A Hybrid Accounting Principles Course: The Best of Both Worlds

Paul J. "Jep" Robertson, DBA
Associate Professor of Accounting

Renae K. Clark, MBA
Assistant Professor of Business

Michael P. Watters, DBA
Professor of Accounting

Abstract

This paper discusses the design, implementation and preliminary evaluation of a hybrid accounting principles course at an AACSB accredited public university. A hybrid course is one that utilizes both traditional face to face instructional techniques with one or more web based tools. Many obstacles face the adequate implementation of a pure on-line accounting course. Whether these obstacles are human or technological, many accounting academics have been slow to develop on-line courses. In addition, research has been inconclusive regarding the effectiveness of on-line courses. Thus, this course was developed with the objective of using the best of traditional, face to face, teaching techniques along with incorporating effective on-line computer based tools. This paper addresses the various components used in the hybrid course along with students' perceptions of their effectiveness. Results indicate that students overwhelmingly preferred the hybrid model over a traditional lecture based accounting principles course.

Introduction

It has often been stated that teaching is more an art than a science. In other words, there is no single best way to teach a given subject matter. The recent dramatic changes in accounting education along with changes in the ability to deliver course material via computers have created greater demands, and complications, on the accounting educator.

In recent years much has been written regarding the benefits and drawbacks to teaching in an on-line environment. In a recent study over 50 percent of both public and private universities indicated that on-line education is critical to their long-term strategy (Allen, et al., 2004). However, prior research has been inconclusive regarding the effectiveness of on-line courses (Bernard, et al., 2004). In addition to the disagreement regarding the effectiveness of on-line course, there are many obstacles that students, institutions and faculty members confront in developing an effective on-line course. Some obstacles that are confronted are time requirements, costs, instructor/student relationships, and training.

Even though there is an extensive body of research regarding on-line education (Bernard, et al., 2004), there has not been much written on hybrid courses (Young, 2002; Aycock, Garnham, and Kaleta, 2002; Waddoups and Howell, 2002). This paper will discuss the design, implementation and preliminary evaluation of a hybrid course that overcomes many of these obstacles at a small AACSB accredited university. A hybrid course has been defined as

one "…in which a significant portion of the learning activities have been moved online and time traditionally spent in the classroom is reduced but not eliminated." (Garnham, et al., 2002). A primary objective of this hybrid model is to maximize the inherent benefits of the face to face (f2f) time and utilize on-line tools to ultimately result in higher student outcomes and satisfaction.

Design and Implementation

Initial design considerations involved some of the educational issues confronting on-line course delivery and processes. Some of the educational issues that were confronted were: reduction in personal contact, the role of the teacher/facilitator, the role of the student, student motivation and involvement and assessment.

Two of the most important design considerations were the ratio of f2f delivery (e.g. traditional classroom format) versus on-line delivery. In addition, much time was allocated during the design phase answering the question "…how do our students best learn accounting concepts and techniques?" The answer to this question helped to drive the pedagogical tools that would be delivered either on-line or in the classroom.

It was concluded during the preliminary design that on-line tools would be most effectively used for: lecture on topical material, partial assessment of student learning, part of the communication to both the class as a whole and to individual students (including supplemental readings, lecture notes, check figures, etc.). Based on previous research, the impact of using a variety of media styles was an important consideration at this stage (Janicki and Liegle, 2000) and it was concluded that the course would use a combination of slides, streaming video, textual material and hands-on exercises in the on-line portion of the hybrid course.

Higher level learning occurs by doing rather than just listening or reading. Thus, the traditional classroom portion of the course was utilized primarily in problem-solving exercises including peer and faculty interaction along with additional evaluation through major exams.

During the preliminary stage, the software and technological tools to deliver such a course had to be selected. Consideration was given to various criteria, including: (1) technology features (e.g. RAM, speed of connection, server, clients, platform independence, supported web browsers, video/audio to users, assessment tools, communication tools, authentication), (2) friendliness and ease of use by both the student and faculty and (3) collaboration tools.

We opted to use as our primary platform WebCT© and for the video/audio lecture component of the on-line portion TEGRITY©. WebCT serves as the portal for the on-line portion of the course and has been set up in a modular format based on the various student learning objectives. WebCT can be accessed by our students anywhere/anytime they are logged on to the Internet. Students have available to them (1) lecture notes, (2) supplemental

handouts, (3) communication tools (chat, bulletin board and e-mail), (4) hands on tutorials, (5) links to additional learning resources, (6) chapter quizzes and (7) grades (8) course schedule and (9) links to the chapter lectures via streaming video that have been recorded via TEGRITY.

