CREATING ENGAGING ONLINE INSTRUCTION

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Introduction

Increased use of technology and the Internet are beginning to blur the line between traditional face-to-face and distance education. Schools of all levels are recognizing the power of the Internet and are exploring ways to make education available to students of all ages. However, one of the criticisms that often come up in discussions of online learning is that it is passive and not as valuable as learning that takes place in face-to-face classrooms. Another criticism of online education is that instruction delivered via text-based computer conferencing lacks the visual and audible cues of communication that are present in face-to-face situations. Therefore, according to critics, online education cannot be as effective and efficient as education offered in face-to-face classroom settings.

During this presentation we will illustrate different strategies that can be employed in creating engaging online classes. We will use concrete examples from online classes we developed for high school students as well as for undergraduate and graduate level college audiences. Particular emphasis will be placed on how to transform online learning from “text on the screen” to a powerful engaging and interactive learning experience. Educators and instructional designers need to understand the capabilities and limitations of the web environment and the process that needs to be followed to successfully adapt existing curricula to the online environment.

Engaged Learning

Jones, Valdez, Nowakowski, and Rasmussen, (1994) have identified several indicators of engaged learning:

- In engaged learning students are responsible for their own learning and they collaborate with their peers.
- Tasks for engaged learning are challenging, authentic, and interdisciplinary.
- Assessment is performance based, generative, and interwoven with curriculum and instruction.
- Instructional models are interactive and generative.
- Learning contexts are based on communities that are collaborative and empathetic.
- Groupings of students are heterogeneous, flexible, and equitable.
- The student is the explorer, apprentice, and co-constructor of knowledge.
- The teacher is the facilitator, the guide, and co-investigator.

The idea of engaged learning derives from constructivist learning theories, which argue for learners that are actively engaged in meaningful tasks. Learners are self-regulated, responsible individuals who can identify goals and solve problems alone and in collaboration with others. The tasks assigned in engaged
Learning settings are authentic, multidisciplinary, and grounded in real world settings, thus making them meaningful to the learner. Assessment of learning is ongoing and based on multiple ways for evaluating learners. Learning is interactive when learners are actively engaged in a variety of activities, and along with their peers and teacher, they are co-constructors of knowledge. The learning environment provides a sense of a learning community within which participants collaborate with others to negotiate and share meanings. The teacher is the facilitator in this community of learners, whereas students are the explorers.

Communication technologies enable educators and instructional designers to design and develop engaged learning environments. In the following section, we discuss how, based on the capabilities and affordances of communication technologies, we have chosen the instructional strategies we used for online instruction in specific online courses we developed. We show the evolution of the course development process by demonstrating concrete examples of online classes and discussing in detail the various steps of the process. We discuss the choices we made regarding the interactive components of online courses such as navigation options, reflective journals, individual student profiles, online discussions, collaborative activities, and interactive quizzes. Furthermore, we will demonstrate and discuss the appropriateness of using Flash technology and database-driven web-based interaction and address the development and production hurdles such technologies involve.

Discussion of Concrete Examples

One of the classes we developed is Consumer Education, which was delivered online for high school students of the Large Unified District Association in the state of Illinois. This class was selected to be offered online for several reasons. First, all high school students in the state of Illinois have to take a consumer education course in order to graduate. Therefore, such a class delivered online was likely to have a large audience. Second, teachers we worked with indicated to us that this was one of the most “boring” courses in their curriculum and they wanted to take up the challenge and work with us to make this interesting, engaging, and deliver it over the web. Third and most importantly, developing this course online offers another alternative to students, who because of scheduling limitations and place and time constraints, cannot attend the traditional face-to-face class.

The Web offers unique opportunities for teachers and learners. At the same time, it also presents certain challenges. The key to creating effective online instruction is to utilize those characteristics of the Web, which are appropriate for the instructional objectives of a class and the intended audience. From a technological standpoint, the interactive nature of the web and its multimedia nature allow for the development of engaging instruction.

One of the major challenges of our project was to work with content, which according to the teachers serving as the content experts, was not engaging and interesting for the learner as it was offered in the traditional classroom setting. In an attempt to make this course engaging, we employed a number of techniques. Considering the interactive and multimedia nature of the Internet, we made a list of possible activities and models we could use in the online environment. In selecting these activities, we first demonstrated to the content experts examples of online classes and activities appropriate for the online environment. Classes we demonstrated were not only of high school level (e.g., AP Calculus) but also of college level (e.g. ITT534-Issues in Instructional Technology). Then we tried to identify those activities that we felt will be appropriate for this age level and content domain. After long discussions and prototype developments, we have selected to include activities and employ strategies discussed below.

