JET
The Journal of Effective Teaching
an online journal devoted to teaching excellence

The Online University Classroom: One Perspective for Effective Student Engagement and Teaching in an Online Environment

Marsha Carr[1]
University of North Carolina Wilmington, Wilmington, NC 28403

Abstract

Universities struggle with alternate means of instructional delivery to meet the demands of distant student needs, the competition for enrollments, and restraints from limited physical building space. For many, fully online programs of study using internet-based instruction commonly named online instruction have become viable solutions. There has been significant growth in the number of on-line degree programs since many students want to take courses that will positively impact their future careers but not hinder family and work responsibilities. Shifting from a traditional program of study to an online format is not without challenges. There are three primary areas of focus when considering an online design format for course delivery: course design, instructor role, and student role. This paper will provide one instructor's perspective of how to improve student engagement and interaction in master's level Educational Leadership courses over a three-year span utilizing available data from the university Student Perception of Teacher (SPOT) assessment available.

Keywords: Online course design, course evaluation, assessment, student engagement, student perception.

The advancement of technology and the increased enrollments for some universities have pushed many colleges to explore alternate means of instructional delivery to meet these challenges. It is commonplace to shift delivery of coursework in higher education programs from the traditional four walls of a classroom, face-to-face (f2f or F2F), to an internet-based instruction commonly referred to as online instruction. Growth in the number of on-line degree programs has been attributed to the increased number of student enrollees who want to take courses that will positively impact their future careers but not hinder family and work responsibilities (Bangert, 2004; Maeroff, 2003). Nationwide, there is also a growing concern among educators that the design and delivery of Internet-based courses have not undergone rigorous quality assurance as colleges and universities rush to offer an array of online programs that will allow them to compete for increased enrollments (Fish & Wickersham, 2009; Motiwalla & Tello, 2000).

Teaching online requires an understanding of the benefits and limitations of the online environment as a teaching and learning tool (Conceição, 2007). An online course is not a

[1] Corresponding author's email: carrm@uncw.edu

traditional course in a different delivery format. Conceição believes that university instructors need to rethink the roles of the teacher, the learner, and course design to embrace effective online teaching strategies unlike those in a traditional classroom.

A departmental shift to online teaching occurred in the Educational Leadership department at UNCW several years prior. The demands of distant student needs, the competition for enrollments, and the flexibility afforded from online course delivery on physical building space was sufficient to explore fully online programs of study at master's level and select doctoral classes. Not all programs of study are afforded the option of online delivery or given consideration due to content restraints (Mandernach, Mason, Forest, & Hackathorn, 2012). Even when courses can be delivered in an online environment, shifting from a traditional program of study to an online format is not without challenges. Some obvious challenge is the inability to see students, and the absence of visual cues, creating a 2-dimensional environment compared to 3-dimensional in a traditional classroom. Lecture formats can be difficult to present in online classrooms without student interaction and feedback. Learning to navigate within the multiple layers in module designs can be frustrating for instructors that need to personally have documents in hand. The obstacles in online teaching vary by instructor and learning style, so planning is difficult until the instructor is in the environment to realize what is personally challenging. The first step, for any online instructor, is to create a well-organized and manageable course. There are three equally important areas when considering an online format for course delivery: course design, instructor role, and student role.

Course Design

As an online instructor, one must design for an educational experience, facilitate for a social environment, and project subject matter expertise. Each of these areas has potential to cultivate interest, motivation, and engagement of students in active learning.

There are various methods of online course design. The key is to realize online courses may not mirror F2F design with exception to content. According to Dykman and Davis (2008), detailed organization and planning is the first step in teaching online. Anderson, Rourke, Garrison, and Archer (2001) suggest a framework to describe the context of instruction based on a model of critical thinking and practical inquiry using three components of teaching and learning: "cognitive presence, social presence, and teaching presence" (add page number). Cognitive, social, and teaching presence can be built into any course design with adequate planning. Cognitive presence can be built into the course through content. Social presence is usually established in the discussion board section of online courses but can also be accomplished through emails, video, interactive sessions, and through the use of teams in the course. Teaching presence is instructor visibility, and is accomplished in a variety of methods such as daily or weekly email announcement, content or assignment videos, content lectures, question and answer sessions, as well as group or main discussion board chats.

Blackboard, a common online classroom format, provides for all three presences. Blackboard includes discussion boards (private and public); public and private folders (referred

to as modules); internal emailing (private and group); public announcements; team or group formation, chat rooms, blogs, video conferencing, interactive and voice emailing. WebEx, an interactive classroom, is also available to supplement Blackboard and offers audio and video of each student by each other and the instructor during instruction. In most instances, both formats would be used to deliver an online course.