By choosing WebCT, it was determined that faculty training would be minimized. Most of the materials placed on WebCT were created using software that faculty members were already comfortable with (MS Word, MS Excel, MS PowerPoint, and Adobe Acrobat) and then simply uploaded via WebCT. The chapter quiz module in WebCT was employed to provide both the student and faculty member with timely feedback regarding progress being made. Quizzes were constructed in a traditional manner and then uploaded to WebCT. Once uploaded to WebCT, the quiz could be administered on-line and graded electronically. The quizzes could be made available when the faculty member chose and had a variety of grading/administering options, including: (1) random question selection (2) time limits, (3) automated feedback to the student, (4) multiple attempts with various grading options (e.g. highest, lowest, average, etc.).

The selection of the lecture recording/capture tool for the streaming video was the one that most concerned the faculty. Concerns were expressed regarding training time for both faculty and students, delivery to students without high speed Internet access nor state of the art hardware/software, and the fact that the software/hardware would interfere with the normal way a faculty member lectures. After an analysis of the available software was conducted, TEGRITY was chosen as the tool for capturing and disseminating lecture material. This tool required minimal training and preparation time, no post production editing/conversion, and allowed faculty to teach using their own style and technique. As the faculty member records a lecture, they can use Power Point slides, documents (both electronic and hard copy), web-sites and, maybe most important to accounting faculty, a whiteboard that captures annotations. The faculty member can use their natural style of lecturing, using anecdotes and voice inflection to emphasize particular material. This software has a simple browser based interface that allows students to view recordings without having to have high speed connections or special software. TEGRITY also gives the option to create CD ROM content for additional viewing options and capturing a live classroom presentation.

The first class in accounting principles was designated to be the initial course to implement the hybrid model. This course is required for all business majors (including accounting majors) and is taught at the sophomore level. The course is a 3 semester credit hour course that traditionally meets for 50 minutes per class 3 days per week. The final design called for the class to meet in a traditional f2f environment only 2 days per week with the on-line portion monitored on a weekly basis. The course covered introductory financial accounting topics using a traditional accounting textbook. Grades were based upon on-line quizzes (graded automatically via WebCT, participation (both on-line posting and in-class), problem solving (delivered via WebCT and in-class) and major exams (administered in-class).

Evaluation

At the end of the semester a survey was administered to the students to ascertain their perceptions of the hybrid course model. The survey was given using the survey module of WebCT, which recorded if a student responded, but maintained the anonymity of their responses. Out of a total enrollment of 73, 64 students completed the survey.

The survey was organized into three main sections. The first section dealt with the students' demographic profile, the second with their perceptions/uses of WebCT, and the third with their perceptions/uses of Tegrity. The following section will follow this same classification.

Demographics

It is often argued that the current generation of students respond to media (the so-called MTV generation) more than traditional lecture models. In order to determine the demographic profile of the students that completed the survey, we asked a question regarding their age. We found that 73.3% of the students were age 25 or younger and that only 2.7% of the student were over the age of 35. The students also had a range of GPA's, with 48% with a 3.00 – 4.00 average, 46% in the 2.00 – 2.99 and the remainder below 2.00 (on a 4 point scale).

WebCT Perception/Use

WebCT was the course technology platform and portal used throughout the hybrid course. The results indicate that the students overall perception of WebCT was quite positive, with 91.8% of the respondents very satisfied or fairly satisfied with WebCT (Illustration 1). One concern often expressed in designing computer based tools is the ease of use by the students (Koohang and Du Plessis, 2004). An overwhelming majority of the students (94.6%) found WebCT to be either very easy to use or easy to use.

The general questions regarding WebCT were followed up with questions regarding specific tools used within WebCT; course content, quizzes, grades. In each of these cases, a majority of the students found them useful. The continuous availability of course content, syllabus and other information was useful to 100% of the students with 70.3% responding that it was very useful. The ability to check their grades was useful to 100% of the students, whereas the quizzes were deemed to be useful by only 56.7% of the students (Illustration 1). All three of these tools enabled the student to receive information and feedback immediately, which has been shown to be important in helping students achieve the learning objectives of a given course.

The students were asked to indicate how much they agreed with the following statement: "WebCT helped me develop more professional responsibilities than most other courses." The responses were quite interesting in that 86.5% of the students agreed or strongly agreed with this statement. This result perhaps supports the idea that on-line learning is more

student focused and requires more self-motivation and responsibility than a traditional class. Overall, the perceptions of the students regarding the benefits of using WebCT were quite positive and confirmed our expectations derived during the implementation and design phase. Generally, the written comments were quite positive in response to an open ended question regarding their general impression of WebCT. On the positive side one student wrote:

"It promoted time management, but at the same time was an advantageous way to improve grades. WebCT provides the instructor with a way to observe who wishes to excel in the class and who does not. WebCT provides me with the comfort and ease I desire after I take a test or quiz because the instructor can post grades."

On the negative side, another student indicated that "hate it, do CLASS work."

