

TEACHING ACCOUNTING AND OTHER BUSINESS COURSES TOTALLY AND PARTIALLY ONLINE

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ABSTRACT

This paper summarizes the state of key issues affecting non-traditional delivery systems in the United States, especially for those educational scenarios where students are generally computer prolific and regularly use laptop computers for both traditional and online courses. The paper also describes preliminary results of a study in two Principles of Financial Accounting courses—one with traditional face-to-face seat time and the other with a one-third reduction of in contact class time. Findings include that the partially online section earned stronger grades at the end of the semester, but did suffer with slightly greater attrition. The hybrid section earned higher grades even though they were taking a larger semester hour load. The traditional class section was able to improve final grade average since the midterm, but was unable to catch up to the achievements of the partially online section at the conclusion of the course. However, the number of withdrawals from the traditional section were less than the online section, suggesting if attrition is an important objective, traditional mainstreaming with full course meeting times is desirable.

INTRODUCTION

The tremendous growth in recent year of totally or partially "hybrid" online courses in colleges and universities suggests that this form of distance learning is not a passing fad but an educational phenomenon that is permanent and increasing. In fact, some programs in both nontraditional--and traditional university settings are totally online. For example online MBA programs are offered at both the nontraditional University of Phoenix and the very traditional Auburn University. Other universities such as Brandman University, a member of the Chapman University system headquartered in Orange, California, offers undergraduate and graduate programs favoring a "hybrid" approach with both face-to-face traditional classroom teaching as well as a strong online component. Another example of a university where the hybrid partially online approach is favored over the totally online mode is Clayton State University in metro Atlanta, Georgia where some business courses, especially those with a class schedule of Monday/Wednesday/Friday, are offered in the hybrid format.

TRADITIONAL VERSUS ONLINE

The number of online course offerings in business courses continue to increase. Courses with a significant online presence are popular with both university administrators and students--both the younger traditional students and older adult learners. Increased student enrollment eases some concerns by budget-conscious administrations. Most younger traditional students are very comfortable with technology, especially the "Millennials" born between approximately 1983 and 1996, also called "Generation Y" or "Echo Boomers" who have been growing up using technology from an early age. Students of all ages like the flexibility in both location and time. With rising fuel costs, heavy traffic, and increasing work commitments often requiring travel, non traditional adult students also often prefer the advantages of the online format. They often use technology in their workplace and are familiar with it. Another advantage of the online approach is noted by Machuca (2007) who studied online teaching methodologies and found that online learning provides more customized and individual instruction for students with different learning needs and styles, as well as provide adult learners with greater opportunity to gain insight and knowledge through a variety of instructional media.

Another point is that exposure to online learning prepares students for their future careers. For example in the accounting profession the prestigious Certified Public Accounting (CPA) designation requires passing a rigorous examination that in recent years has become increasingly technology-based, with some parts simulating online research that would be done by an accounting professional in today's online accounting environment. Accounting records of companies are maintained, and financial statements are prepared with the utilization of accounting software. Recently the thousands of pages of "Generally Accepted Accounting Principles" have been organized into the online "Codification" used by accounting and auditing professionals. Tax practitioners have used computer-based and online resources for many years. All accounting professionals face opportunities to purchase diverse software packages from vendors, and the larger firms engage in a substantial amount of internal development.

The advantages of online learning as preparation for the modern work environment has been suggested by Borthick and Jones (2000) who note that the online approach to learning prepares students for work environments in which new problems are the norm and professionals work collaboratively to solve them in virtual space. These authors make a case for a master's course in information systems assurance, valuable to future professional accountant auditors, being more effective than a traditional lecture-based course because of its use of collaborative discovery learning online. Borthick and Jones hold that when learning participants are immersed in a community of practice and solve problems collaboratively together, these online participants seek the knowledge they need and solve problems together in a virtual environment. The authors point out other advantages such as accessibility because participants may be anywhere they have Internet access, and affordability as the development and delivery efforts are leveraged across multiple universities.

