Rapid Adaptation To An Online Format

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> *The Internet is providing new opportunities in higher education for the delivery of online courses and degree programs. The advantage of using the Internet to deliver course instruction has been well documented. This paper describes how the authors modified a traditional instructional design model to redesign a graduate-level course to be delivered completely over the Internet when circumstances necessitated a change in modality.*

Keywords: Web-Based Instruction, Instructional Design Model, Blended Learning

In the summer of 2001, the authors were developing a new course for a graduate-level program in Human Resource Development. This particular course was an elective for students in the Masters' level Human Resource Development and Administration program. Several students from the Education & Leadership/Human Resource Development doctoral program were also using the course as an elective. The course, "Diversity in the Workplace," consisted of two main components. The didactic portion of the course was to be delivered over the Internet using WebCT, as a course management system. For the second component, the class was embarking on a one-week study tour in London, England. Three people were involved with the design of the course: a full-time faculty member, a graduate student enrolled in the HRD doctoral program, and an instructional designer who also enrolled in the doctoral program. The web portion of the course was constructed in a modular format. Each module contained reading assignments and discussion topics for asynchronous discussions on the site bulletin board. Several modules also included additional written work to be sent as individual assignments to the instructor via email. Other modules contained activities and assignments for the study tour component of the course. During the trip itself, there were to be lectures by content experts in London as well as site visits. Assignments for the trip centered on these in-country lectures, as well as the experience of being in a different culture. The class had two face-to-face sessions at the beginning of the course to demonstrate the course technology, and to answer questions about the study tour course format and provide travel information.

Unfortunately, the class was scheduled to take the trip to London on September 21, 2001. After the events of September 11th, many in the class had concerns about flying overseas and cancelled their reservations. While some students were still willing to go through with the plans, it was finally decided to cancel the entire trip. At this point, the course developers had a problem. The course was lacking an essential component: the overseas trip. During the trip, the class was to explore the differences experienced by British corporations in the area of diversity as compared with the United States. The class was also going to be recording their own observations and experiences in this different culture. Students from both the graduate and doctoral programs needed the elective course credits and wanted to continue with the course. Other students who had not been able to register for the trip were also interested in taking the course.

The Design Dilemma

This paper describes how the faculty used the instructional systems design (ISD) and developed a design model to guide their steps in transferring a "blended" course to a virtual delivery format to meet the needs of both undergraduate and graduate students already in enrolled in the course.

The solution was to reformat the course so that it would now be completely online. Time was critical as the new semester was about to begin: what was an "inter-session" course had to be functioning and available for the Fall, 2001 term beginning in October, 2001. The developers had about two weeks to adapt the course for the new format. Following effective design principles, the developers revisited the course and module objectives so that new online learning activities could be developed. Since some of the students had already completed much of the readings and asynchronous discussions, it was decided to make the course more self-paced with students needing to complete all assignments by the end of the upcoming term. The authors wrote a new syllabus, learning modules,

and learning activities. Word spread to the graduate and doctoral students about the new availability of the course, and five more students enrolled.

Theoretical Framework

Online courses provide the freedom of time and place sought by students (Cooper, 1999; Downes, 1998; Gubbins, Clay & Perkins, 1999) However, there is much debate about how to design a successful online course. A major concern is the issue of instructional design and its impact on the success of online learning. Carr-Chellman and Dushastel (2001) argue that the ideal online course would be designed using a constructivist, student-centered approach rather than a traditional behaviorist approach.

Most university and college courses in the United States make use of the Internet to provide a course syllabus, online readings, online discussions, and/or group projects (Vrasidas, 2000). According to a recent study conducted by the National Center for Education Statistics (Waits & Lewis, 2003), 55% of all colleges and universities in the United States offered some type of distance education during the 2000-2001 academic year. During this same academic year, there were over 3,000,000 enrollments in distance education courses

One of the major challenges in designing online learning is deciding the appropriate delivery format to meet the needs of the "distance" learner. Determining the appropriate design structure for creating an online course or module is crucial in promoting interaction and the feeling of social presence (Vrasidas and McIsaac, 1996). One contemporary design concept according to Serwatka (1999) consists of taking a portion of the class that is easily adaptable to the Web, such as the syllabus, reading assignments, discussion boards or tutorials, putting it online, and then having the students access that material prior to attending class. Palloff & Praff (1999), asserted that if one departed from the traditional campus classroom course to using some form of media for delivery, a transitional phase or process must be addressed to ensure ease of transfer for the student and the faculty who are unfamiliar with the online process. This becomes a course design issue as the learning outcomes and the behaviors will be different. Having a transitional period is desirable as it allows the instructors to develop new approaches and skills to create an effective online learning experience.

