Blended Learning vs. Traditional Classroom Settings: Assessing Effectiveness and Student Perceptions in an MBA Accounting Course

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Abstract

A survey was conducted of Master of Business Administration (MBA) students in an accounting class at a university in the Northern United States to compare students' assessments of course effectiveness and overall satisfaction with the course. One group of students were enrolled in a traditional in-class section, and another group in a "blended-learning" section in which the primary course delivery method was online, but in which students met in class on a limited number of occasions. Overall perceptions of the course, instructor and learning outcomes were positive for both groups. Students also felt strongly that they would use the material in their careers. The majority of students in the blended learning section indicated that they would take another accounting course using that approach if it were offered. However, some interesting differences were noted. Specifically, students in the traditional setting were more satisfied with the clarity of instruction. On the other hand, students in the blended-learning section felt more strongly that they gained an appreciation of the concepts in the field. Blended-learning students also indicated more strongly that their analytical skills improved as a result of the course. The results suggest that the two delivery methods were similar in terms of final learning outcomes, but that both may be improved by incorporating aspects of the other.

Introduction

With the use of computers becoming nearly universal over the last several years, college course delivery was almost certain to be affected. At universities across the nation, there has been a proliferation of distance education courses, with a total enrollment estimated at 3 million students (Fisher, 2003). With increasing numbers of nontraditional students desiring to increase their knowledge base, skills, and/or marketability, a number of schools have offered Master of Business Administration (MBA) programs that are entirely online. The convenience of such programs may mean the difference for some between furthering or foregoing the additional education because of the high opportunity cost of doing so. Undoubtedly, classes that meet once or more every week for 15 to 16 weeks make the opportunity costs prohibitive for some students.

As is the case with any new offering, the growth in online education is not without growing pains. Crow et al. (2003) summarize a number of factors that others have reported as impediments to further growth. Included in these factors is that instructors find the administration of online courses to be time-consuming. Students are often frustrated, citing problems with the technology and lack of communication. Importantly, some programs experience high dropout rates as a result (Bennett, 2000).

Courses incorporating online learning range from those that are completely online, with no class meetings, to those that provide for a few meetings in a classroom during the semester. An example of the latter is one in which the Web is the primary instruction mode, but there are a limited number of other face-to-face meetings at various points in the semester. This "blended learning" approach may be appealing to many students because it offers the convenience of a primarily-online course, but allows for at least a few meetings with the instructor in person. This approach affords the opportunity to see the instructor face-to-face and avoid a completely impersonal course experience, thereby creating a learning community without an overly-burdensome meeting schedule.

In order to ensure that course objectives are accomplished, it is important to understand how effective the alternative course delivery methods are when compared to the traditional classroom approach. Some research has examined the differences in effectiveness between courses that are

completely online and those that use a traditional classroom, with mixed results. However, very little research has examined the differences between traditional in-class delivery and blended learning approaches. Therefore, we conducted a survey of students at a university in the Northern United States in order to assess the perceived effectiveness of the two course delivery methods.

Prior Literature

Results of prior distance learning studies are mixed. Some conclude that distance learning is at least as effective as traditional classroom learning (Dellana et al., 2000; Iverson et al., 2005; Sooner, 1999; Jones et al., 2005), while others have found that graduate students in traditional face-to-face courses outperformed those in web courses (e.g. Terry et al., 2001; Ponzurick, 2000).

Studies in distance learning with respect to accounting courses have primarily focused on overall effectiveness and have related primarily to courses offered completely online (Gagne and Shepherd, 2001; Vamosi et al., 2004). Again, the results are mixed. Gagne and Shepherd (2001) compared students' survey responses in traditional and online sections of a financial accounting course and found no differences in final grades and overall evaluations of the course and instructor. However, in a study by Vamosi et al. (2004) of student perceptions in an undergraduate accounting principles course, students indicated that distance learning was less interesting and less efficient than traditional delivery, which might be associated with lower overall course satisfaction than they had anticipated.

