Lessons Learned from Migrating to an Online Electronic Business Management Course

Kent A. Walstrom
Department of Accounting
College of Business
Illinois State University
Normal, Illinois 61790-5520
kawalst@ilstu.edu

ABSTRACT

This article describes the lessons learned while migrating an Electronic Business Management course from traditional face-to-face delivery to online delivery across a six and a half year time frame. The course under review teaches students how to develop and construct a working information-based online business using free versions of online resources. Over 220 students completed this course as a traditional face-to-face class and over 300 students have completed this course as an online class. Student performance and satisfaction remained mostly consistent across delivery methods. Reflections include lessons learned and suggestions to aid in developing a course for online delivery. Course evaluations remained stable during the migration of the course to an online environment. The Electronic Business Management course migration was considered successful.

Keywords: Online education, Case study, Student perceptions

1. INTRODUCTION

Online education seems to be here to stay and is gaining ground as an effective form of delivery (Chen, et al, 2013). However, online education may be perceived as conflicting with the "person-centered" culture of traditional universities (Haytko, 2001). This article will not debate the merits of online course delivery versus traditional face-to-face course delivery. A plethora of studies are available addressing that issue. The position that teaching success is rooted in pedagogy, more than in technology or mode of delivery has been previously defended (Redpath, 2012; Arbaugh and Benbunan-Fich, 2006). The focus of this review is on the online mode of course delivery. Therefore, the purpose of this article is to describe the pedagogy, migration, and lessons learned from a traditional face-to-face delivery format to an online delivery format of an Electronic Business Management course.

2. COURSE DESCRIPTION

The course under consideration is titled "Electronic Business Management." The catalog description reads: "Principles of managing the linkage between organizational strategy and enterprise information technologies, including e-commerce architecture, development and strategy."

Students focus on learning about and developing their own online information-based business. The course has no prerequisites. Students are not required to bring any products of their own into the business development process.

An information-based business model was selected for that reason. Each student is required to produce information about a particular niche area of interest. This information is posted on a web site and a blog created by the student. All work is done individually. No group work is required or allowed.

These information-based web pages and blog posts form the basis of the online business. Traffic to these businesses is created and monitored using search engine registrations, ezine database article submissions, inbound links (links to the students web pages from other online sources), niche related outbound links (links from the students web pages to other web pages related to the same area of interest), page counters and analytics.

A student's online business is established on the Internet and accessible using normal search engine procedures. Students then attempt to make their business profitable through a monetization process. This monetization process includes: posting advertisements on their web pages, promoting physical products available through affiliate relationships, asking for donations, promoting physical products created using CafePress, and promoting the sale of ebooks created by the student.

Understanding of electronic business content, monetization and traffic generation concepts were gained in the development of the working electronic business described above. Assessment of the application of these concepts is done using a project format. The project is divided into four milestones with measurable deliverables.

The result of this project was a real working online business for each student. Some students were even able to earn money before the semester was over. No measures were available regarding any money that might have been earned after the semester was over and contact with most students was lost.

Basic concepts, theory and terminology about electronic business are gained using a suitable textbook. Assessment of the understanding of key concepts and terminology is done using multiple choice quizzes and exams.

Course level has been found to be a moderating factor in online course success (Chen, et al., 2013). Therefore, it is noted that this course is intended to be a first course for students to explore their interest in the information systems field of study. The course is positioned at the sophomore/junior level and has no prerequisites. However, due to demand, only senior students near graduation enrolled in the course each semester before reached enrollment capacity was reached.

2.1 Objectives and Activities

As with any course, the process of course development can begin with determining the core competencies students should gain while taking the course (Wiechowski, 2010). Potential competencies related to this course were reviewed and the following learning objectives were selected:

The student will be able to:

1. Recall the key terminology related to e-business
2. Create e-business structure and content.
3. Monetize an e-business.
4. Generate traffic to an e-business.
5. Apply a number of e-business concepts to a functional e-business.
6. Create plans for developing and continuing an e-business

Learning objectives were then mapped to appropriate activities and assessments. Delivery methods for content, activities and assessments were then determined. Finally, the course was constructed and tested.

2.2 Syllabus

Comprehensive and clear expectations have been identified as factors in instructor effectiveness (McFarland and Hamilton, 2005-2006). To that end, the syllabus for this course has ranged from four to 15 pages and currently contains ten pages. The syllabus contains all the usual components, plus a page on academic integrity, a page on instructor expectations of student time commitment to the course, a page on developing a contingency plan for when technology and life disruptions interfere with their participation in the course. In addition, six pages about the project were included with milestone due dates, project requirements, and problems students have encountered in the past. One page documented quiz due dates. The final page was a checklist of what to do immediately to start off successfully in the course.

