Web-Based Instruction: Successful Preparation For Course Transformation

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Abstract

An internet site can provide excellent support for traditional campus-based classes or replace the classroom for a distance learner. Appropriate use of this powerful tool depends as much upon the style of the faculty member, learning objectives of the course, and communication skills and preferences of teachers and students as upon the technology. This study examines the experiences of a business faculty member who has found the internet to be a versatile and effective tool.

Introduction

Less than two years ago, a supporter of our department of insurance and risk management in the school of business asked if we would be interested in providing the only accredited courses in higher education for an electronic education firm being organized specifically for the insurance industry. His vision was to be the one-stop location for the employees in the industry and to provide everything from 15-minute programmed learning modules appropriate to teach the many technical terms in the industry, to a masters degree from an AACSB-accredited university. Although the idea had merit, and may develop into one of the many e-commerce businesses that abound today, it has not yet materialized. In the meantime, with the support of our dean, our department did explore the idea of becoming a distance education provider. In our state, our university was negotiating articulation agreements with 2-year institutions, and our university had established an extremely strong reputation for distance education which, at that time, meant correspondence and one-way video course transmissions using telephone lines for communication between the teacher and the distance students.

The decision was made for our university to offer, through the internet, degree completion programs for the students receiving associates degrees from the state's 2-year institutions. The DegreeLink program at ISU allows students with designated two-year associates degrees to complete all requirements for the bachelor's degree without ever coming to ISU's campus (unless they choose to participate in the commencement ceremony). This allows residents of distant communities (theoretically of the world) to complete their degrees at work or at home. Bachelor's degrees currently available include technology, business, criminology, and nursing. Masters and doctoral courses are also offered over the internet. The initial degree offered through the School of Business was the Bachelor of Science in Business Administration. The Bachelor of Science in Insurance was second. Because of the large, common core of business classes, the marginal addition necessary to the distance

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offerings was the nine courses in insurance necessary for the insurance degree. All other requirements were already being prepared for the business administration degree. The Bachelor of Science in Insurance was second. Because of the large, common core of business classes, the marginal addition necessary to the distance offerings was the nine courses in insurance necessary for the insurance degree. All other requirements were already being prepared for the business administration degree.

Course Transformation Academy

To prepare faculty for the transition from traditional classroom course delivery to distance education delivery Indiana State University offers a choice between one-week, intensive Course Transformation Academy (CTA) each summer and a comparable course spread across a traditional semester. The purpose of the CTA is to help professors who are traditional classroom educators obtain the background necessary to convert a course in their area of expertise to an alternative delivery method. The CTA has proven itself to be successful in preparing faculty, who offer distance courses using video and correspondence delivery, alternatives that have been available for decades at the university. Although video and correspondence delivery were discussed in the most recent CTAs, the major interest of most faculty was conversion to the internet. Activities scheduled for the CTA include presentations by faculty who have been successful in their course transformations, and who are willing share their experience; hands-on experience with technology; design introduction by a combination of technology experts and pedagogy consultants; and time to compare ideas with classroom peers.

Following the CTA, each faculty member who would be converting a course from the traditional classroom presentation to the internet was assigned a teaching consultant who would be available to discuss class objectives and to offer alternative methods of approaching the differences in style and technique that might be considered for the course. Each faculty member was also assigned a member of the technology staff who would be available to help with hardware and software issues and who had a staff of student workers available to do time-consuming repetitive tasks as needed to put material onto the course website. Effective in June, 2000, the university will add a 3-day follow-up course to provide opportunities for faculty to learn advanced applications of instructional technologies and to compare notes with each other on successes and concerns.

Prepare Before Conversion

Although the temptation is to start immediately on the conversion of material that has traditionally been provided by lectures, handouts, or library reserve, it is necessary first to examine the type of material and the style of instruction that has been successful in the campus classroom. Course objectives and the types of learning experiences traditionally offered must be considered. Some types of material and some courses lend themselves to self-study and individual learning. Others require substantial interaction between students or between faculty and students. Communication and connection work differently on the internet. However, the widespread acceptance of the internet service providers' communication tools and of the e-commerce sites would indicate that although communication and connection may differ on-line, they can still be effective.