In thinking of the challenges of business education, more advantages of online learning become apparent. Increasingly there has been a focus on the importance of global business including international issues in education. It is interesting that one of the two International Education Practice Statements (IEPS) released by the International Accounting Education Standards Board (2007) focuses on an information technology (IT) knowledge component of a professional accounting education program in outlining the knowledge and skills necessary to prepare professional accountants to perform competently in the IT environment. According to IEPS 2, all professional accounting candidates are expected to have knowledge and understanding of at least one of three roles--manager, evaluator or designer of information systems--or a combination of these roles.

Since online or at least partially online classes appear to be desirable for a number of reasons, an important question has arisen regarding whether or not online classes are as effective as traditional face-to-face courses. Many of the earlier research studies have not found significant differences. Salimi (2007) recounts a 1999 study by Thomas Russell entitled "The No Significant Difference Phenomenon" in which the author examined 355 studies comparing distance education to traditional education, and found that many studies supported the view that there is no significant difference between the two modes of instruction. Some subsequent studies have tended to deliver similar results.

For example Gagne and Shepherd (2001) studied the differences between an introductory graduate accounting class delivered according to traditional method versus through distance learning. The authors findings supported prior research in that the performance of students in the online course was similar to the performance of students in the on-campus course. Gagne and Shepherd also found that students' evaluations of the course were similar, although students in the online class were less satisfied with instructor availability than the in-class students, and the authors suggested that future research in this area should focus on improving student perception of instructor availability, for example by videos or improving students' perceptions of instructor availability, and also to study whether some student subjects are more prone to this student perception problem than others.

Basile and D'Aquila (2002) found no significant differences in performance results between students using WebCT course management software and students studying with traditional instruction methods. Friday, Friday-Stroud, Green and Hill (2006) conducted a multi-semester (eight semesters), multi-course study comparing student performance in undergraduate online and traditional sections of strategic management courses, and similar to previous research studies, found no statistically significant

differences in student performance between online and traditional classes. Mallory (2007) compared three classes of students enrolled in a traditional Principles of Accounting course to their distance learning counterparts. The traditional and online students were taught by the same instructor and provided with the same learning material, as well as given equal access to the instructor outside of class. The author found no significant differences in final course grades or in attrition rate, although there was a significant difference in the self-reported behavior types between the online and traditional students. However academic socialization did not appear to be of concern to the online students. Larson-Birney (2000) studied Internet based and traditional deliveries of an introductory accounting course, and found that the final exam grades and final course grades were very similar between the two groups. However the withdrawal rate was almost three times higher in the Internet class.

Other authors (Huh, Jin, Lee and Yoo, 2009) have studied the differential effects of student characteristics on performance as measured by test scores between online courses and offline courses in undergraduate accounting at California State University, San Bernardino. Student characteristics variables included GPA, age, commuting distance, working hours, gender and marital status. While overall empirical results suggest no significant differences in student performances, some characteristics variables were found to have differential effects on performance between students in the online and traditional courses, with the effects of GPA and gender on performances being significantly higher for offline students than for online students.

In another interesting study, Stapleton, Wen, Starrett, and Kilburn (2007) investigated generational differences in using online learning systems, examining factors of perceived satisfaction, perceived learning, online technology environment, interaction, student motivation and self-management. In analyzing 966 usable responses, a number of generational differences were found. Millennials have more interaction with students, have less interaction with instructors, are more comfortable with online course discussions, and are less likely to have an online learning plan. However contrary to profiles of generations in the literature, the results suggested that the perceived satisfaction, learning, and motivation of these generations are more homogeneous than different. Nellen, Manly, and Thomas (2009) also studied accounting education and the Millennials. Based on their unique characteristics, the authors suggested specific teaching techniques to better engage these students. For example, since Millennials are comfortable with and know how to use technology, to better engage these tech savvy students in the learning process, instructors would be wise to make use of technology where appropriate, including PowerPoint, course-management software, pod casts, and Internet resources, and in addition should respond quickly to e-mail or IM questions.