2.3 Implementation

Table 1 shows changes to some of the pedagogical components over the past six and a half years. The first three

and a half years the course was delivered in a face-to-face format. For the last three years the course has been delivered primarily online. During the Fall 2012/Spring 2013 school year, in class exams were added. A mid-term skills exam and a final skills exam were administered in a computer lab with the instructor proctoring the exams. This component was added to the course when the instructor discovered that students engaged in academic dishonesty by helping each other completed graded assignments.

Table 1 also shows that during the six and a half year time period, three different learning management systems (LMS) have been employed. Blackboard took over WebCT so the migration of course materials from WebCT to Blackboard was not overly time consuming. However, at the time of LMS migration, the university was looking for a new LMS. The instructor decided to move some course reference materials to the college's dedicated server. Only registered students have access to the material on this server.

Assessments (quizzes and assignments), the grade book, and communication components of the course where provided using the LMS. Detailed instructions regarding the tasks necessary to complete the project milestones were made available using a dedicated college server.

While not shown on Table 1, it should be noted that the use of an individual semester long project consisting of four deliverable milestones and the use of quizzes and examinations was consistent across all semesters and all delivery formats. This consistency is one of the key factors in the validity and reliability of this migration review.

Students were required to take quizzes and review project milestone grades using the LMS. Communication with the instructor and other class mates could be done in person during office hours, by email, or by phone, but the preferred method of communication was use of the LMS discussion forums. This allowed questions and answers to be viewed by all class participants. Students were responsible for announcements posted on the learning management system (LMS). Most LMSs allow for students to have an alert sent to an email address of their choice when new announcements or discussion forum replies are posted. Project milestones were submitted using the LMS.

Detailed descriptions of the tasks necessary to complete the project milestone were available on a dedicated server. The instructor considered using video recordings. However, students indicated it would be difficult to watch the video and follow along unless they had access to two computers at the same time. Detailed, written instructions allow the student to print out the directions and have them on hand while they were executing the steps on their own computer. Project milestone requirements and examples were available on the dedicated server.

2.4 Learning Management System (LMS)

Which software platform to use is an important consideration (Wong, et al., 2003). That decision may be made for the instructor by the university since the university often pays for and maintains the LMS. Another option is to use an LMS provided by a textbook publisher. The publisher option is discussed below.

Semester	Format	Delivery Mechanism	PowerPoint Presentations	Learning Management System (LMS)	Textbook
Fall 2006 to Spring 2008	Face-to-face	In class demonstrations	In classroom	In house portfolio system and WebCT	(Rayport, and Jaworski,, 2004)
Fall 2008 to Spring 2010	Face-to-face	In class demonstrations	In classroom	In house and Blackboard	(Napier, H.A., et al., 2001)
Summer 2010 to Fall 2010	online	Detailed online handouts	Available online	Blackboard	(Napier, H.A., et al., 2001)
Spring 2011 to Sumer 2012	online	Detailed online handouts	Available online	Blackboard	(Stokes, R. et al., 2010.)
Fall 2012 to Spring 2013	hybrid—exams only	Detailed online handouts	Available online	In house: Sakai based	(Stokes, R. et al., 2010.)
Summer 2013	online	Detailed online handouts	Available online	In house: Sakai based	(Stokes, R. et al., 2010.)

Table 1: Course Implementation

When this course was first offered, the WebCT LMS was used and supported on campus.   Later it became WebCT/Blackboard. The 2012-2013 school year was used to migrate from the WebCT/Blackboard platform to a proprietary LMS built on the Sakai open source software platform.

When the time came to switch LMS again, the instructor was delivering two courses in online/hybrid format. The estimate was that migrating two different courses from Blackboard to the new in-house Sakai based system took approximately 100 hours.

Online discussions among faculty migrating from the old system to the new system have stimulated thoughts on the use of learning management systems. Since LMS remain a primary component of online instruction, the system used will determine the types of pedagogical tools available. For instance, if the instructor wishes to use a rubric checkbox system for providing students feedback on written work, that feature must be available.

It should be noted that several textbook publishers now offered fully-developed turn-key LMS to support their textbooks. These systems were not available or were not well-developed when the course under review was being developed for online delivery. The instructor's colleagues who use these systems have indicated their satisfaction with the products and features available.

It should also be noted that whatever LMS is selected will drive the pedagogy used in the course. The availability and quality of the functions incorporated into the LMS will influence the instructor's decisions to use them. (Van der Vyver and Lane, 2004). This would be an example of the technology determining the pedagogy instead of the other way around.

2.5 Content Delivery
For the first three semesters, from Fall 2006 to Spring 2008, the following textbook was used:*Rayport, J.F. and Jaworski, B.J. "Introduction to E-Commerce, 2ⁿᵈ edition," McGraw-Hill/Irwin: New York, NY, 2004*. This textbook provided the conceptual content for the course and the instructor supplemented with in-class demonstrations for the online ebusiness development component.