Instructor Role

Understanding learner characteristics is essential for designing online instruction. Conceição (2007) believes the learner is the most important element of the online learning environment and should be considered early in the design and implementation of the online learning experience. The experience will be better for both if the instructor understands online learners (Moore & Kearsley, 1996).

Students must be comfortable in the online environment. Online training for students is critical in order to reduce student anxiety and prevent online technology frustrations interfering with learning (Cornelius & Glasgow, 2007). UNCW does provide online video support and a Technology Assistance Center (TAC) to answer students' (and faculty) questions. As instructors, sending students emails prior to the opening of the course can direct students to the services as well as offer step-by-step instructions to enter the course. It should never be assumed that students are familiar with the technology.

As instructor, course organization is of absolute importance. Since students are not entering a classroom and visually present for the instructor to assess, the online classroom must be organized, easily accessed, and navigationally free of roadblocks regardless of the technological expertise of each student. Course content must incorporate different learning modalities to meet student needs such as using both instructor video and text format for modules. Folders, organized and labeled by content, should house instructional materials. Without the ability to interact in a physical setting with students, care must be taken to ensure students feel connected to the instructor through daily interactions by emails, course updates, or assigned online tasks. Course related questions should be stored in one location for student accessibility since online courses are not afforded the luxury of a student asking a question in class for the benefit of all students.

Course delivery is equally important in designing a great course. Coppola, Hiltz, and Rotter (2002) identify three roles for the online instructor based on tasks performed during the delivery of the course: cognitive, affective, and managerial. Learning, thinking, and information are cognition roles and the classroom environment, instructor, and relationships of students are affective. Not only is the instructor responsible for challenging course content, the instructor must also have etiquette in the online environment. When voice and body clues are absent from communications, instructors must be savvy in interactions so students see the instructor as considerate and caring. The managerial role is associated with the management of the course. The course must be user-friendly, easily accessed, and simple assignment submission. Assignments can be set online to not accept uploads after the deadline. Students must be aware of unfamiliar protocols associat-

ed with online teaching such as logging into Blackboard, knowing how to locate and find contents of module folders, and uploading assignments.

Meaningful and authentic activity is basic to engagement. Steinbronn and Merideth (2008) suggest making learning outcomes meaningful in the teaching environment by engaging students actively in their own learning through student-to-student, student-to-teacher, and student-to-content to build collaborative skills. The development of these skills involves a commitment from students to share personal experiences, ideas, and alternatives (Merideth, 2007). This is often the greatest challenge in online course development. Authentic student engagement is a natural process, not forced through assignment, but encouraged through participation and collaboration. Students must be engaged in authentic learning tasks which support learners in their development of skills in self-regulation and self-learning (Herrington, Oliver, & Reeves, 2002). Online course development must focus on processes to engage the learner during content delivery.

Gathering feedback from students in the form of an end of course survey will provide assessment data. If feedback is needed prior to the end of the course, then instructor-created mid-term surveys using UNCW Select Survey or external resources such as Survey Monkey (SurveyMonkey.com) can be sent to students. Email frequency needs to be monitored as it can be a sign of insufficient information in the course for students or it can be a lack of content support. Some students just need more encouragement than others. Emails serve as a means of support from the instructor. Some students are very comfortable in the online environment and others lack the confidence to navigate in a foreign setting. Online technological expertise appears to be a barrier for some adult students who are returning to school for an advanced degree or certification program. All students can be successful regardless of the initial navigational level of expertise in an online environment.

Student Role

Students often require or request online programs of study without giving thought to what an online program will require has been the experience of this instructor. The flexibility of taking a course from the comfort of home and the convenience of being able to perform tasks at any given time is conducive to keeping busy schedules, maintaining employment, and raising families. While these are certainly enticing attributes of the online environment, online courses often require student to put forth unanticipated effort in ways which are different from a traditional classroom.

The online environment is designed for self-guided and self-directed student efforts. Since they are not meeting the demands of attending a physical class each week, students are responsible for logging in and checking assignments, uploading work, and interacting with colleagues on given topics. Steinbronn and Merideth (2008) also believe the instructor must take on a new role as a facilitator, strategist, and coordinator to provide support to students in the online environment. Online technology does not replace the instructor; but does shift the focus to the students' relationship with the learning process.