Student perception of online courses has stimulated research. Watters, and Robertson (2009) who taught introductory undergraduate, upper-division undergraduate and graduate accounting courses in an online format found that approximately 75% of the undergraduate students indicated that online delivery of the courses was as effective or more effective than a traditional course. Watters and Robertson also found that all of the students in the graduate course agreed that the online course delivery was as effective as a traditional course, and furthermore that in the future they would prefer to take more online courses as compared to traditional courses. However less than one-half of the combined students in the two undergraduate classes indicated that in the future they would prefer to take more online courses, compared with traditional courses. The authors noted that in the case of the course they studied, that the online delivery was probably more appropriate for the graduate class.

A CALL FOR THE HYBRID DELIVERY

It seems reasonable that preference of Millennials for technology may indicate a preference for online delivery--whether totally online or in the partially online hybrid form. However as indicated by the above authors, it may be that certain courses, particularly undergraduate course in such disciplines as accounting, may best be suited for the partially online hybrid approach. Dowling, Godfrey and Gyles (2003) investigated the association between the learning outcomes of students and the two teaching models of a traditional face-to-face model and the hybrid flexible delivery model. The hybrid model

was delivered using a combination of face-to-face and electronic delivery and communication tools. The authors found that academic performance is higher for students who studied under the hybrid flexible delivery model, achieved higher marks in prerequisite units, were female, or were younger. The authors provide evidence that the hybrid method can be used to achieve the benefits of small class sizes when teaching large numbers of students--results of interest to administrators interested in supplying education to increasing numbers of students and meeting flexible delivery schedules.

AN INFORMAL EXPERIMENT WITH HYBRID

The authors of this paper have over sixty combined years of teaching Accounting Principles courses. Our Institution is known as a laptop university where all students must have available in and outside of class a compliant laptop computer. Accordingly, as we designed our study, we needed to be sensitive to the equal accessibility to the technology by all students—both traditional and partially online. Furthermore, we are unable to control for the technology effects studied by Basile and D'Aquila (2002). While our Institution was an early leader in online course development, we backed off in recent years on full scale online courses in our accounting curriculum.

However, partially online courses are tried periodically in the undergraduate curriculum for managerial cost, income tax, and intermediate accounting. The parameters on a partially online class typically are contact time between student and professor in class at approximately 40 to 60% of the traditional class with conventional seat time. Our efforts in these courses have yielded mixed results. Faculty teaching these courses did enjoy the ease of attending conferences and professional meetings resulting from less structured mandatory seat time, but because each of these courses is an entry point into the accounting major at the junior year, and due to the ability to offer only one course of each class each semester, we have not been able to measure true success with the hybrid delivery structure.

During the Fall, 2009 semester, we devised a way to measure hybrid teaching and learning effectiveness. By using the standard Principles of Financial Accounting course, required of all majors in the School of Business and some allied Schools, we were able to counteract both the control and the rigor problem. Control was achieved by measuring the results of one instructor who simultaneously taught a traditional and a hybrid section in the same semester. While the accounting principles courses are substantially rigorous for many students, the authors believed that type of rigor was one we could control for through sufficiently large class sizes.

A continuous concern by the authors as well as our administration, is not to deprive any student tools which could assist them in path to success. While making all the electronic tools equally available to the traditional and hybrid sections, we do not believe we jeopardized relevance of our results. Rao and Walsh (2000) recommended “chat” discussion board activities by students, and this is a practice that is heavily engrained with many of our students. Accordingly, we did not want to withhold the technology applications from any student. Kozub (2010) reports that supplemental online resources anyway are not viewed by students as substitute for class attendance, and that the availability of the resources does not enhance grade performance in undergraduate financial accounting.