Tegrity Perception/Use

Tegrity was chosen as the software to record and disseminate the on-line streaming video. This software had great promise, in that it allowed the faculty to record their lectures in a very natural style. While recording the lecture, the faculty could use all of the typical classroom tools (e.g. whiteboard, PowerPoint, overheads…) and create annotations wherever they desired. Thus, the next section of the student survey centered on their perceptions of Tegrity (see Illustration 2).

Illustration 1. WebCT Survey Results

1) Which of the following best describes your experience with WebCT?	Very easy to use 40.5%	Easy to use 54.1%	Somewhat easy to use 5.4%	Fairly difficult to use 0%	Very difficult to use 0%
2) How useful did you find WebCT as a place for your instructor to put the course syllabus, course content, or other similar information?	Very useful 70.3%	Fairly useful 16.2%	Useful 13.5%	Fairly Unuseful 0%	Unuseful 0%
3) How useful did you find the quizzes in WebCT?	Very useful 29.7%	Fairly useful 27.0%	Useful 37.8%	Fairly Unuseful 5.4%	Unuseful 0%
4) How useful did you find the WebCT feature that allows you to check your grades online?	Very useful 75.7%	Fairly useful 24.3%	Useful 0%	Fairly Unuseful 0%	Unuseful 0%
5) Compared to a course	Quite a bit	A little	The same	A little bit	Quite a bit

that does not use WebCT, did you enjoy this course more or less because it used WebCT?	more 51.4%	bit more 35.1%	 10.8%	less 2.7%	more 0%
6) What is your overall satisfaction with WebCT?	Extremely satisfied 45.9%	Fairly satisfied 45.9%	Indifferent 8.1%	Fairly dissatisfied 0%	Extremely dissatisfied 0%
7) Which of the following statements most closely matches your opinion	I wish every course I took used WebCT 37.8%	I wish more courses I took used WebCT 56.8%	I wish fewer courses I took used WebCT 5.4%	I do not want to use WebCT with any course 0%	
8) Please indicate how much you agree with the following statement: WebCT stimulated my intellectual efforts beyond that required by most courses?	Definitely agree 13.5%	Somewhat agree 48.6%	Neutral 35.1%	Somewhat disagree 2.7%	Definitely disagree 0%
9) Please indicate how much you agree with the following statement: WebCT helped me develop more professional responsibilities than most other courses	Definitely agree 24.3%	Somewhat agree 62.2%	Neutral 8.1%	Somewhat disagree 5.4%	Definitely disagree 0%

Tegrity lectures were accessed via a link on the WebCT site and allowed the student to view a lecture as many times as they wanted, anywhere they had Internet access and anytime. The results indicate that the students found Tegrity easy to use with 75.6 % indicating it was easy or very easy to use; however, 5.4% found it difficult to use. The difficulty of use was usually related to hardware downtime or the use of AOL or Netscape as the browser since Tegrity runs most consistently with the MS Internet Explorer browser.

The responses to question two (Illustration 2) were quite encouraging. Over 64% of the students would select a course that uses Tegrity over a course that does not, with 21.6% neutral on the selection. One may surmise from this result is that students found value in the Tegrity module of the hybrid course.

As discussed previously, the hybrid course was structured where 1 out of 3 days was a "web day" that utilized on-line tools and not a traditional f2f class. A majority of the students tended to want more "web days" (59.4%) than were currently in the class.

Since one of the benefits of the on-line streaming of lectures was the ability of students to view a lecture multiple times, the final question regarding Tegrity centered on how many times they viewed a Tegrity lecture. Of the respondents, 62.1% indicated they viewed the lecture more than once with 13.5% of the total viewing chapter lectures more than 5 times on average. However, 32.4% viewed the lectures only once (obviously the same number of times they would have viewed an in-class lecture if they were in class that day) and 5.4% rarely viewed the lectures at all. Obviously the benefit of repeat viewings was not realized by all students, but those that chose to had the ability to do so.

Illustration 2. Tegrity Survey Results

1) Which of the following best describes your experience with Tegrity?	Very easy to use 37.8%	Easy to use 37.8%	Somewhat easy to use 18.9%	Fairly difficult to use 2.7%	Very difficult to use 2.7%%
2) Please indicate how much you agree with the following statement: I would select a course that uses Tegrity over the same course that does not use Tegrity	Definitely agree 40.5%	Somewhat agree 24.3%	Neutral 21.6%	Somewhat disagree 10.8%	Definitely disagree 2.7%
3) Please indicate how much you agree with the following statement: The Tegrity lectures helped me understand the material	Definitely agree 45.9%	Somewhat agree 37.8%	Neutral 5.4%	Somewhat disagree 10.8%	Definitely disagree 0%
4) Please indicate how much you agree with the following statement: I would prefer the class have more "web-days" during which I would use Tegrity	Definitely agree 32.4%	Somewhat agree 27.0%	Neutral 24.3%	Somewhat disagree 10.8%	Definitely disagree 5.4%
5) On average, how many times did you view a Tegrity chapter lecture	More than 5 times 13.5%	Between 3 and 4 times 10.8%	Two times 37.8%	One time 32.4%	Rarely, if ever 5.4%