For the next six semesters, from Fall 2008 to Fall 2010, the following textbook was used: *Napier, H.A., Judd, P.J., Rivers, O.N., and Wagner, S.W. "Creating A Winning E-Business," Course Technology: Boston, MA., 2001*. This textbook provided conceptual content and practical application content for the course. This textbook was not regularly updated.

During this six semester time frame, for the first four semesters, Fall 2008 to Spring 2012, the instructor supplemented with in-class demonstrations for the online ebusiness development component. For the next two semesters, Summer 2010 to Fall 2010, the instructor supplemented for the online ebusiness development component with descriptive handouts, power point presentations, examples, and readings available through the LMS or through a dedicated web server.

For the last eight semesters, Spring 2011 to Summer 2013, the following textbook was used: *Stokes, R. and the Mind of Quirk, "eMarketing: The Essential Guide to Online Marketing," Flat World Knowlege, Inc.: Irvington, NY., 2010*. As with the previous two semesters, the instructor supplemented for the online ebusiness development component with descriptive handouts, power point presentations, examples, and readings available through the LMS or through a dedicated web server.

2.6 Students
The course under review is a required course for General Business Administration majors. This requirement was in place when the course was taught face-to-face, as well as, online/hybrid. The student population was the same using both delivery methods. These students were primarily full-time, traditional, residential students. Gender distribution varied from 30 percent female and 70 percent male to 10 percent female and 90 percent male. Each semester male enrollment has been significantly higher than female enrollment

3. MIGRATION TO AN ONLINE ENVIRONMENT

Demand for online instruction can be driven by geographical dispersion (Spice, et al., 2011); work or family obligations and conflicts (Hummer, et al., 2010); level of

maturity of the student (Beqiri and Chase, 2010); or some other measure of convenience (Simon, et al., 2013).

For this course, demand was driven by level of maturity of the student and convenience. During in-class course delivery the instructor received repeated requests to review material previously covered in the class. These requests were driven by poor class attendance on the part of a few students and by waiting until the last minute to work on a milestone before the due date by other students. In-class demonstrations were very technical and precise. Students who missed these demonstrations or who did not apply them within 24 hours of the class were often unable to successfully complete the required tasks for the project milestones without additional help. This resulted in a number of requests to repeat the demonstrations during the 2 to 3 class sessions immediately before a project milestone was due.

The precise nature of the tasks made it possible to provide detailed step-by-step written instructions for the students. These instructions could be used to complete the task while the student was alone working on their computer. These instructions resulted in reduced classroom attendance. Notes on conceptual class components could be copied from students who did attend class. Course projects could be completed with a combination of copied notes and detailed instructions provided by the instructor. The next logical step in the mind of the instructor was to move the class entirely online.

On-campus, residential students can be a viable market for online courses. Studies that seek to compare and contrast the advantages and disadvantages of face-to-face instruction versus online instruction (Haytko, 2001; Simon, et al., 2013) tend to leave out some key variables that are important to students. For instance, who will be teaching the face-to-face course? As demonstrated by the popularity of RateMyProfessor.com. What time of day will it be offered? As demonstrated by early morning and late afternoon classes filling up during registration time only after classes offered during more popular time slots are full. Will all of the online instructional material be available at the beginning of the semester? These questions matter to students.

One of the courses taught by the instructor has been offered in a large lecture hall (200+ seats) at 8:00 am on Monday and Wednesday or Tuesday and Thursday for the past ten years. This is a core course required of all students in the college. Based on course evaluations, non-majors who are required to take it indicate a low level of interest in taking the course. Lack of interest coupled with an unfavorable time slot make this course an excellent candidate for online delivery. This demand was driven by convenience and lifestyle conflicts. Many students want to stay up late and do not care to get up early to attend a class. Historically, attendance in this course averaged 50 percent.

Discussions with students indicate many students would prefer to have the option of choosing between a traditional face-to-face method and an online method of learning. They would like to be able to select the delivery method that is most convenient for them at a given time within the semester. During the early days of PowerPoint slide usage, students often requested that PowerPoint slides be made available online. Colleagues expressed concern that if students had the slides, they might chose not to attend the class. If students consider sets of PowerPoint slides to be suitable substitutes for class attendance, then we must consider the value of class meetings. If we consider students perceptions to be false regarding the value of PowerPoint slides as a substitute, then fine. This raises issues outside the scope of this current discussion.

Online delivery as an instructional method is more of a "student-centered" paradigm requiring an increased level of student responsibility (Dana, 2013.) The role of the faculty then becomes to educate students about the differences between traditional and online education (Schweitzer and Stephenson, 2008). As more and more students are exposed to online course components, the need to educate students on their responsibilities in an online class should diminish.