Although the blended-learning method has become popular in both the corporate and academic world, little research has examined its effectiveness relative to traditional face-to-face instruction. In an MBA statistics course, Grandzol (2004) investigated student responses to blended learning and traditional delivery methods, but found inconclusive evidence about learning outcomes as measured by examination scores. Grandzol also found that students' perceptions in terms of enthusiasm, preparation, grading, and clarity of instruction were similar for the two sections. In a descriptive study**,** Trasler (2002) argues that flexibility, variety and adaptability are key factors in attracting, retaining and motivating learners.

The distance learning research is relatively scarce in technical topics such as accounting. The current paper is primarily exploratory and comparative in nature and extends the literature by presenting survey results relative to a graduate accounting course. We assess the relative effectiveness of blended-learning and traditional classroom delivery along several important dimensions relating to the following general research questions:

- How does blended-learning compare with traditional classroom delivery in terms of student learning outcomes in a graduate-level accounting course?
- Are there differences in overall perceptions of the instructor and the course?

The following sections discuss our research methods and statistical results. We then summarize our conclusions and the primary implications of the study.

Method

Subjects

Student participants were enrolled in either a traditional classroom section (n = 38) or a blended-learning section (n = 58) of an MBA course that covered introductory material in financial and managerial accounting. The same instructor taught each class and administered the course in the same way, except for the method of course delivery. Using this approach allowed us to "control" for differences due to instructor, evaluation criteria, and other potential confounds. The traditional and blended-learning sections involved two separate sections over two semesters. Within delivery methods, we compared sections and found no significant differences between semesters on the survey item responses.

In addition to the survey items of primary interest, we collected information regarding age, undergraduate grade point average (GPA) and years of prior work experience in order to examine whether there were significant differences between the two delivery methods on potentially important demographic variables. The average age of student participants was 32 years (standard deviation = 8.24) and their prior work experience ranged from 2 to 36 years, with

a mean of 9.79 years (standard deviation = 8.61). The average undergraduate GPA reported was 3.21/4.00 (standard deviation = 0.37). There were no significant differences between the two delivery methods with respect to these variables ($p > .4$ for all three variables).

Course Administration

The blended learning sections consisted of four on-campus meetings during the semester, one of which was at the beginning of the semester. All other "meetings" were online for two hours each week during the semester. The traditional section met twice each week for 75 minutes each.

The traditional and blended-learning sections were identical in terms of the factors that determined students' grades and the relative weight of each factor. The instructor conducted classes in the traditional sections using a combination of lecture and class discussions, focusing the lecture on a summary of key issues related to particular topics. Discussions focused on illustrative examples from actual financial reports and cases assigned for a particular day. In the blended learning sections, the instructor conducted the four in-class meetings in the same way as those for traditional classroom sessions. Online class meetings primarily focused on specific student questions e-mailed to the instructor prior to online meetings. The instructor required students in the blended learning section to participate during online class meetings.

The course grade for both traditional and blended-learning sections was based on homework case performance (50%), examinations (40%) and class participation (10%). Students completed five homework cases in groups of four formed during the first class meeting. Each group made a single submission for each case. In the first meeting and in the course syllabus, the instructor told the students that they would assess the relative contribution of each group member by completing peer evaluations during the last class meeting. The instructor then adjusted individuals' grades based on these peer assessments. The overall examination score consisted of two take-home examinations.

Comparative Survey Results

General Course Effectiveness

Table 1 shows the mean responses for several questions intended to provide different measures of the comparative effectiveness of the two alternative course delivery methods. Students responded to each of these items on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). We used t-tests to examine the comparative differences.