The survey also solicited students' comments regarding their attitudes/experiences with Tegrity. Most of the positive comments centered around the anytime/anywhere benefits of the Tegrity lectures. Typical of the positive comments, one student wrote: "The ability to review and complete work per my own schedule. There were definitely nights I listened to an Acct A lecture at midnight. This really helps me b/c I do have a full time job outside of class." The few negative comments that were received primarily related to hardware and access problems. Some of these problems were on the university's side (e.g. server down) and others were on the students' side (web browser down or dial-up Internet connection access).

Conclusion

This paper has discussed a hybrid approach to teaching accounting principles. Using on-line tools along with traditional face-to-face classes strives to bring the best of both worlds to accounting education. Students generally perceived the hybrid class as an excellent model for the accounting principles course and would prefer that more, if not most, courses followed this model. Some of the benefits mentioned by students were: ability to review material at their convenience, ability to "catch-up" on course material when they cannot/did not attend class, less time spent commuting and more time spent learning, and more effective communication of grades and course requirements, and that material may be learned at their pace and is not constrained by class times.

Some of the benefits that faculty have seen are: once recorded a lecture need not be repeated in multiple sections, no dramatic change in the way one teaches, the automatic grading of WebCT quizzes, effective communication to students, frees up time in class for problem solving exercises and group interaction, and less commuting time. Some of the negative aspects are the reduction in face to face interaction, occasional system downtime, and additional upfront preparation time for construction of the WebCT site.

The university perceives benefits deriving from freeing up classroom space and the ability to attract more non-traditional and distant learners. Overall, the results have been quite promising, and the intention is to expand the hybrid on-line model to many more accounting courses.

The question that still remains to be answered (and perhaps the most important one of all) is the effectiveness of such a hybrid approach on actual student learning and success. This is an area of future research that will be undertaken to ascertain the true effectiveness of this hybrid mode.

References

Allen, I. & Seaman, J. Entering the Mainstream: *The Quality and Extent of Online Education in the United States, 2003 and 2004*. The Sloan Consortium. 2004.

Aycock, Alan, Garnham, Carla & Kaleta, Robert. (2002). *Lessons Learned from the Hybrid Course Project*. Teaching with Technology Today. Vol. 8 Number 6: March 20, 2002.

Bernard, Robert M., Abrami, Philip C., Lou, Y. & Borokhovski, Evgueni. (2004). *How Does Distance Education Compare With Classroom Instruction?* Review of Educational Research. Fall2004.

Janicke, T. & Liegle, Jens. (2000). *More that Class Notes? A Features Review of Current Web-Based Course Management Tools and Their Adherence to Accepted Learning Pedagogy*. Academy of Educational Leadership Journal. Volume 4, Number 2, 2000.

Waddoups, G & Howell, S. (2002). *Bringing Online Learning to Campus: The Hybridization of Teaching and Learning at Brigham Young University*. International Review of Research in Open and Distance Learning. January 2002.

Young, J. (2002). *'Hybrid' Teaching Seeks to End the Divide Between Traditional and Online Instruction*. (2002) Chronicle of Higher Education. March 22, 2002.

Biographies

Dr. Robertson has been with Henderson State University (HSU) since 2004. Dr. Robertson earned his BA and MBA from the University of New Mexico and his doctorate from Mississippi State University. Dr. Robertson has over 15 years experience teaching accounting and has used web-based technologies in the class room for the last 6 years. In addition to his teaching Dr. Robertson has had numerous articles published in professional journals and has co-authored two on-line accounting courses for John Wiley & Sons.

Ms Clark has been with Henderson State University (HSU) since 2003. Ms. Clark teaches a variety of courses in information systems in the School of Business. Prior to coming to HSU Ms. Clark taught at the Dona Ana Branch of New Mexico State University. She has extensive experience in web-based teaching tools along with practical experience as a former vice-president for the New Mexico Lottery. Ms. Clark earned a BS and BA at the University of Missouri and her Masters of Business Administration at New Mexico State University.

Dr. Watters has been on the faculty at Henderson State University since 1996. Dr. Watters earned his bachelors and masters degrees at the University of Texas-Arlington and his doctorate from Mississippi State University. Dr. Watters is currently the MBA program director and teaches a variety of on-line and traditional classes in the accounting area. Dr. Watters has published extensively in the area of taxation and has co-authored two on-line accounting texts.