At the same time the instructor was experiencing these needs in the course, the university was asking for increased online course offerings for the summer session. The university agreed to pay for the development and offering of online course that would be offered during the summer session. The hope was to enroll students in online courses over the summer who would typically enroll in traditional face-to-face classes back home while they were away from campus. Offering courses online was one way to capture some of the revenue going to competing institutions. This demand was driven by geographical dispersion.

4. RESULTS

4.1 Performance and Satisfaction
Table 2 shows some evaluation figures for each section of the course with overall figures for face-to-face delivery versus online/hybrid delivery. A total of 225 students completed the course across seven face-to-face sections. A total of 301 students completed the course across ten online/hybrid sections.

The average GPA ranged from 2.74 to 3.32 in the face-to-face classes. The average GPA ranged from 2.48 to 3.42 in the online/hybrid classes. The overall average GPA in the face-to-face classes was 3.01. The overall average GPA in the online/hybrid classes was 3.15. The difference of the overall average GPAs of 3.01 and 3.15 was found to be not significant at the 0.05 level of analysis.

For Table 2, student satisfaction was measured by the course evaluation statement "Rate the course in general" with 1 being excellent and 5 being very poor. Overall, satisfaction with the face-to-face classes (2.18) was slightly better than satisfaction with the online/hybrid classes (2.36). The evaluation instrument states: "Differences between means of less than .3 should not be considered significant." Given this metric, the difference between 2.18 and 2.36 is not greater than 0.3 and, therefore, should not be considered significant.

The biggest difference was that only 38 percent of the students enrolled in the online/hybrid classes responded to the request to fill out the course evaluation questionnaire as opposed to 66 percent of the students responding in the face-to-face class. This might be attributed to the lack of social pressure to fill out the evaluation. In the face-to-face class, a proctor administers the evaluations at the beginning or end of a class period. Other students are filling it out and the social pressure exists to conform and fill out the survey.

Semester	Format	Enrollment	Mean GPA with variance	Student satisfaction *	Evaluation Responses
Fall 2006	Face-to-face	30	3.17 ($\sigma^2 = 0.63$)	1.73	26/30
Fall 2007	Face-to-face	30	3.13 ($\sigma^2 = 0.95$)	2.18	17/30
Spring 2008	Face-to-face	33	2.88 ($\sigma^2 = 0.92$)	2.13	24/33
Fall 2008	Face-to-face	31	3.32 ($\sigma^2 = 0.89$)	2.08	24/31
Spring 2009	Face-to-face	34	2.79 ($\sigma^2 = 1.30$)	2.15	20/34
Fall 2009	Face-to-face	32	3.09 ($\sigma^2 = 0.41$)	2.60	15/32
Spring 2010	Face-to-face	35	2.71 ($\sigma^2 = 1.03$)	2.39	23/35
Overall Face-to-Face		225	3.01 **	2.18	149/225 66 percent
Summer 2010	online	25	2.48 ($\sigma^2 = 2.43$)	none	
Fall 2010	online	35	3.24 ($\sigma^2 = 1.16$)	1.95	19/35
Spring 2011	online	34	3.21 ($\sigma^2 = 1.11$)	2.41	17/34
Summer 2011	online	30	3.18 ($\sigma^2 = 1.04$)	none	
Fall 2011	online	32	2.87 ($\sigma^2 = 1.52$)	2.78	9/32
Spring 2012	online	29	3.41 ($\sigma^2 = 0.61$)	3.00	6/29
Summer 2012	online	28	3.42 ($\sigma^2 = 0.89$)	none	
Fall 2012	hybrid—exams only	34	3.28 ($\sigma^2 = 0.53$)	2.14	14/34
Spring 2013	hybrid—exams only	30	3.10 ($\sigma^2 = 0.92$)	1.88	8/30
Summer 2013	online	24	3.30 ($\sigma^2 = 1.17$)	none	
Overall Online/Hybrid		301	3.15 **	2.36	73/194 38 percent

Table 2 Evaluation of Course by Face-to-Face versus Online/Hybrid

* From the course evaluation questionnaire. For the statement: "Rate the Course in General" 1=excellent, 5=very poor
** not significantly different at 0.05 level

4.2 From the Student Perspective
When the course was delivered face-to-face, course evaluations were administered at the beginning of one class period during the last two weeks of the semester. Students who attended class on that day were asked to complete the evaluation before class could begin.

For the online course, the department chairperson sent an email request to students to follow a link to a survey web site, such as SurveyMonkey, and asks student to fill out the evaluation. The instructor also posted an announcement on the LMS asking students to participate in the evaluation. Usually students were allowed a week to ten days to respond and a reminder announcement was posted on the LMS halfway through evaluation availability. Follow up reminders were posted on the LMS by the instructor at the request of the department chairperson when response rates were low.

Table 3 shows the comparison between the average perceptions of students who took the course face-to-face and students who took the course online. The evaluation instrument states: "Differences between means of less than .3 should not be considered significant." Using this metric, five of the 21 items (24 percent) on the evaluation were significantly different.