Table 1: Comparative Overall Perceptions of the Course

Items	Blended Learning (n=58)	Traditional Classroom (n=38)	*p*-value
1. Overall, this was an excellent course.	3.88	4.12	0.25
2. Overall, the instructor was an excellent teacher.	4.56	3.82	0.01
3. I learned a great deal from this course.	4.22	3.87	0.21
4. I gained a good understanding of concepts/principles in this field.	4.16	3.58	0.03
5. The clarity of instruction was good.	3.45	4.50	0.01
6. I will use what I learned in Mgt 521 in my career.	4.12	4.00	0.80
7. I deepened my interest in the subject matter of this course	3.66	3.50	0.75
8. I was motivated to do well in MGT 521	4.12	4.20	0.86
9. I enjoyed the class	3.97	3.75	0.38
10. MGT 521 was interesting	3.95	3.70	0.23
11. MGT 521 was difficult	3.76	3.10	0.03
12. I am confident in my ability to understand and apply concepts learned in this course.	3.95	4.16	0.33

As shown in Table 1, both groups had fairly good perceptions of the course. Although the mean response for Item 1 was higher for those learning under the traditional classroom setting, the difference for that item is not statistically significant. A separate item (different scale) solicited students' expected grades, and the responses were also not significantly different for that item. In addition, both groups indicated reasonably favorable responses in terms of learning from the course (Item 3). Again, the difference shown for Item 3 is not statistically significant. Therefore, overall learning and performance do not appear to be measurably different between the two groups. Additionally, students in both groups indicated a belief that the material they learned will benefit them in their careers (Item 6).

In terms of general satisfaction with the end results of the class, students in both sections indicate at least a moderate level of agreement that the class deepened their interest in the subject matter (Item 7). The difference in means was not significant for this item. In addition, the instructor appears to have been quite successful in motivating both sections of students to do well (Item 8) and in creating an enjoyable course (Item 9). Again, the differences for these items were not statistically significant.

A further look at Table 1 reveals some interesting differences, however. Despite the comparable end result and the fact that both courses had the same instructor, traditional classroom students appear significantly more satisfied with the clarity of the instruction itself (Item 5). However, students in the blended learning section indicated more strongly that they gained a good understanding of concepts and principles in the field (Item 4). Their overall perceptions of the *instructor* were more favorable than the perceptions of their counterparts in the traditional classroom setting (Item 2). This result is somewhat surprising and suggests that something else is offsetting the impact of being relatively less satisfied with clarity of *instruction*. Blended-learning students appear to have found the course more difficult (Item 11), perhaps related to their perceptions of instructional clarity during online meetings.

Skill Assessments

Table 2 shows mean responses related to several skills commonly named as desirable for development in university curricula. Again, students responded on a scale from 1 (strongly disagree) to 5 (strongly agree).

Table 2: Learning Outcomes and Skills Assessments

Items	Blended Learning	Traditional Classroom	*p*-value
13. My writing skills have improved as a result of this course	2.33	2.30	0.88
14. My analytical skills have improved as a result of this course	3.85	3.25	0.04
15. My interpersonal skills have improved as a result of this course	3.20	2.80	0.24
16. My computer skills have improved as a result of this course	3.30	2.50	0.01
17. I am confident in determining what is relevant in solving problems.	3.93	4.28	0.20

As mentioned previously related to Table 1, blended-learning students appear to have found the course more difficult. Interestingly, however, blended-learning students indicated significantly more agreement that their analytical skills improved as a result of the course (Item 14). Since the sections differed only in delivery method, this difference is intriguing. Online or primarily-online delivery may place more burden on the learner in some cases than traditional classroom delivery because the student cannot rely nearly as much on class attendance to clear up questions on the material. Therefore, perhaps these students had to rely more on their own effort and had to find ways on their own to clear up confusing topics.