Using the internet, the first question (and often one that is not examined, but answered by default) is whether the internet class should attempt to reproduce the classroom experience or should attempt to accomplish the learning objectives differently. Indeed, reconsideration of the learning objectives themselves is often the most viable starting point. Given the outcome of the consideration of course

objectives and materials, and of teaching and learning styles and communication abilities, the faculty member is ready to prepare the course for distance delivery. Issues of class culture and learning style can then be examined.

Potential Distance Students

Course transformation to the internet is beneficial to many students including those in the following circumstances:

- Traditional campus-based students with specific needs including problems because of the simultaneous offering of two required courses; conflict with work, athletic or class schedules; and injuries or illness that removes them from the classroom for lengths of time.
- Students located in other communities who do not have access to programs in their preferred degrees (in some communities, 4-year institutions may not be available, or may not offer business degrees).
- Students located in other communities who have difficulty in attending their local college during the regularly scheduled classes, possibly due to work schedules or family commitments.
- International students for whom a degree from an accredited U.S. business school would not be otherwise possible due to travel constraints.

For each of these categories of students, an internet-based course or degree offering can overcome barriers that would otherwise impede progress toward a degree.

Administration and Staff Concerns Prior to the First Day of Class

Prior to successful participation in a distance course, prospective distance students must identify a university as being able to meet their needs. They must then connect with the university and negotiate the admissions, financial aid, advising, and registration processes. Given the substantial and numerous potential pitfalls in these processes, there exists tremendous potential to fail before the class has even begun. Indiana State has answered this issue within the state by locating representatives throughout the state. These staff members are the first contact for many prospective students. The DegreeLink web site, a toll-free phone line, and e-mail and phone numbers of appropriate campus-based personnel provide alternative contact points. At this time, most courses offered by Indiana State for distance delivery, including most internet courses, are provided on the traditional semester basis, so the timing of the most demanding communication is bunched around the late summer and the new calendar year.

DegreeLink and admissions staffs are prepared for these periods. Department staff and the faculty who teach the courses are finding that there are different communication needs and styles of distance education students. Unlike traditional campus students who will form lines and wait, distance education students make phone calls expecting immediate attention or send e-mail messages which may easily be overlooked during the very busy few days at the start of each semester.

Classroom Community

If, indeed, each classroom is a learning community, then the faculty member must consider the ways in which community has helped individual students to accomplish the course objectives. What aspects of this community will be sacrificed in the conversion to a virtual community? What

advantages exist with the new technology? Assuming that the contributions of the community to the learning experience are valuable, how will they be duplicated or replaced by the new setting? In what ways can the new technology enhance the learning experience? The technologies available to the faculty and students and the creativity of the faculty and students will limit or enhance the feeling of community.

CourseInfo, the software used at Indiana State University allows for chat rooms and discussion boards for the entire class and also for groups of students. This has proven useful for students who have never met. New, inexpensive digital cameras and eyeball cameras are available, and can add a significant personal touch to the class.

CourseInfo, a Valuable Tool

In the following sections, we explore the capabilities of one software package, and discuss the ways in which it can be used to enhance the learning of a traditional classroom or to create an alternative classroom for distance students. Ways in which the new technology can mimic the traditional classroom and ways in which it can extend the learning experience from that setting can be easily inferred. Finally, we will turn to the issue of student response to the new technology.

Indiana State University uses CourseInfo, an excellent software package from Blackboard, Inc. This paper demonstrates version 2.0. Let us quickly examine CourseInfo's major components which include 1) the tools available to faculty, 2) the tools provided to students, and 3) communication tools. The home page for the course site is reproduced in Figure 1. The Control Panel available to faculty and staff is reproduced in Figures 2. The communication tools entry page is found in Figure 3, and the student group tools page is found in Figure 4.