Table 3 shows 15 items where perceptions were less favorable for online/hybrid course delivery; Q1, Q2, Q3, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q13, Q15, Q18, Q19, and Q21. Perceptions for four items were significantly worse for online/hybrid course delivery. These items were:

Q2 The instructor was organized in presenting class materials.
Q7 The instructor provided valuable insight into the material.
Q10 The instructor used meaningful examples and illustrations in class presentations.
Q11 The instructor expressed ideas clearly and effectively.

Table 3 shows six items where perceptions were more favorable for online/hybrid course delivery; Q4, Q12, Q14, Q16, Q17, and Q20. Perceptions for only one item were significantly better for online/hybrid course delivery. This item was:

Q14 The examinations administered by the instructor seemed appropriate for the course.

As pointed out earlier, Table 3 also shows that response rates were significantly lower for students taking the online/hybrid course. There may be more disincentives and less peer pressure to participate in course evaluation when the course is delivered as online/hybrid.

	Face-to-face	Online /Hybrid	Difference
Q1 The instructor achieved established course objectives. 1=strongly agree; 5=strongly disagree	1.72	1.89	0.17
Q2 The instructor was organized in presenting class materials. 1=almost always; 5=almost never	1.60	1.91	0.31 ** down
Q3 Did the instructor treat students in the class with respect? 1=almost always; 5=almost never	1.52	1.60	0.08
Q4 The instructor was available to discuss course content outside the classroom. 1=almost always; 5=almost never	1.64	1.51	0.13
Q5 The instructor made an effort to fulfill classroom responsibilities. 1=strongly agree; 5=strongly disagree	1.55	1.82	0.27
Q6 The instructor explained difficult or abstract ideas. 1=strongly agree; 5=strongly disagree	1.92	2.19	0.27
Q7 The instructor provided valuable insight into the material. 1=almost always; 5=almost never	1.87	2.33	0.46 ** down
Q8 The instructor appeared to be knowledgeable about the subject matter of the course. 1=Yes, very much; 5=Not at all	1.58	1.75	0.17
Q9 The instructor provided the opportunity to ask questions/participate in discussion. 1=usually; 5=never	1.60	1.79	0.19
Q10 The instructor used meaningful examples and illustrations in class presentations. 1=strongly agree; 5=strongly disagree	1.74	2.28	0.54 ** down
Q11 The instructor expressed ideas clearly and effectively. 1=Yes, very well; 5=No, confusing	1.90	2.25	0.35 ** down
Q12 The assignments made by the instructor helped in learning the course material. 1=strongly agree; 5=strongly disagree	2.07	1.96	0.11
Q13 The instructor used appropriate and fair methods for determining student grades. 1=strongly agree; 5=strongly disagree	1.73	1.79	0.06
Q14 The examinations administered by the instructor seemed appropriate for the course. 1=almost always; 5=almost never	2.08	1.77	0.31 ** up
Q15 With relation to other instructors I have had, I would rate this instructor 1=upper fifth; 5=lower fifth	2.29	2.35	0.06
Q16 Compared to other courses, I learned 1=very much; 5=not very much	2.39	2.30	0.09
Q17 Compared to other courses on the same level, how much effort did you put into the class? 1=much more than normal; 5=never had to study	2.37	2.16	0.21
Q18 Instructors ability to field questions effectively. 1=excellent; 5=very poor	1.82	1.89	0.07
Q19 I had a strong desire to take this course. 1=strongly agree; 5=strongly disagree	2.72	2.75	0.03
Q20 I have learned a great deal in this course. 1=strongly agree; 5=strongly disagree	2.43	2.29	0.14
Q21 Rate the course in general. 1=excellent; 5=very poor	2.18	2.36	0.18
Respondents/Class size (percent)	149/225 (66 %)	73/194 (38 %)	28 percent ** down

Table 3: Course Evaluation Comparison Between Face-to-Face and Online/Hybrid *

* Evaluation instrument states: "Differences between means of less than .3 should not be considered significant

** Significantly different according to the 0.3 difference identified by the evaluation instrument

4.3 From the Faculty Perspective: Lessons Learned

Past research has found that among students and among faculty there is no consistency as to what is the best way to design an online/hybrid course (Callaway, 2012). Therefore, this review will not attempt to identify best practices for online course delivery, but will offer lessons learned.

Some of these lessons were passed on by colleagues already engaged in online course delivery and reinforced by experience. Some of them were learned the hard way, by just experience. The following lessons are presented with no particular classification and in no particular order.

Lesson 1. The entire course should be prepared and available at the beginning of the semester. Students should be allowed to preview material or work ahead at their convenience.