Online learning or distance learning (DL) is an organizational education program that uses one or more media tools to deliver instruction to students, who for various reasons, are either unable to use the on-campus traditional style of education or have a preference for online (Steiner, 1997). Today most educational institutions have or will add a technology-based distance learning component to their course offerings as a way to offer more class options, increase enrollment, and/or raise revenue (Olsen, 1999). The design of online learning activities, similar to the design of educational multimedia products, requires coordinated teamwork and planning. According to Boyle (1997), good design will be the best possible integration of all the views and know-how of a design team and will also take into account the perspective of a wider community of stakeholders.

A traditional, classroom-based setting allows for spontaneous, "real-time" interactions that can have a critical impact on the attitudes and performance of students. However, online learning communications are predominately asynchronous and mediated by technology, so the opportunity for these spontaneous exchanges are lost. (Hirumi, 2000). Therefore, when designing a course, it is important to sequence and plan learning activities to overcome this shortcoming and challenge learners .

Historically, there has always been some concern surrounding computer-based education with respect to the three kinds of interactivity that may affect learning in online courses: interaction with content, interaction with instructors, and interaction with classmates (Moore, 1989). Although none of the three modes of interaction function independently in practice, (for example, interaction among students is typically supported by instructor facilitation), these interactions, provide useful lenses for thinking about interaction online (Swan, 2001).
Research conducted by Carr-Chellman and Duchastel (2001), suggest the ideal online course would center learning assignments around a set of student tasks that have been designed to achieve an established learning objective that students work on either independently or collaboratively

According to Lee, Owen & Benson (2002), traditional instructional design models that have directed efforts to produce quality learning in face-to-face training environments can now be integrated into a Web-based training delivery**."** Thrush (1999) noted that courses with outcomes that are more knowledge-based than skills-based are more successfully transformed onto web-based delivery formats. This paper presents an instructional systems design model that illustrates how a course that was only partly online was able to be transitioned into a totally virtual course in a short period of time.

Instructional Design Process Provides Conceptual Framework

The model developed to migrate the course from partly to totally online delivery was based upon the issues that the authors faced, given the limited time for design, development and delivery of the course. As with every instructional design project, this project also had its own unique goals, audience, content, and budget. The emphasis of the following discussion of the model will be on the design component of the process.
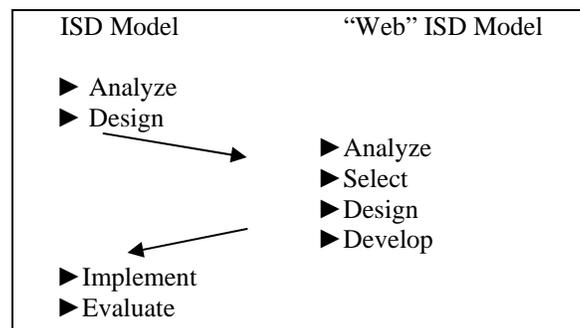
When the course was first created utilizing internet-based, and experiential activities, the designers used the "Instructional Systems Design" (ISD) model developed by Gagne. (Smith & Ragan, 1999). As such, they began by developing goals for the course based on desired outcomes. The learners for this course were already known to the designers, since they were part of a cohort enrolled in a Masters program, as well as a few students from the PhD cohort who were taking the course as an elective. Most of the students were familiar with the online course management system(WebCT) that would be utilized for the internet-based portion of the course.

One of the graduate assistants was a subject-matter expert who had extensive experience in teaching workplace diversity concepts. Her expertise was used in analyzing the content to be included within the course and in determining the course objectives. She also suggested appropriate learning activities to be included that would best assist the students in meeting course objectives. It was decided to assign the bulk of the reading activities and discussion board activities prior to the overseas portion of the course so that students would have the conceptual framework they needed for the experiential activities. The overseas portion of the course included several lectures and tours, coupled with some activities designed to make the students more aware of diversity issues. Learning activities included journaling the experience as well as a final paper.

When the trip was cancelled, the designers had to make a decision as to how to best manage the rest of the course. The course had already begun, and students had completed many of the initial assignments. The Fall term was about to begin, and there was no space or time to schedule a class to include the hours required to complete the course. Students who were already enrolled did not want to lose the potential elective credits. Other students were asking for the opportunity to enroll in the course. The decision was made to migrate the entire course so that it would be completely web-based, and to extend the course through the Fall term. Since the initial assignments were self-paced, this allowed for additional students to enter the course without falling behind.

