

A Comparison Of Student Outcomes And Student Satisfaction In Three MBA Human Resource Management Classes Based On Traditional Vs. Online Learning

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ABSTRACT

The author taught three MBA Human Resource Management classes in the spring term of 2007 at a large private university in Florida. Two of the classes were taught in a 100% online format while the third was taught off campus in a university-owned building in Orlando where students met in a face-to-face, weekend setting. This traditional class was augmented by a WebCT classroom where students posted assignments, did exams, and communicated via email and discussion boards in the interims between classes. Comparisons were made regarding student performance and student satisfaction. In both areas, students in the face-to-face class scored just slightly better than their online counterparts.

INTRODUCTION

Eight years into the new millennium, it is an inescapable conclusion that online education is here to stay. The whole meaning of distance education has changed from the early adopter delivery systems of the 1970s when universities first began to offer significant numbers of courses in evening, weekend, and satellite campus format. Today, distance education increasingly means classes delivered via the internet. (Gibson et al, 2001)

In the past decade, online students around the world have been taking courses or even entire degree programs from a wide variety of institutions. At the turn of the millennium, the U.S. market for online classes was reported to be \$1.2 billion. (Weinstein, 2000). One estimate in late 2000 was that 1.6 million students in the United States were already enrolled in cyberclasses. (Ligos, 2000) By 2002, reports were that online enrollment was increasing by 33% per year. (Pethokoukis, 2002). Additional growth rates for 2003 (19.8%) and 2004 (24.8%) confirm that more students are taking more classes outside of the traditional environment. (Hagie & Hughes, 2005) A 2007 issue of *Planning for Higher Education* reports a projected growth to 11.5 percent of students in degree-granting institutions who will be taking online courses by 2008.

The reasons for proliferation of online courses are largely economic and demographic. Universities struggle with the need for access by populations who are increasingly far-flung, working, and facing multiple demands on their time. Lifelong learners require different points of access than traditional, campus-bound schedules allow. (Willis, Tucker, & Gunn, 2003)

As numbers of cyberstudents rise, so too does the number of studies and related articles on the efficacy of online education. Questions abound about learner outcomes, student satisfaction, administrative support, competing platforms, faculty preparation, and appropriate pedagogy. These studies do much to familiarize the uninitiated about online education and to calm skeptics who may feel that a departure from face-to-face education is both radical and an inferior approach.

This study provides data from the author's comparison of three graduate HRM courses taken in one term at the same university. Two were 100% online classes and one was an off-campus, face-to-face class. Caution was taken to make the classes as similar as possible and results were examined in terms of learner outcomes and student satisfaction. The study adds one more data point to the small but growing literature comparing online and traditional classes.

A COMPARISON OF ONLINE AND TRADITIONAL CLASSES

To date, comparative data has been gathered regarding performance measures of online learning and/or student satisfaction with the medium. In the latter category, some studies have assessed what online students feel are the benefits and challenges in taking online classes. Gibson et. al. (2001) for example, surveyed 129 graduate and undergraduate students at 3 universities regarding the advantages and disadvantages of online classes. The major categories of positive responses were in the areas of flexible class time, ability to attend class from anywhere in the world and online pedagogy. The major negative aspects reported were technical problems, lack of face-to-face interaction, and the perception that online classes seem to require more time and work.

Cooper (2001) surveyed traditional and online students who took Fundamentals of Computer Applications in the 1999-2000 academic year. Over 80% of the online students reported that the format helped them manage their time better and they liked working at their own pace. However, while 38% of the respondents reported that the amount of learning was approximately the same as in a traditional class, 31% felt they learned more in a traditional class.

Hagie & Hughes (2005) polled currently online students who had taken traditional classes in the past to assess the positive and challenging aspects of online vs. traditional classes. In the positive area for online classes, students reported both pedagogical factors such as timing and pacing of their work and feeling more free to participate and logistical factors such as not having to commute or deal with traffic. As positive factors of traditional classes, students reported only pedagogical factors such as getting to know other students as individuals. In terms of online challenges, Hagie & Hughes' participants reported problems with time management, lack of immediate instructor feedback, and not having enough personal contact with others in the class. Challenges associated with the traditional classes were largely logistical, i.e., trouble getting to class, while others dealt with dislike of the lecture format and reluctance to participate in the face-to-face setting. (The author of the current article suggests that the absence of technical problems as a major challenge reported in this study may be due to the increasing technical competence of online students as well as the availability of online technical support.)