Figure 1 shows the results in terms of class GPA (A=4.0) of the sections under study

FIGURE 1. COMPARATIVE COURSE GRADES

Delivery Style	Original Class Size	Number of Withdrawals	Percent With-drawals	Students Completing Course	Midterm Course GPA	Final Course GPA
Traditional	55	7	12.7%	48	2.04	2.29
Hybrid	52	11	21.2%	41	2.73	2.55

To assist with possible future policy directions regarding student advisement, we also sought to the academic measures of Overall GPA. A suspected distraction from doing high level work is overall course load so we decided to factor that in as well. Figure 2 carries these results.

FIGURE 2. COMPARATIVE TOTAL SEMESTER HOURS AND OVERALL GPA

Delivery Style	Sample Size	Total Semester Hours	Overall GPA
Traditional	48	10.73	2.73
Hybrid	41	12.34	2.57

Preliminary analysis of data between the traditional and hybrid showed significance in course grade, which was higher for the hybrid section. The difference in total semester hours was also significant, with hybrid taking a larger semester course load than the traditional group. However the difference in overall GPA between the two groups was insignificant.

CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

Our preliminary findings reveal that some students do tend to perform better under the hybrid rather than the traditional delivery method. This is so even though students in the hybrid group were taking more semester hours.

We held constant as many variables as possible between the two sections, except for the number of meeting times. The instructor's office hours and Blackboard Web platform were identical as were the type and quality of assessments.

We realize that earlier studies focused on age, gender, and other variables. We plan to explore these characteristics in future research. One limitation that we plan to control for in the future is the timing during the day when classes do meet. We suspect that differences will be revealed in morning, afternoon, and evening sections.

We are delighted to see positive results in the overall final grade for the hybrid section. However, the deterioration in the grade (or further lack of progress) since the midterm, and the larger number of withdrawals, may be indicative that the achieving students rest on their laurels and coast the second part of the semester, once learning the ropes of the hybrid delivery, and that traditional students will on the other hand come to the plate with determination and complete the course with satisfactory results.

We make no claims at this time about external validity. While students are notified in advance of which section is hybrid, that may mean little to some students who are just looking for a satisfactory grade with minimal preparation. The hybrid section under study met only two-thirds of the regular class time, with Friday being the normal “non-meet” day. Both the hybrid and traditional section met most Mondays and Wednesdays.

The results indicate that the hybrid class actually performed better in terms of grade point average. However it is interesting to note that the number of withdrawals in the hybrid section was greater than in the online section. Although the hybrid format may have influenced the withdrawal rate, It should also be noted that the hybrid section was a day section whereas the traditional section was an evening section. Thus it may be that the differences in performance were due to other factors including demographics of students, and the necessity of future research is acknowledged. Future research is also needed to compare the hybrid approach to the totally online delivery mode.

The authors hope to include in their future research the issue of faculty development to improve online delivery. It is interesting to note that some institutions require faculty to complete an online training program before teaching online courses. The benefits of this approach have been suggested in prior research. For example, Lavoie and Rosman (2007) describe how the Resource-Enriched Learning Model (RELM), an active student-centered approach to faculty development and course design and delivery provides faculty with the skill set learned in the same environment that they will create for their students. When faculty experience active learning firsthand in an online environment they become better prepared to create a similar learning environment for their students. Salimi (2007) discusses how teachers need to be trained not only in the technology of online teaching, but in designing online education courses as well. He notes that some universities such as the University of Maryland require their online instructors to successfully complete a thorough training program before they are allowed to teach online courses, but in many other schools the resources to train faculty to teach online are not enough and instructors are left to flounder around on their own in developing their online courses. Salimi also points out that it takes much longer to set up an online course than a traditional course, and that there needs to be adequate compensation such as release time given to faculty for this purpose.

In summary, future research is needed in a number of different aspects of online learning, including issues from the students perspectives and also from the faculty perspective. Important issue for future work include study of the effectiveness in meeting learning outcomes, differences between online and traditional face-to-face instruction, and differences between the totally online and partially online hybrid approach. It is hoped that presentation at the SEINFORMS Conference will provide an opportunity for colleagues to share best practices and experiences in teaching online business courses.

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