Web-based Instructional Systems Design

The designers realized that there was very little time to redesign the course before the start of the new quarter. They chose to continue to use ISD concepts to convert the course to completely web-based delivery.

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ISD Model                    "Web" ISD Model

► Analyze
► Design
                            ►Analyze
                            ►Select
                            ►Design
                            ►Develop

►Implement
►Evaluate
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The first steps of the ISD model had already been completed: the course had been designed based on the initial analysis of the course audience, content, and objectives. To convert the course to completely web-based, four new steps were added, as shown above.

The first step was to **analyze** the current situation. There had already been an orientation meeting to introduce the students to the initial web-based components. The web site had been created and contained the original online modules and discussions. There was also the reality of more students wanting to take the course if it was available to them. As part of the analysis, the designers considered learning activities that would not require a face-to-face setting. These included: experiential assignments, group projects, discussion board, online chat, webquests, and individual projects and research papers. They brainstormed the most appropriate activities given the short time-frame, stated learning objectives, and required contact hours. They also revisited the original evaluation methodologies and desired outcomes.

Step 2 was to **select** the course parameters. These were selected after considering the population, the technology available, and the appropriate instructional activities. A concurrent decision was to expand the student population to allow new students to join the course, and to also expand the time-frame for the course to the end of the Fall term. The decision was made to convert the course from a linear to a non-linear structure. As such, students could complete the assignments in any order that they wished and in any time frame, as long as all activities were complete by the end of the quarter. This decision was based on the fact that students were at different levels of completion, with some students just beginning the course. A third decision was to have students work on individual, rather than on group, projects.

Step 3 was to **design** the elements of the course. In determining the best instructional methodologies, the designers analyzed the objectives and initial content and treatment. It was decided that the objectives for the course remained unchanged. However, the focus of the course was expanded so that it encompassed broader diversity issues. This expansion was reflected in the new assignments that were created as well as the inclusion of content material that was more generic. In addition, the Internet portion was changed to include more interactive components.

Step 4 was to **develop** the course components and assignments and to update the site. The designers developed the additional learning activities and assignments, rewrote the syllabus to reflect the updated material, and created new modules. To minimize confusion, they also created a matrix table of assignments for easy student reference. The former "live" discussions that would have taken place during the study tour were changed to online discussion topics. Two assignments that were originally developed to focus on the diversity aspects of the country visited during the study tour were changed to experiential assignments focusing on cultures with which the individual student was unfamiliar.

From here, the designers returned to the next step on the original ISD schematic as they implemented the course. The revised course consisted of one face-to-face meeting with all students to explain the updated course structure and methodology, and to allow them to become familiar with the technology. The remainder of the course was conducted on the Internet using WebCT. Students completed the assignments at their own pace, with all assignments due by the end of the quarter.

An evaluation of the course revealed that all fifteen students who enrolled in the course were able to complete it; this included five additional students who entered the course after it was revised. For many, it was their first experience with a completely online course. Their evaluations of the course indicated that they found the course easy to use and enjoyed the ability to manage their own time. In addition, the faculty found the students applying the diversity concepts learned in the course to other courses in their program of study.

Lessons Learned

The designers found that using sound ISD principles was instrumental in allowing them to quickly redesign the course in an alternative format. The measurable objectives that were developed up front facilitated the design, development, delivery, and evaluation for the redesigned course.

While this particular course was delivered totally online, students did continue to meet face-to-face for their other scheduled courses. This afforded them the opportunity to meet with the designers and/or faculty for the virtual course if they had any questions or concerns, a circumstance that is often not present for many virtual courses. This may have prevented the isolation and lack of communication with faculty that is sometimes noted with other online courses (Brown, 2000).

Another factor that may have contributed to the success of this course was the demographics of the students themselves. These students were largely within the 25-50 age group noted by Grill (1999) as being more successful as distance learners. Other success factors of these students, also cited by Grill included:
1. being accustomed to a participating in a formal education program (All students were either part of the Masters or PhD program).
2. being highly motivated to complete the course (Elective credits were needed for degree completion).
3. voluntary participation in the course (Since the course was an elective, students had other courses that they could take instead).

The most important lesson learned was that faculty who are willing to be flexible can adapt to unforeseen circumstances. Online learning can provide the means.

Conclusions

This paper presents a simple instructional design process to develop Web-based training. The value for discussing this pragmatic approach is to illustrate that by using the instructional systems design (ISD) model as the basic tool to design any training course, the content and process can be easily adapted to other forms of instructional media for presentation.

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