Research suggested that "online courses must be planned, documented, and finalized before the first online class session" (Dykman and Davis, 2008b). This may be the most valuable and helpful lesson learned by the instructor. Making the entire course available helps the students gain an appreciation for the amount of work required in the course. It also helps the student immediately see what they will be

responsible for throughout the duration of the course. Furthermore, the students feel empowered knowing everything is available for them to access at their convenience.

The instructor's experience indicates that online course delivery requires more total instructor time then teaching in a traditional classroom. Other instructors have found the same to be true. This point needs to be made because anecdotal evidence suggest that faculty who have not taught online believe the opposite to be true (Hummer, et al., 2010).

Asynchronous online instruction must be designed in advance of being delivered (Imran, et al., 2012). While adjustments can be made as the class progresses, the initial plan must be laid out in advance for the students to see where they are going.

If the entire course is available at the beginning of the semester, students can begin working as soon as they want. They can also proceed as fast as they want. The earlier students can begin work on the class, the more in control they will feel. It can also reduce complaints about deadlines because they know they had ample time to review the work to be done and the deadlines.

Lesson 2. Students appreciate the use of low cost, online, open source textbooks as an alternative.

Research has found cost to be the dominant factor in why students might select an electronic textbook (Chulkov and VanAlstine, 2014). The instructor has believed for some time that college textbooks are priced too high for the value. So when an online, open source textbook was introduced it was eagerly considered as an alternative. Initially the Flat World Knowledge textbook could be read online for free by anyone. The business model has since changed slightly. Currently, online access to the textbook is about $24.

This textbook was adequate for the needs of this course. However, unlike traditional book publishers this book is not updated on a regular basis. In fact, the most recent book used in this course has been revised by the authors and released as a copyrighted book into the professional market. This has caused some confusion for students who are trying to purchase a hard copy of the book through on online retailer or through the used book market.

In addition, the use of an online textbook seems to be more in keeping with the spirit of an online course.

Lesson 3. Students like to be able to engage content repeatedly and in whatever increments desired.

Wilkes, et al. (2006) found schedule flexibility to be an important issue more characteristic of an online course. Students may choose to work on the course in five minute increments or to do weeks' worth of lessons in a single weekend. If tasks and content are presented in small increments that can usually be completed in about 15 minutes, students will be happier. Students commented to the instructor they liked this format.

Previous research indicated that some tasks and assignments were more successful in a hybrid class and some were more successful in an online course (Martin, 2012). For this class, students performed equally well on the class project and on quiz and test components across all course formats. The instructor believes this was based on the nature

of the course. Having taught the course in a face-to-face format for over three years it was easier to visualize the implementation of an online course delivery.

Lesson 4. If you make the students do the work without "spoon feeding" them or "holding their hand" they may accuse you of not doing your job because it does not fit their paradigm.

Online education offers students the opportunity to share in the responsibility for achieving his or her own educational objectives (Dykman and Davis, 2008a). Some responsibilities traditionally viewed by students as instructor responsibilities are shifted to students. These include deadline awareness, changes to course requirements, and being aware of difficulties being experienced by students in the course. Student responsibility for these tasks better reflects a lifelong learning model. In addition, these skills better prepare students for the work place. Increased student responsibility can be viewed as positive. However, because it is different than the norm, it may be initially viewed as negative.

In a traditional face-to-face classroom setting, the instructor has a physical presence. The instructor can be seen as a real person. Physical distance is small. However, social distance may initially be quite large. Differences in age, educational background, or cultural upbringing can produce social distance. However, in a face-to-face environment, social distance can be reduced by the personality of the instructor, by classroom activities where students interact with each other and with the instructor, etc. Students have the opportunity to see other students who are "like them." In the online environment both physical and social distance exist and seem to be more difficult to overcome.

During summer course offerings, students regularly indicate they take more courses than they probably should. Online course offerings can encourage this behavior because an online course does not occupy a particular time slot on a schedule. Thus, taking an online course does not preclude students from taking other classes which might be offered during that time slot since there is no time slot to occupy. Overloading on courses may cause students to not put in the time required for each course. Student have verbalized this issue when contacting me regarding their performance in the course.

As an interesting side note on student responsibility, the current learning management system allows the instructor to see the number of students have viewed a particular discussion forum post. Class discussion forums were used to post questions about the course, exams, quizzes or the course project. The instructor was surprised to find that less than a third of the students bother to view the questions and the resulting answers.

The instructor is confident that some students sacrificed an entire letter grade in the course. Their failure to monitor the questions related to problems other students were having and the subsequent answers and solutions related to those problems resulted in loss of points on project milestones.

Lesson 5. Authentication of student participation is different when students are not in a synchronous environment with the instructor.