Tools Available to Faculty

The tools available to the faculty (and designated teaching assistants or other staff) are accessed through the control panel button available only to individuals who logged on under an id which is identified to the software as being that of one of these categories of users. Faculty and staff may edit any part of the course site, and for each edit are allowed the choice of whether or not to make the edit available immediately to students. This option makes it possible to create entire sections of the site, but only reveal portions that are relevant to the students at the current time. For courses that are truly asynchronous, and that do not include any interior time constraints, the entire site can be available to students at all times. The control panel button is the only difference between the screen presented to the staff and the screen presented to students. The control panel offers the following choices. CourseInfo descriptions of each of these options are shown in the screen reproduced in Figure 2.

1. *Page Editors* for each of the buttons seen at the left of the initial screen (Announcements, Course Information, Staff Information, Course Documents, Assignments, and External Links).
2. *Assessment* choices concerning Quiz Generator, Assessment Tools, Online Gradebook, and Course Statistics.
3. *Assistance* including the staff's version of the Online Manual; and links to Contact to the System Administrator, Join List Serve, and Online Support.
4. *User Management* tools that allow the staff to Create a User, Modify a User, Remove a User, Create a Group, Modify a Group, or Remove a Group.

5. *Communication Center* that allows the staff to Send Email (to the whole class, a particular user group, or to an individual student), edit the Course Calendar, Discussion Board, or Digital Dropbox.
6. *Site Management* tools including Communication, Course Options, Student Tools, and Course Utilities.

Tools Provided to Students

Students tools include a utility that allows the student to create and edit his or her own class home page (a particularly useful tool for creating a feeling of community among the class members); the DropBox which can be used to submit files to the instructor and into which the instructor returns files (with comments attached); the student's own calendar space; on-line help manual; and instant access to their class grade (part of the instructor's grade book).

Communication Tools

The CourseInfo Communication Center allows the student to go to the class discussion board (which is organized by threads); to go to classmates' home pages; enter a chat room; send e-mail, and enter group pages. The group pages provide teams of students with a secure area in which they can use the group's private chat room or discussion board. Group pages also allow students to exchange files with their teammates. Faculty can observe the activity among group members. This function has the capability of vastly improving the instructor's awareness of group dynamics, an important factor in any class in which a group project comprises a substantial portion of the class grade.

Student Response to the Support Site for the Traditional Class

Over the past two years, I have taught at least one class each semester that was substantially supported by a web site. By substantially supported, I mean that the class materials were only provided on the site (not in traditional handouts). Assignments were posted without introduction in class; questions were posted and replies to them required on the discussion board for the site. Responses to the replies was encouraged on-line. The classes continued to meet in person at the regularly scheduled time on campus. Testing was done in the classroom, and consisted of essays and problems, but an objective test was posted for each chapter to serve as a review and self-test. Student grades were calculated based on classroom performance and the exams, but a substantial portion of the semester grade was determined by the discussion board postings and the successful use of the self-tests. All assignments for discussion board answering of questions had weekly deadlines. In this way, the course work could be considered asynchronous. Since the software kept track of the dates and times of postings, I was relieved of the need to collect homework and students who were unable to attend any particular class were able to perform in a timely manner and receive credit for that. No chat room discussions were required, so each student was able to schedule his or her own work.