Course Evaluation

In an online course, akin to a traditional classroom, feedback is necessary to make changes to course design using data. One method of online course evaluation is through student feedback. UNCW uses a method of course and instructor evaluation called Student Perception of Teacher (SPOT) assessment. SPOTs are a series of questions where students are asked to rank a response from 0 to 5. A narrative section is also provided for students to elaborate on any particular area. SPOTs are sent to students prior to the end of the course and final grades. The surveys are offered both in online and paper formats primarily matched with the format of the course. SPOTs are not mandatory. The Educational Leadership department experiences a higher percentage of paper versions completed by students since they are distributed and collected during class time while most students are in attendance. Students in online courses are asked to complete the online evaluations and the instructor has limited control over whether students actually complete the evaluation. Students often complain they are busy finalizing end of course projects when SPOTs are made available and when they have time to access the online survey, the link has been closed. This leads to a lower percentage of students responding in the online environment since students are asked to complete the SPOTs independently outside of a class setting with a deadline coinciding with the end of the course.

Review of Online Course Data

The current UNCW course evaluation instrument has been replaced. For the purposes of this paper, the online SPOT evaluation responses of one instructor in three online educational leadership courses offered multiple semesters over a period of three years were charted. A fourth online course was reviewed but did not have three years of data so the course was not included in the analysis; however, the course also showed an increase in the SPOT rating. Four questions were selected from the SPOT survey to evaluate the course and instructor. A ranking of 5.00 is the highest a student can give any of the responses in Tables 1-4.

From the SPOT reports, the first three questions, Q1, Q2, and Q4 focused on the course content and design. This is also an evaluation of the instructor's ability to design an online course. The final evaluation question from SPOTs, Q7, focused on the instructor. There are some challenges in using online student evaluation for data in altering course designs due to low student participation. Students that are content with courses do not always feel a need to participate in the survey; therefore, the feedback may not accurately assess class perception without majority representation.

Another factor difficult to filter was the number of students that participated in each evaluation. The university has procedurally used a percentage to compensate for low student response to surveys. During the three-year range, class sizes varied and student participation in the evaluation process also fluctuated from course to course, albeit, a review of the SPOTS showed that the student participation was similar throughout the three-year review.

Table 1. EDL 512 School Law
SPOT Results for Q1, Q2, Q4, and Q7.**

EDL 512	Q1	Q2	Q4	Q7
Year 1 (2010-11)	4.71	4.76	4.59	4.59
Year 2 (2011-12)	4.93	4.85	5.00	4.86
Year 3 (2012-13)	5.00	5.00	5.00	5.00

Table 2. EDL 513 Organizational Management
SPOT Results for Q1, Q2, Q4, and Q7.**

EDL 513	Q1	Q2	Q4	Q7
Year 1 (2010-11)	3.14	2.86	3.14	3.14
Year 2 (2011-12)	4.40/4.67	4.80/4.33	4.40/4.00	4.60/4.67
Year 3 (2012-13)	5.00	5.00	5.00	5.00

Table 3, EDL 526 Essentials of Management
SPOT Results for Q1, Q2, Q4, and Q7.**

EDL 526	Q1	Q2	Q4	Q7
Year 1 (2010-11)	3.20	2.65	3.13	3.24
Year 2 (2011-12)	3.90	4.40	4.00	4.00
Year 3 (2012-13)	4.33	4.56	4.00	4.00

Table 4. EDL 569 Pre-Leadership Internship
SPOT Results for Q1, Q2, Q4, and Q7.**

EDL 569	Q1	Q2	Q4	Q7
Year 1 (2010-11)	4.5	4.5	4.33	4.33
Year 2 (2011-12)	4.5	4.5	4.5	4.50
Year 3 (2012-13)	*	*	*	*

** New reporting system was used.*
*** Narratives were not included in this chart.*

Class sizes averaged 20-25 students (5 students in internships to 38 students in content courses) and student participation was between 7-10% as compared to similar enrollments in f2f courses where the instructor had 90-94% of students respond to paper evaluations. There was a slight increase of student online survey responses over the three-year period although no correlation between increased satisfaction and responding to surveys was determined.

Narrative responses paralleled the 7-10% survey responses. If students completed the survey, they were compelled to respond to the narrative. Narrative comments were reviewed only to support student survey responses with detailed accuracy. An average of the responses for each year for comparison purposes was also considered as viewed in Table 3. This was used only to observe the incremental change from year to year in the survey questions since there are factors that cannot be taken into account such as student enrollments, course rigor and content, and seasonal modifications (summer school).

