and professor.

Having continuous rapport-building communication, such as anecdote-telling, with the student can personalize an instructor-student relationship and reduce the chance for miscommunication or lack of self-motivation that some surveyed instructors experienced.

Discussion Board Forum and Questions

In a traditional classroom environment, a student gets to know his or her classmates and the instructor via face to face interactions. In such an environment, debates and discussions arise and can foster collaboration between the students and reinforce what they are learning. Students can also share their previous work experience with others and in turn learn from their classmates' experience.

While such personal interaction is easily possible in a traditional classroom, such interaction transforms into a different type of personal interaction in an online classroom. Having a discussion board as a feature in an online classroom can have many benefits for the students. In any technical communication course, students work on individual and group projects. Even if the project is individual, it is still important for a student to connect and feel a part of the community and avoid feeling lost (El Mansour and Mupinga 2007). Such collaboration can be facilitated via a discussion board.

A study done on online discussion boards showed that when working on a project together, students communicated to build working relationships, to develop a group process and to find meaning in the class assignments. Once such relationships were established, students reported on feeling comfortable, holding their classmates accountable, and deepening their understanding of the course material (Molinari 2004). The same study also expanded upon previous research that found that social content accounted for 43% of all message codes. Social content can be put