Not surprisingly, blended-learning students indicated more strongly that their computer skills increased as a result of the course (Item 16). However, likely due to students' preexisting level of comfort with computers, neither group indicated a very high mean response. In any case,

computer skill enhancement was not a primary objective of the course. Likewise, although enhancement of writing skills is universally believed an important result of college curricula, neither group of students appeared to perceive improvement in this area (Item 13). Again, however, writing skill enhancement might reasonably be expected only as a secondary objective of most accounting courses. Finally, neither group indicated very strongly that their interpersonal skills improved as a result of the course.

Both groups of students indicated that they were reasonably confident in determining what is relevant for solving problems. Problem-solving ability is generally regarded as an important skill to be developed in today's business curriculum. The Association to Advance Collegiate Schools of Business (AACSB) suggests problem-solving skills as an example of a desirable goal for undergraduate programs and explicitly calls for graduate programs to further these skills in their students (AACSB 2006). The American Institute of Certified Public Accountants, in its "core competency framework", also explicitly calls for problem-solving skills as necessary for all new entrants into the accounting profession, regardless of the sector in which they work.

Isolating Blended-Learning Students

To further assess students' perceived effectiveness of online instruction compared with traditional in-class delivery, we also asked those enrolled in the blended learning class two other questions designed to examine their general impressions about the quality of online course delivery. Students responded on the same five-point scale discussed earlier for the other survey questions. Table 3 shows these items, along with the mean responses.

Table 3: Online Class Delivery vs. Traditional In-class Delivery – Responses of Blended-Learning Students

Items	Mean Response
18. I find online class delivery of accounting materials at least as effective as traditional in-class delivery	2.52
19. I find online class delivery is more effective than traditional in-class delivery	2.16

As shown in Table 3, students in the blended learning section indicated on average that they do not generally find online course delivery itself to be as effective as the traditional classroom setting. A response of less than "3" indicates at least some level of disagreement with the statement. These responses suggest that, if the end result in terms of learning and satisfaction with the course are approximately equal to that of traditional classes, then something outside of the instruction itself contributes to their satisfaction with the course and instructor. In addition to the responses shown above, 90% of the students in the blended learning section indicated that they would take another accounting course using that delivery method, if offered. Perhaps because of the convenience and flexibility of the course, this delivery approach would not deter the majority of students in future courses.

As suggested by Chen, Jones, and McIntyre (2004), a well-researched phenomenon known as a "halo effect" (e.g. Cooper 1981) may occur in which some aspect of a course or instructor outside of the instruction affects students' overall rating of the instructor and the course. For example, the convenience of the course or the promptness with which an instructor responds to email questions may outweigh other factors and affect a student's overall perceptions.

Interestingly, a separate item also indicated that students in the blended-learning section on average contacted their instructor significantly more often outside of "class" than did students in the traditional section (5.6 times vs. 1.8 times). Students from both sections indicated that the predominant form of contact outside of class is via email. If the instructor is prompt and helpful in his/her responses to these inquiries, the "halo effect" theory would suggest that this aspect alone can offset other perceived deficiencies. However, we cannot conclude definitively from this study exactly what other aspects are driving these interesting and conflicting results.

Limitations, Summary, and Conclusions

This survey was administered at only one school and involved one MBA course in accounting. Therefore, inferences cannot necessarily be made about other courses, institutions and instructors. Although this approach may be seen as a limitation, it was necessary because an important goal of this study was to be able to make meaningful comparisons between two delivery methods. The traditional and blended-learning sections were taught by the same

instructor and differed only in the delivery method, although two sections of each delivery method were used and we found no differences due to semester. Grading and other course administration procedures were carried out the same in both courses. Therefore, we were able to be reasonably certain that the differences observed are primarily attributable to the differences in course delivery method. Otherwise, different instructors, universities, and course designs, and course subject matter could account for differences observed. Certainly, additional future studies are warranted in other courses and at other institutions in order to assess whether the results are similar to those from this study. In addition, future research should compare courses taught solely using a web-based approach and those using a blended learning approach to determine if the blended learning approach adds any incremental effectiveness. Still, this study provides some early evidence on the latter question and we can glean several insights from this survey, summarized in the following paragraphs.