Changes made to the online courses were also grounded in the additional narrative feedback from SPOTs, available throughout all three years, coupled with a review of the current research for online course design. During the final year there was notable change, according to the data in Table 1-4 (also represented in Figures 1-3 in the Appendix) in the students' perception of the courses and instructor compared to the first year of online course implementation. Students rated early courses in the range of 2.65-4.76. This rating changed over a three-year span to 4.00-5.00, a relatively high evaluation. It was necessary to understand what alterations occurred in the courses that precipitated an elevated shift in SPOTs.

Course Modifications

The changes the instructor made to the online course design and format over the three-year period of time are shown in Table 5.

During the first year of online implementation as a department, students rated the courses as less engaging and less organized. During narratives, students shared that they had difficulty in locating materials contained in online folders. Students also expressed feelings of isolation without an instructor physically present. They also said that assignments were more self-directed in nature. Changes were then made to improve course delivery and to create an environment that was user-friendly for students without prior experience in the online environment. Courses were also rearranged so that students could engage with one another on discussion boards. The SPOTs results, including both quantitative and qualitative data, were used to alter the course delivery for Year 2.

The second year of changes yielded higher rankings on SPOTs, but there was obvious room for improvement. SPOT narratives cited the 24/7-instructor availability as a major strength of the course because it helped students feel connected virtually since they knew that they had access to the instructor even if they did not take advantage of this . Videos were abundant with instructor images that delivered assignment overviews, provided tips for successful completion of the projects, and, from time to time, reminded students of the goals of the course. Students also agreed that the instructor videos, which provided assignment overviews and encouragement throughout the course, were an asset. Group or team discussion board activities and projects were introduced to create a natural oasis for rich student dialog. Student narratives revealed that some students initially did not like the idea of working in teams but afterwards, they felt that it was a great tool for student connectivity. Year 2 also abandoned discussion boards with limited use for specific interactions.

Table 5. Changes to Online Course Delivery.

Year 1

- Courses were redesigned based on the performance goals for students.
- Tutorials on how to work in Blackboard were made available with links for students.
- Discussion boards were mandated for students to use for interaction with each other and for attendance purposes.
- Weekly announcements and emails were sent to students as needed, not consistently.
- Students were sent private emails when assignments were missing to check on them and serve as reminders.

Year 2

- Instructor-made videos provided an overview of Blackboard and showed how to navigate the particular course.
- Discussion boards were used only when needed for interactions related to specific content and were not a continual part of the course design.
- Both group discussion boards and main discussion boards were used for student interaction.
- Videos were used to introduce the instructor to the students and the students to each other for a more personal effect.
- Team activities were used in the courses to increase student interactions through small groups.
- Videos and written assignment overviews were made for each module in the course.
- The course was made available to students upon entry into the course, in order that the students could preview all assignments, plan, and work ahead when desired. Students were encouraged to email questions to the instructor at any time of day for immediate feedback.

Year 3

- WebEx (an interactive video and audio online classroom) was used to deliver lectures for each module to help students interact with each other and the instructor.
- WebEx lectures were recorded, allowing students to revisit them and giving students who missed lectures access to them.
- Links to video resources for course format were provided.
- Various software such as Inspiration, Camtashia, LiveBinders, and Dipity timelines were used for assignments, projects, and activities.

The greatest change over a span of three years was revealed during the third year in SPOTs narratives. The majority of student comments credited the interactions with the instructor through WebEx, a source for increased instructor visibility and student engagement, as a powerful online tool. WebEx mirrors a face-to-face classroom with the exception that students can access the website remotely from any location with video and audio, which allows the student to feel as though they are in a physical 'online' classroom.

While it is not believed that any one change was instrumental in course appeal, a combination of changes over time improved the course design by providing multiple avenues for student engagement. Student engagement was thought to have increased due to continuous and ongoing student interaction with each other and the instructor throughout the course. The courses and the instructors received higher marks. Efforts will continue to improve the quality and design of each course as well as to heighten student engagement as new technologies become available.

Summary

Designing and teaching online is not for every instructor nor is every course appropriate in an online environment (Mandernach, et. al., 2012). Courses and instructors that are open to an online environment necessitate careful planning.. Online course design continues to be pivotal in the success of online interactions and student engagement.