Studies comparing performance measures of online vs. traditional students have been particularly interesting to academics. One of the earlier studies examining this question was by Schulman and Sims (1999) who themselves were early adopters of online classes. Using pre-tests and post-tests to compare their own classes in both formats, the authors concluded that the learning experienced by students in both settings was equal. A study by Ryan (2000) found that student perception of quality and final grades for online and traditional students were not significantly different for a class on construction equipment and methods. Nichols, Shaffer & Shockey (2003) compared learner outcomes from an online tutorial in information literacy with the traditional face-to-face instruction for this material and found both learning and student satisfaction were comparable. A dissertation by Shou (2007) measured student attitudes and performance in an introductory business statistics course. No significant differences were found in learning outcomes or in student attitudes towards statistics.

One of the problems in comparing online and traditional students is the non-experimental format that most studies use. There may be no controls for things like instructor, textbooks, syllabus, exam format, and many other individual variables within the courses. Even the same instructor can change his or her pedagogical approach over time.

SAME TERM, SAME INSTRUCTOR COMPARISONS

The current study took a snapshot comparison of three HRM classes taking place in the same term and being taught by the same instructor. Other studies have used this same format although the extent to which the courses were equalized for anything other than time and instructor vary greatly. Sue (2005) compared same term online and face-to-face statistics classes. While student satisfaction was not significantly different, traditional students scored higher on 2 of the 5 exams. The following observation suggests that the research in this area is timely and important.

Whatever one's position, the fact is that the distinction between the traditional classroom and online instruction will continue to blur as traditional classes add online components and online courses gain mainstream respectability. (Sue, 2005, p. 30)

Davis et. al. (2005) compared student performance in an introductory special education course using pre and posttests regarding course content as well as scores from three course deliverables and students' attitudes toward inclusion. Results showed no significant differences.

A larger study was reported by Friday et. al. (2006) who provided 8 semesters of data for two undergraduate business courses. No significant differences were found in student performance although women had higher grades in both formats. Men in online courses performed lower than men in traditional classes. A suggestion was made that women may have had an easier time collaborating rather than competing in the online environment.

A study by Adams et. al. (2006) recognized the challenges in comparing online and traditional student outcomes.

Comparisons between online and live classes are often difficult, because of different testing situations and other significant differences in the way live and online classes are delivered. (p. 129)

The Adams study has many common elements with the current one in that the same instructor taught the same operations management courses using the same text, syllabus, course materials, plus with all students taking identical exams online using WebCT. The research team found that the three online sections outperformed the six live sections by 2.49% overall on the four tests given.

METHOD

The purpose of this study was to compare the effectiveness of both a traditional graduate-level human resource management course with two 100% online classes for the same course in the MBA program at Nova Southeastern University. The term for all three classes was April-July 2007 and the students were all full-time working adults who took classes on weekends or online. The study measured the student outcomes on deliverables including midterms, finals, case studies, term papers and final grades as well as surveyed student satisfaction on a wide variety of factors.

COURSE DESCRIPTION

GMP 5030 is a required core course for the MBA program at NSU. The author is the lead instructor for this course and teaches it every term to two or more sections. In recent years, these sections have been predominantly online but she also continues to teach in the traditional classroom setting. Online classes extend for 10 weeks and have weekly, graded discussion questions and participation requirements. The face-to-face classes meet for 5 weekends during a 12 week term. For this study period, the author was teaching two online classes with a total of 26 students and one traditional class in an off-campus center in Orlando with 16 students. The courses were designed to be as similar as possible. See Figure 1 for a comparison of the grade points for both formats. Note that asterisks mark the differences in points assigned to various deliverables in the courses. The majority of the course grade points received exactly the same weights, including midterm and final exams, team cases with oral

presentations (face-to-face class) and PowerPoint presentations (online class), participation, and research paper components (outline, key article review, and written paper).