Benefits of Traditional Delivery

In terms of course performance and overall course satisfaction, students learning under the two course delivery methods did not appear to differ significantly in their assessments. Students in both sections indicated a strong amount of utility from the course in terms of usefulness to their careers. The latter finding is consistent with the results of the study by Chen, Jones, and McIntyre (2004) referred to earlier. That study found that, although undergraduate students did not believe strongly that the first college accounting principles course would help them to do well in their careers, graduate students had significantly better perceptions of that course's usefulness to their careers than did undergraduate seniors who were near graduation. Graduate students are often older and have more exposure to the "real world" than undergraduates. Therefore, they may have a better appreciation for the relevance of accounting principles to the environment in which they operate.

Based on the results of this survey, however, the traditional classroom setting continues to add value in terms on *instruction clarity*. Students and instructors alike may simply be more comfortable with the classroom environment because it has always existed. This environment allows the instructor to explain more informally how to work accounting problems and s/he is not encumbered by the need to explain material using a computer keyboard. The instructor can

perhaps more easily circle numbers or point to items of emphasis while using a traditional board at the front of a classroom.

Benefits of Blended Learning

The blended learning approach may offer incremental value in terms of learning and gaining an appreciation of the *concepts* in the field. Perhaps students using this mode of delivery, simply by virtue of using their computer more extensively in the learning process, use more resources from the web and broaden their understanding by retrieving more resources such as outside articles illustrating the concepts taught. If this is the case, then it is likely that instructors could enhance the traditional classroom approach by requiring more use of the web. This increased web emphasis may encourage students not to rely as extensively on mere classroom attendance, which sometimes amounts only to passive participation. Also, online "meetings" sometimes force students to be more prepared and to participate more actively in the learning process than they might while sitting in the classroom. They may therefore be less likely to become detached and passive in the process. Of course, some instructors are very adept at incorporating active learning techniques and are able to minimize or even negate the tendency for students in the classroom to become detached. To the extent that differential appreciation of the concepts is attributable to greater student involvement, these instructors will be effective in closing the gap and helping students to develop this deeper understanding.

Based on these results, blended learning does not appear to impede students' development of certain skills considered important by accrediting bodies such as AACSB International. Students' perceptions of their general ability to determine what is relevant in problem solving were not significantly different between those participating in the two alternative delivery methods. Blended-learning students actually had stronger perceptions of their improvement in analytical skills than did students taking the same class in a traditional classroom setting. Although this study does not offer definitive evidence, the latter finding may be related to their perceptions of gaining an appreciation of the concepts, discussed in the preceding paragraph.

Tradeoffs

The results of this study suggest that there are tradeoffs in the processes for the two delivery methods examined. The authors believe that traditional classrooms will continue to offer benefits that arguably cannot fully be obtained in any other manner, but that any gaps in process effectiveness will continue to be narrowed as technology becomes friendlier for both instructor and student. Blended instruction does not appear to impair students' performance and may indeed enhance their appreciation of the concepts in some cases. In addition to the benefits for students, courses that incorporate online instruction offer a "win-win" situation for accounting programs and professors. As stated previously, students in the blended learning section indicated they would take another course using that method if offered; therefore, accounting program administrators have the opportunity to maintain or increase enrollments. This delivery method also offers professors increased flexibility in that they may operate from home in some cases, thereby freeing up commuting time for research and other pursuits.

Both course delivery approaches examined in this study serve vital purposes in today's increasingly-competitive education marketplace, and perhaps both can continue to improve as instructors learn from both delivery methods. In order to adequately equip students for the business environment in which they will operate, programs must not merely offer convenience at the expense of effectiveness. At least for the course sections discussed in this paper, this trade-off does not appear to have occurred. In any case, the goal for educators must be to continuously improve in whatever delivery method they are using in order to ensure that their students are gaining the necessary knowledge and skills.

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