Research has found cheating to be more prevalent in an online environment than in a classroom environment (Ucol-Ganiron, Jr., 2013). The greatest resistance to online course delivery the instructor has encountered over the last 19 years from other faculty has revolved around concern about academic dishonesty. In particular, "how can we know who is actually doing the work?" The same concern is present in a face-to-face environment, but seems to be greater related to online course delivery. How can the instructor know who is actually doing any of the work performed outside of the classroom? The usual remedy for this concern is to administer examinations in a controlled environment. This practice allows for verification using student identification cards. If necessary, additional proctors can be secured to monitor that each student does their own work. Other measures such as multiple versions of the exam and seating charts can be employed to minimize academic dishonesty.

If a course is delivered entirely online, it is difficult to reproduce these controlled conditions. Some organizations and universities take advantage of testing centers. The use of testing centers would place additional financial cost and inconvenience upon the student. In some locations, the issue has been addressed at a higher level. Some states have created testing centers. Students can chose to go to a testing center near their location to take examinations. These centers can verify student identity and proctor student's use of outside materials while completing an exam. This would reduce the cost burden, but may still be inconvenient. This inconvenience may be seen as an acceptable tradeoff to the student for the overall convenience of being able to complete most course requirements in the location of the student's choice.

One way to minimize the impact of lack of authentication might be to increase the number of graded assessments and reduce the point value for each assessment. This would require someone who wished to engage in academic dishonesty to secure the help of a willing party more frequently. Such frequency might reduce the willingness of the accomplice. These pedagogical methods are currently being tested in another online course offered by the instructor, but results regarding the effectiveness of this method were not available at the time of this review.

Lesson 6. Instructor enthusiasm is important.

Research has shown that enthusiastic faculty support is the most important element to success in online course development (Gibson and Herrera, 1999). The primary instructor for the course was the course developer. The instructor did exhibit enthusiastic support for the project and continues to enthusiastically support the project and other faculty who wish to migrate their courses into the online environment.

During the course of development the University offered a ten-week workshop over the summer of 2010 on online course development titled, "Design a Quality Online Course." Workshop coverage included: designing objectives, creating an assessment plan, using grading rubrics, creating a course plan, overview of Blackboard (the

LMS at the time), making materials accessible online, creating audio and video content, online communication, performance tracking, and use of an online grade book. Time was provided for the application of the concepts learned. The objective was to have a fully functional online course ready for student enrollment by the end of the workshop. Participants were required to offer this course either completely online or as a hybrid course within one calendar year of completing the workshop. The workshop has been repeated with new participants each subsequent summer. Participants were paid a substantial stipend (approximately one month's pay) for their time and effort to create each course. Each department on campus is allowed to select one faculty member to participate in the workshop each summer. Past participants are expected to serve as resource contacts for those interested in or struggling with online course delivery.

Based on the instructor's experience, it takes about three times as long to develop an online course as it takes to develop a face-to-face course. Other instructors have voiced similar experiences. This estimate is based on the need to build the course from scratch and master the LMS at the same time. If the instructor has experience teaching the course and/or has experience with the LMS, it might take only twice as long to migrate a course to the online environment as it would to build a new face-to-face course.

Lesson 7. Course evaluation instruments need to be tailored to evaluate online/hybrid course delivery.

Online/hybrid course evaluation tools are often not available or are not being used to evaluate courses delivered in an online/hybrid environment. A discussion with colleagues who teach in the online environment suggest this issue has not been adequately addressed. Research has found that an instructor may disregard an evaluation when students are complaining about issues which the instructor has no control over (Nevo, et al., 2010).

One unintended consequence of poor course evaluation methods may be the hesitancy of untenured faculty to venture into this endeavor. They might prefer to teach in a traditional face-to-face environment where responses on course evaluations might be more predictable and more comparable with other faculty.

Course evaluations measure perceptions of the students regarding statements about the course. These perceptions may be used as a measure of student satisfaction about the course. The positive or negative impression of these perceptions will be influenced by the expectations of the students offering their perceptions. Since the students in this course were usually seniors, it could be proposed that their expectations were based on previous college courses they have taken. Most students enrolled in the course have less experience taking a class using online course delivery and were probably comparing their online/hybrid course with traditional face-to-face courses.

Evaluation questions asking perceptions such as "Compared to other courses, . . . " do not specifically indicate that the comparative "other courses" as online courses. Therefore, students may be comparing online courses with face-to-face course offerings. Such

comparisons may not lend themselves to accurate evaluation or to being helpful in course improvement.

Face-to-face classes tend toward linear delivery. One item at a time is examined in an order determined by the instructor. The instructor controls the pace and the tempo of presentation. Students can not deviate from the organization provided by the instructor. In an online environment, all items were laid out in a linear progression in the syllabus and in the project milestones. But because all materials were available for students to engage at their own pace, students could deviate from the linear progression and review any task, milestone, or quiz as they please. Therefore, variance in student perceptions may be greater regarding an online course than in a face-to-face course.