One of the issues we struggled with was how much control to give the learner in the online environment. Structure is crucial in learning environments and it is particularly more important in the online environment (Vrasidas, 2000; Vrasidas & McIsaac, 2000). In the Consumer Education course, we decided to structure activities in a way that one builds on the other. Therefore, the learner has to complete the
activities and cover the content in a structured fashion. Since this was one of our first online classes at the high school level, we decided to have it as structured as possible, without violating the principles of engaged and constructivist learning. The class consists of 10 units. Each unit has a number of lessons that range from 3 and 6. Students have to complete all activities in lesson 1 before moving to lesson 2. In order to have the site structured in such a way, we developed a database driven course that requires students to log on and proceed in a structured manner.

The internet provides an endless source for information on virtually any topic. In an attempt to take advantage of the wealth of information available online, we designed activities that require learners to take the role of an explorer and visit several websites in order to gather information about topics and assignments on health insurance, taxes, finding a job, credit, etc. Learners, after visiting other sites, return to the class site and, using online forms, submit their work and findings to the teacher. All student submissions are automatically stored in the database. At the end of each unit and when appropriate, there are reflective journal activities where the student reflects on what she learned and how the knowledge she gained helps her be an informed consumer.

In addition, there are several discussion questions, which ask the students to think about critical issues on consumer education and discuss them with their peers and the teacher. For example, in the lesson on credit, students are presented with a scenario in which a young lady purchased from an online store a CD player that is not working properly. In an attempt to resolve this matter, she failed to follow the steps necessary, and the case was taken to court. Students are asked to take sites (student versus store owner) and present arguments and discuss online how to resolve this issue. The specific requirements for participation in online discussion were structured ahead of time and made explicit by the teacher. Every student had to participate at least twice in each unit’s discussion topic. Students were required to respond once to the question posted online and once to a contribution made by one of their peers. Requiring participation ensured that students would engage in discussion with their peers.

An issue we had to deal with was to ensure students receive prompt feedback on their contributions and submitted work. Feedback has been associated with kinds of responses that provide information to students about the correctness of their assignments, homework, and class contributions. In distance education feedback is more important than just a mechanism of informing the student on how well she did on an assignment. In face-to-face situations nonverbal gestures are constantly exchanged thus providing both the teacher and learners with feedback. In the online environment, however, you lose all the contextual cues of communication, which are important in creating the feeling of social presence. Vrasidas and McIsaac (1999) conducted a study to examine the factors influencing interaction in an online course. One of the major findings of the study was that the lack of immediate feedback contributed to the feeling of isolation among students. To address this issue, we also developed several interactive quizzes and practice sessions which asked the student to respond to questions and get instant feedback. Furthermore, we tried to make the grading and teacher/learner communication easy by employing database technologies. The student’s responses are stored in a database, and made available for the teacher in an organized manner. Once an activity was submitted, all information entered the database-driven gradebook. There, the teacher can view all assignments completed by the students, grade them, and provide feedback to the student.

The multimedia nature of the web allows educators to develop online curricula that transcend the traditional text-based correspondence model of delivering distance education. Animations were used to illustrate several concepts that relate to consumer education. For example, we used Flash technology to develop interactive animations illustrating how to file your taxes. Then, we developed the tax forms, allowing the students to practice filing taxes, giving a real world scenario. In another class we developed for college level students and with the title “Introduction to Geology”, we developed Flash animations that illustrate volcanic phenomena and what actually takes place beneath the earth as a volcano is ready to
erupt. One limitation of using Flash technology is that bandwidth intensive multimedia content is not yet a widely used standard and slow Internet connection speeds discourage users. Furthermore, users will need to have installed on their computer the Flash plug-in in order to view the content.

In addition to the online activities, we incorporated several offline activities. Engaged learning in an online class should not rely solely on the student interaction with the computer. Research in distance education has identified four kinds of interaction: learner-teacher, learner-learner, learner-content, and learner interface interaction (Hillman, Willis, & Gunawardena 1994; Moore, 1989). Students can be engaged learners by participating in a variety of activities that are offline. For example, in the Consumer Education class, students had to visit a local bank and talk to a banker about opening an account, different kinds of accounts, loans, interest rates, etc. They had to visit a local grocery store to complete an activity on comparison shopping. They had to interview members of their family or neighbors regarding credit card problems they had to deal with and how they resolved them.

Conclusion

Designing online courses is not as easy as it is often argued. It takes time, resources, and requires an understanding of the content domain as well as the online environment. Educators are often asked, and at times required, to develop online classes. We have briefly provided a few examples of strategies that can be employed for facilitating engaged online learning. We are currently implementing a large-scale evaluation of online courses we developed and the online course development process itself. Within the next few months the findings will be available on our web-site at http://www.cait.org

References


Biographical Sketch

Richard Chamberlain is Associate Director of the Center for the Application of Information Technologies at Western Illinois University. He has been involved in multimedia development and distance education for the last 15 years. He has given numerous presentations and workshops at national and international conferences.

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