The student response to the web site and to the class use of it was overwhelmingly positive. It consisted of two major themes. The students felt that the discipline added by the requirement of weekly performance helped them in their own time management and in their learning throughout the semester. The intensity of this response was surprising to me, because most of the students who initially expressed this reaction were some of the better students in our department. I consider them to be self-motivated and self-disciplined, yet they expressed appreciation for the weekly deadlines. The second

major component of the student response was appreciation for the provision of the learning aids. This, likewise, surprised me. Most of the material that I posted on-line was drawn from (often identical to) handouts that I had traditionally used. It had been my style to use outlines of materials, and often I would extend the outlines to include comments, or additional material that I wished the students to consider more seriously than if they were provided in lecture format. When the materials were posted on-line, however, the students felt that there was order to them, and they could see how the materials coordinated with their weekly assignments. The materials were also conveniently in one location throughout the semester. Apparently there was some aspect of this that helped the students to view the material very positively. As an aside, it was my feeling that in some prior classrooms, handouts were viewed negatively "not another one!"

The only major negative comments received to the use of the web site to support the classroom course centered on the quantity of work expected from the students. Some felt that they were actually doing the work of two classes: attending and participating in person for three hours a week and also logging on and posting their materials and reading and responding to their peers in the virtual environment. Since students often complain that teachers expect too much of them, there is a tendency to discount such comments. However, the first students to express this concern were some of my most talented and dedicated majors. I responded to this by reducing the length of the traditional classroom participation for my web-supported class during the next semester. It was my feeling that during this second attempt to find balance, the students were under-performing those from the traditional class setting. Although test performance and other outcomes were adequate, it was my feeling that the students were not achieving as much as they might have in the traditional classroom alone. My current resolution to this issue is to reduce the quantity of on-line work, and to return to the more traditional classroom expectations. As with any new tool or technique, the issue is one of balance.

One Student's View

A short article, taken from a MSN newsletter, is reproduced in this section. It effectively demonstrates the possibilities, and some of the challenges, of internet-based degree programs from the point of view of one MBA student.

The Business of Distance Learning

While lots of graduate schools claim that they offer distance-learning or online-learning programs, Durand says that several of the schools that he researched simply mail out videotapes of lectures. "When I started looking at actual online class offerings, I found that City University was one of the few places that provides a truly online experience," he says. "It offers a wide range of chat rooms and Web-discussion forums, and professors can set up a chat room for a specific night so that students can discuss class material online."

But the City University program can sometimes be too flexible, Durand says. Students can start classes on the first of any month; to register, they need only call their adviser by the 20th of the previous month. Because students can take any class at almost any time, they might end up having only one or two classmates in a given course -- which can limit opportunities for chat sessions, asynchronous discussions on the Web, and other online class activities. "The only thing missing from the program is interaction with other people," Durand says. "I'm willing to give that up because I have plenty of interaction with colleagues at work, but I can see how some people might think that they're missing

something."

Making the Grade: Because of that potential for isolation, it's important to leverage the connections that you are able to make. Some instructors can be good about answering questions and offering feedback, but if your instructor is a professional who is working while teaching, he or she might not be as accessible as a full-time teacher. "I don't expect everybody to be at my beck and call, but I am paying them to help me learn," Durand says. "One of my professors was a full-time consultant, and he was on the road quite a bit -- so getting in touch with him was always difficult."

If you plan to continue to work full-time while you pursue a degree online, Durand suggests that you make the most of your own time. The responsibility for setting and keeping to a work schedule rests on your shoulders. "I made the mistake in one 10-week course of waiting until week 8 to get started, and things got pretty hairy. Procrastination can kill you," he says. "You have to be very self-disciplined."

You can also make your online MBA part of the Brand Called You. Don't assume that your company will reimburse this type of learning -- but if you can sell your boss on the idea, you may become an example to other employees. "I've turned quite a few heads by saying that I'm working on my MBA and that I'm doing it online," Durand says. "It says that you're willing to take a risk, to do something outside the box." Coordinates: Ken Durand, kdurand@tacticsus.com

Conclusion

This study has examined the experience of a business faculty member who has now converted three traditional classes to web-based classes and beta tested them with her traditional campus-based students. It included a discussion of the course objectives, pedagogies, and technical issues for successful participation in this type of course transformation and delivery. It also included a review of the responses of the students concerning their successes and difficulties with this type of delivery system. Although the particular classes are in the Insurance and Risk Management Program, the course transformation information and considerations are applicable and readily transferable to most business disciplines.