Differences in grading the deliverables were kept to the absolute minimum but the format of the class dictated a few differences. First, the online students posted responses to weekly discussion questions on the week’s discussion board; this component is missing in the traditional class. To account for this, the oral presentation of the term paper was awarded 10% for the traditional class, but the corresponding posting of the Executive Summary was worth only 2% for the online students. The rationale here is that the additional work the cyberstudents put into the weekly discussion questions was roughly analogous to the time and effort the face-to-face students put into preparing and delivering their term paper oral presentation.

Midterms and finals were identical, untimed, week-long exams and were given on the WebCT platform. The Orlando traditional class had a supplemental WebCT classroom where the instructor would post PowerPoint slides used in class, as well as where students would submit homework assignments and term paper deliverables. It should be noted that this supplemental use of WebCT would not classify the class as a blended or hybrid class because all instruction was delivered in class. This is in keeping with the distinction made by Mansour & Mupinga (2007) who defined hybrid classes as ones where students first see new information and concepts outside the classroom.

Figure 1
Grade Points for Both Formats

Deliverable	Classroom-Based	Online Class
Midterm	20%	20%
Final Exam	20%	20%
Team Case – Written	5%	5%
Team Case – Oral/PowerPoint	5%	5%
Research Paper – Written	20%	20%
Research Paper – Outline	2%	2%
Research Paper-Key Article Review	4%	4%
Research Paper-Oral Presentation	10%*	
Executive Summary (Online)		2%*
Participation	12%	12%
Weekly Discussion Questions	--	8%*
Total	100%	100%

RESEARCH QUESTIONS

The current study was designed to explore two questions regarding these specific three classes in order to help the faculty member further plan to make her online and traditional classes more identical in terms of learner outcomes in performance and satisfaction areas.

Research Question One: Are student performance outcomes the same in both formats?

Research Question Two: Are student satisfaction outcomes the same in both formats?

RESULTS FOR QUESTION ONE

The first comparisons made were in grades for the various deliverables. Figure 2 shows mean scores for all the grade points in the classes. Note that the two traditional classes are combined for this comparison. Note also that in the traditional course, two students dropped out and were not included in the final analysis. In the online classes, a total of two students also failed to complete the course. It is unknown whether class format had anything to do with these withdrawals.

**Figure 2
Mean Scores for HRM 5030 Deliverables**

Deliverable	Classroom-Based Students N=14	Online Class N = 24
Midterm Actual scores	84.8%	88%
Final Exam Actual scores	94.7%	91.3%
Team Case – Written Weighted at 5%	4.9%	4.7%
Team Case – Oral/PowerPoint Weighted at 5%	5%	4.9%
Research Paper – Written Weighted at 20%	16.4%* (included one zero for a plagiarized paper) Mean deleting plagiarized paper = 17.7%	14.5%* (included 3 zeros for plagiarized papers) Mean deleting plagiarized papers= 16.4%
Research Paper – Outline Weighted at 2%	1.96%	2%
Research Paper-Key Article Review Weighted at 4%	3.2%	3.4%
Research Paper-Oral Presentation Executive Summary (Online)	No direct comparison	No direct comparison
Participation Weighted at 12%	12%	11.2%
Weekly Discussion Questions		8% No direct comparison
Mean Final Score	89.7%	88.7%

DISCUSSION FOR QUESTION ONE

Both the midterm and final exams were of a similar format. Students were given a mock exam supposedly already taken by a student in this class. There were 20 true and false questions that they had to “grade” as either correct or incorrect. Then, students had to write a paragraph explaining why the answer was true or false. This gave them the opportunity to integrate their reading, class lectures (both online and in the traditional class) as well as do research on each HR issue involved. Part II of the exam asked students to answer short essay questions which pulled from textbook, articles, PowerPoint presentations provided by the instructor and class discussions. Many of these issues asked students to take a side on an HR issue, such as affirmative action, and back up their point of view. In no case, were these exams simple regurgitation of material, nor were they able to look up “the answer.” Exams were posted to the WebCT classroom for one week during which time students could spend as much or as little time as they liked working on the exam. Results showed that the Orlando, classroom-based students did not do as well as the online students for the first exam, but they surpassed the online students on the final exam, gaining an average of almost a full grade with the second exam. The gain may have had something to do with the familiarity with the online environment which was gained during the course.