Some statements on the evaluation can also be confusing for students. Questions such as, "The instructor was available to discuss course content outside of the classroom" or "The instructor made an effort to fulfill classroom responsibilities" imply there should be a classroom in this course.

"The examinations administered by the instructor seemed appropriate for the course" suggests that traditional quizzes and exams should be administered. The use of projects, papers and other assessment tools are discounted.

At many institutions, course evaluations are required and standardized. Unfortunately, some of the questions on the evaluation form are more difficult to respond to regarding an online instructional environment. For instance, students were asked perceptions about "Did the instructor treat students in the class with respect?" If the class never meets it can be difficult to determine how the instructor treats students.

With an online LMS, objective evidence of "The instructor provided the opportunity to ask questions/participate in discussion" can be examined by the existence of email information, discussion forums and feedback comments. So while objective measures were available, student perceptions were still being measured.

Lesson 8. Be prepared to quickly address problems and issues that arise.

Previous research by Pollard (2012) found "communication is key." In a face-to-face class students often find it acceptable to wait until the next class meeting to ask their questions. They may even be willing to wait until the class period after that for the instructor to search out and deliver an appropriate answer to their questions.

In cyber space, expectations are different. When students are online, they may assume the instructor is online. In a face-to-face class instructors and students are engaging the content of the course synchronously, both in time and space. In an online course students understand they are engaging the course content in an asynchronous location from the instructor, but they may not understand that it is also at an asynchronous time.

Quick response to emails and discussion forum threads make students feel confident the instructor is engaged. It is helpful to tell the students in the syllabus the instructor's policy for how often and/or when email and discussion forums will be checked. If an immediate answer regarding a student query is not available, an acknowledgement of receiving their issue or concern and letting the student know when to expect an answer will satisfy most students.

5. CONCLUSION

This article describes the lessons learned while migrating an Electronic Business Management course from traditional face-to-face delivery to online delivery. The intent was to document one instructor's experience. The lessons learned from this experience can be used by other instructors to help them avoid common mistakes. This instructor built upon the mistakes and lessons learned by others. Hopefully, instructors will continue to build on these lessons, create better online educational experiences, and publish the lessons they learned so online education can continue to improve.

Most issues faced in teaching are not online, hybrid, or traditional face-to-face classroom issues. Most issues are pedagogical issues that manifest themselves differently in different teaching environments. The lessons reviewed here explain how some of those issues were managed in an online/hybrid environment. The experiences described in this article can be used to stimulate the thinking of those contemplating offering courses online.

Online course delivery is not better or worse than other methods of delivery. It's just different. Different pedagogies have different strengths and weaknesses. Finding the strengths of online delivery and using them is a unique challenge. Since course evaluations remained relatively stable across delivery media, the migration of the Electronic Business Management course was considered successful by the instructor and those who evaluate the course.

5.1 Limitations
This study is limited by focusing on one particular course at one particular institution administered by one particular instructor and results may not be generalizable to all courses at all institutions. This study is also limit to the time frame between 2006 and 2012. As technology changes student and instructor perceptions regarding online education should change.

This study is limited by the best practices and learning management systems available now. Better practices and improved learning management systems will change perceptions.

The course under review is a technical course. As such, it seems to be readily adaptable to online delivery. Courses with teamwork components, discussion dialogs, and student presentations seem to be less readily adaptable to the online environment.

5.2 Further Research
Instructor experiences should be collected from instructors who have different perceptions about online education. Perceptions from instructors who have a negative or neutral bias toward online education would be beneficial to the educational community. The perceptions of instructors with fewer years of experience should be compared with the perceptions of instructors who have many years of experience teaching at their current level.

Future research should include examination of courses outside a college of business. Students other than seniors preparing to graduate should be studied. The perceptions of elementary and high school students and instructors should also examined. The popularity of such web sites as www.khanacademy.org might be found to influence the perceptions of pre-college students. Examining the perceptions of non-traditional students should also yield valuable data for improving online educational experiences.

As both students and instructors become more familiar with online education perceptions should change. Comparing the perceptions of students and instructors with less online experience with the perceptions of those with more online experience should provide insights for improving online education.

Future research should include comparing the perceptions of instructors with formal pedagogical training with the perceptions of instructors who have no such training. Comparing instructors based on computing and technical expertise should also be examined.

6. ACKNOWLEDGEMENTS

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AUTHOR BIOGRAPHY

Kent A. Walstrom is an Associate Professor of Information Systems at Illinois State University. Kent's primary teaching area is business information systems. His research interests focus on Executive Information Systems, Electronic Commerce, Leadership Support Systems, and Creativity and Problem Solving. He has published articles in *Communications of the ACM*, *Information & Management*, Journal of Information Systems Education, *Journal of Computer Information Systems*, *Journal of Information Systems Management*, *Computers & Operations Research* and other journals. Kent has presented and published papers at regional, national, and international information systems conferences.

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