As faculty in a university that has been a leader in Indiana distance education for decades, we are working with the conversion to the internet of many of the classes that have been successfully delivered by correspondence or by satellite delivery, and with others that have only been offered in traditional, campus classrooms. The university's commitment to this initiative has been affirmed by a recent competitive federal grant of \$1,500,000 that will be added to prior state and university funds to support innovation in course transformation to the internet.

The use of a website to provide a course to distance students creates opportunities and challenges unique to the medium. Faculty considering conversion of a current classroom-based course must carefully examine their current courses, and start to learn about new pedagogies. Issues that are handled without tremendous consideration and thought (and successfully so since the faculty member has spent a lifetime in the traditional classroom setting, so is capable of reacting instinctively) must now be anticipated and prepared for deliberately.

The new software offerings available to develop and support a web site for distance delivery of a

university course are capable of being of tremendous assistance to a professor who is not a programmer or otherwise particularly adept with or knowledgeable about the latest technology. CourseInfo provides all the tools necessary for the faculty member; for any staff who will assist with the course; for students individually or in groups; and for effective communication between and among these groups.

As with other distance media, issues of communication with prospective and new students is of concern. Unlike other video delivery, the internet-based students do not even have the opportunity to gather physically. Further, since they are not gathering in any particular location, there is not a representative of the university physically present to help address questions and problems. As stated above, this can be addressed through the use of dedicated university representatives that are trained to provide service to students and prospective students. This can be done across geographic territories, or it can be accomplished on-line. In either event, the level of effort required exceeds that of the same function on a traditional campus. This is at least partly due to the existence of a community of students and their grapevine through which information is traditionally communicated. An on-line replacement tool for student-to-student mentoring and information will be a valuable addition to the current offerings of any system.

Suggestions for Future Research

Clearly, the technology is in place for a revolution in pedagogy. New technology while offering an alternative delivery method, presents new challenges. Research needs to evaluate methods of dealing with the unique challenges. Research needs to evaluate methods of dealing with the unique challenges.

Concerning communication between the representatives of the university and the prospective and/or enrolled students, it would be beneficial to evaluate the advantages and disadvantages of each potential contact point. When is personal contact necessary, when can e-mail or phone suffice? When is posted information on a web site adequate? Are there certain classifications services that are best offered by specific technology?

With regard to communication between the instructor and the students, and among the students themselves, many future research opportunities exist. Many questions are now emerging as essential research topics. What aspects of the classroom learning community are most important and how can they be replicated or replaced by an internet class? The faculty member must consider the ways in which community has helped individual students to accomplish the course objectives. What aspects of this community will be sacrificed in the conversion to a virtual community? What advantages exist with the new technology? Assuming that the contributions of the community to the learning experience are valuable, how will they be duplicated or replaced by the new setting? In what ways can the new technology enhance the learning experience? The technologies available to the faculty and students and the creativity of the faculty and students will limit or enhance the feeling of community.

Assuming this new technology provides a valuable alternative for some individuals, marketing research must be completed to address the unique challenges of reaching the prospective students. In the past, many business schools have typically taken a passive stance, enrolling all eligible students into available courses subject to classroom space constraints. The investment in technology and course conversion should lead to aggressive marketing to a target audience that is new to the university. Marketing research is essential to the success of these new delivery systems.

Truly, the new technology is exciting and offers the opportunity to serve a wider, more diverse student population. Likewise, the technology can enhance the learning experience of students in more traditional, campus-based classroom settings. The ultimate outcome will be dependent upon decisions that are being made at this time, and only with adequate research on the topics will the information exist in order to make the best decisions.

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Figure 1: Home Page for a CourseInfo Course

Figure 2: Faculty/Staff Control Page with Full Detail Descriptors Enabled

Notes