Team cases, both written and oral, were well done by both groups. This particular case had each team pick one of the Fortune’s 100 Best Companies to Work For in 2007 and diagnose what human resource policies and practices made this company stand out from the pack. In addition to the written papers due in the middle of the course during what would normally be an in-class exam period, the Orlando students did elaborate oral presentations using PowerPoint presentations. Online students posted their PowerPoint presentations of key points to the discussion board. While previous classes, both online and traditional had mostly complained about group term papers, both classes did exceedingly well on these smaller team papers and presentations. The information was timely and interesting and grades reflected hard work by the students with classroom based grades just a bit higher.

Term papers for both classes were done in an incremental fashion with students handing in graded outlines, key articles and then the final paper. While online students did slightly better on the first two components of the

term paper project, the Orlando students did better on the final written term paper, scoring an average of 17.7 out of 20 points (88.5%) as compared to 16.4 for the online students (82%). Both classes were provided multiple pages of term paper instructions in the term paper and in class and numerous reminders to follow the guidelines. Each individual had his or her topic approved early in the class and outlines were returned with comments and suggestions. As seen in Figure 2, a total of 3 students received zero on the term paper due to some degree of plagiarism. Students were required to turn their papers into turnitin.com, so the plagiarism was easy to observe. As penalties were clearly outlined earlier in the course, zeros were the automatic response by the instructor. The occurrence of plagiarism in both online and traditional classes was expected by the author who noted in an earlier article:

There is no conclusive proof that assessment of online classes is substantially more challenging than assessing any other kind of classes. Cheating and plagiarism exist in significant quantity to be worrisome to all faculty in all modes of instruction. The authors do not, however, believe that the challenges of online assessment are any more serious than that of on ground classes. They are just different. (Gibson & Blackwell, 2007, p. 6)

The weakest point for direct comparison was participation. Participation, worth 12% in both the online and face-to-face classroom, was evaluated differently. In the online classes, students could earn 1.5% per week by making a significant contribution to the discussion board at least three days during the week. Further, each student received weekly, written grade feedback on both their participation and their weekly discussion questions so they always knew where they stood. Online students earned participation by attending class, participating in discussions, and doing various homework assignments. They had no feedback on participation points until the end of the class when individual participation was given a holistic grade.

It should be noted that mean final grades were within 1% of each other, with traditional students scoring just a bit higher. However, that one point is made more important by where it falls on the grade scale. A mean score of 89.7% equates to an A- while a mean score of 88.7% equates to a B+.

RESULTS FOR QUESTION TWO

Students in all three classes were asked to give feedback as part of the online final exam. All 24 online students complied with this request, while two of the 14 Orlando students did not. While 26 questions were asked regarding not only satisfaction with the course but opinions on individual assignments, the results of 6 questions are particularly interesting to this study. The questions were answered on a Likert scale of 1-5 with 1 = completely disagree and 5 = completely agree. Here are the 6 questions. Figure 3 shows the mean scores for each question.

1. I felt that I learned a lot about HRM during this class.
2. I felt that there was sufficient interaction with the other students in the class.
3. I felt that there was sufficient interaction with the instructor in this class.
4. I felt that I was part of a learning community.
5. I would like to take another class organized in the same format and style.
6. Which number best describes your overall satisfaction with the course?

DISCUSSION FOR QUESTION TWO

In every question, the mean student satisfaction score was higher for the Orlando students who met face-to-face with the instructor than for students in the two online classes. In terms of student perceptions about how much they learned and their overall satisfaction with the class, the difference was very small, 4.5 as compared to 4.4. The largest and most dramatic difference occurred in the question about whether the students felt part of a learning community. For this question, the Orlando students' mean score was 4.9 as compared to 4.3 for the online students. However, the numbers don't tell the whole story. In the case of the Orlando students, most of them knew each other and had taken other face-to-face classes together. While some of the online students had likely been in classes together, the multiple sections offered online and the individual schedules of students make that event far less likely. At least some of the Orlando students were a cohort, going through the MBA program together. Thus, their reaction

to the learning community question could have been as much about their overall MBA experience as about this class specifically.

Figure 3
Mean Scores from Student Feedback

Question	Classroom Based Students N=12	Online Classes N = 24
1. Learned a lot	4.5	4.4
2. Sufficient student interaction	4.7	4.4
3. Sufficient instructor interaction	4.4	4.3
4. Learning community	4.9	4.3
5. Take future similar class	4.3	4
6. Overall satisfaction	4.5	4.4

The other thing to be noted is that the instructor developed some very close relationships with at least some of the students in the Orlando classes. Two asked her to be their mentors and have been in contact with her following the course. One of these insisted the instructor had “turned her life around” in terms of changing her career to one focused on the HR profession. While the instructor participated in the online classes at least five days a week, as compared with the weekend trips to Orlando, there were no similar close relationships developed with the online students. It should be noted that this phenomenon is not necessarily typical as previous online students have developed the same type of close relationships with the instructor, even going on to do research and publish articles with her.

In all, there are no concrete conclusions from the results of this one-term study, and there are other limitations. There are also implications for future study.

LIMITATIONS OF THE STUDY

Even though the author took great care to make the two course formats as similar as possible, there were undeniable, uncontrolled differences. One, as mentioned above, is that the instructor perceived a closer relationship with the Orlando students. The group seemed to click with each other and the instructor. The chemistry of a class relationship is something that cannot be quantified but may produce a bias in satisfaction results.

An obvious limitation is the small size of the study group. These three classes transpired in one, three month term, from April – June, 2007.

A third limitation is that the Orlando students were not expecting a class that would require online exams or submission of homework through WebCT. They were largely unfamiliar with the online environment at the beginning of class as opposed to the online students who self-selected an online format. The online activity of the Orlando students was another limitation as such activity is not currently a normal and expected part of a traditional class. Thus, the results from the Orlando group may have been from a somewhat idiosyncratic format rather than a purely traditional classroom experience.

A fourth limitation is that in comparing deliverables from the two classes, the weekly discussion questions and required student interaction on at least 3 days per week for the online students provided a much more concrete way of measuring participation and these students received weekly feedback on grades.

A final, uncontrolled difference in the two groups is that the online students conducted nearly all class activities in an asynchronous, written environment whereas Orlando students had synchronous as well as asynchronous activities and there was much oral interaction.

CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH

Keeping the above limitations in mind, the classroom-based students in this study performed just slightly better than the online students. This was true on final exams, case studies, and research papers as well as final grades. (Note that plagiarized papers were found in both environments through the use of Turnitin.com.) This is in opposition to much of the current literature showing that online achievement of learner outcomes is at least as good if not better than in-class students. The latter has been the author's observation in previous classes as well. The classroom-based students also showed a slightly higher overall satisfaction level as compared to the online students.

In today's academic environment, assurance of learner outcomes is extremely important. This study provides one more data point about student performance in online as compared to traditional environments. The author was pleased with the general upgrading of her course in providing this comparison study and gratified to see that both the group and individual assignments worked well in both environments. In actuality, significant changes were made in the classroom-based environment to make this comparison work. Specifically, the moving of exams to WebCT gave the instructor an additional six class hours during which students were able to make team case presentations and individual term paper presentations. The entire experience made the author take a fresh look at her pedagogical style and techniques for both formats.

The study also made the author much more cognizant of student reactions and satisfaction levels with various components of the course and has made her more interested in gathering such information in the future. Future plans include an expansion of this study to cover multiple terms and sections in both the online and traditional classrooms.

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