This data suggests the most effective method of increasing student engagement in these educational leadership courses was instructor visibility through interactive sessions and video conferencing. Additional tools included weekly video snapshots providing an overview of the module or video assignment introductions. Creating smaller teams or groups within larger classes of 20 or more students also created a bed of interactivity for students. The use of discussion boards should be limited to specific assignments for rich dialog and not just the satisfaction of online attendance. It is not clear whether the success of the educational leadership online course development can be transferred to another course of study, but this does provide a foundation of inquiry for other schools.

Online instruction provides several benefits to students and instructors. The accessibility and flexibility of an online course can be advantageous to adult learners in a career path or with family responsibilities. Any biases such as age, weight, or gender are removed when students are not visual although it can be argued that as professionals; students are not subjected to biases even in traditional classrooms. For instructors, the ease of an online environment provides accessibility and uninterrupted teaching while traveling for conferences, professional development, or training in the field. Students are always accessible in the online format. In some cases, online courses have spurred increased enrollments due to their flexibility. Regardless of preference, online courses are a consideration for some courses and instructors but serious contemplation must be given before any final adoption.

Conclusion

Draves (2002) has estimated that by the year 2050, one half (50%) of all learning will take place in an online environment. Research indicates that there is no significant difference in learning when using online or face-to-face formats (Benbunan-Fitch & Hiltz 1999; Johnson, Aragon, Shaik, & Palma-Rivas, 2000; Swan & Jackman 2000) and this establishes online education as a viable delivery format (Steinbronn & Merideth, 2008). Online course delivery is a valuable method of teaching but it requires an organized course format and delivery; an instructor who is knowledgeable in the environment; and students that are aware of the responsibilities and additional demands of the online setting.

References

Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001) "Assessing Teaching Presence in a Computer Conferencing Context." *Journal of Asynchronous Learning Networks*, *5*(2), 1–17. Retrieved June 19, 2006, from http://www.aln.org/alnweb/journal/ jaln-vol5issue2v2.htm.

Bangert, A. W. (2004). The seven principles of good practice: A framework for evaluating online teaching. *Internet and Higher Education.* 7.

Benbunan-Fitch, R., & Hiltz, S. R. (1999). Educational application of CMCS: Solving case studies through asynchronous learning networks. Journal of Computer Mediated Communication, 4(2). Retrieved August 31, 2005, from http://jcmc.indiana.edu/vol4/issue3/benbunan-fich.html.

Conceição, S. C. O. (Spring, 2007). Understanding the environment for online learning. *New Directions for Adult and Continuing Education*. no. 113, Wiley Periodicals, Inc. Wiley InterScience. (www.interscience.wiley.com)

Coppola, N. W., Hiltz, S. R., & Rotter, N. (2002) Becoming a Virtual Professor: Pedagogical Roles and Asynchronous Learning Networks. *Journal of Management Information Systems*, 18.

Cornelius, F., & Glasgow, M. E. S. (2007). The development and infrastructure needs required for success—one college's model: Online nursing education at Drexel University. *TechTrends*, 51(6).

Draves, W. A. (2002). *Teaching online* (2nd ed.). River Fall, WI: LERN.

Dykman, C. A., & Davis, C. K. (2008). Online education forum: Part two—teaching online versus teaching conventionally. *Journal of Information Systems Education*, 19(2).

Fish, W. W. & Wickersham, L. E. (2009). Best practices for online instructors. The Quarterly Review of Distance Education, Volume 10(3). ISSN 1528-3518

Herrington, J., Oliver, R., & Reeves, T. (2002). Patterns of engagement in authentic online learning environments. ASCILITE 2002 Conference Proceedings. Retrieved on December 6, 2005 from http://www.ascilite.org.au/conferences/auckland02/proceedings/papers/085.pdf.

Johnson, S. D., Aragon, S. R., Shaik, N., & Palma-Rivas, N. (2000). Comparative analysis of learner satisfaction and learning outcomes in online and face-to-face learning environments. *Journal of Interactive Learning Research*, 11(1), 29–49.

Maeroff, G. I. (2003). *A classroom of one: How online learning is changing our schools and colleges.* New York: Palgrave MacMillan.

Mandernach, J., Mason, T., Forest, K., & Hackathorn, J. (July, 2012). Faculty Views on the Appropriateness of Teaching Undergraduate Psychology Courses Online. *Teaching of Psychology***.** 39(3) 203-208

Merideth, E. M. (2007). *Leadership strategies for teachers* (2nd ed.). Thousand Oaks, CA: Corwin.

Moore, M. G., & Kearsley, G. (1996). *Distance Education: A Systems View*. 2nd ed. Belmont, Calif.: Thomson-Wadsworth, 1996.

Motiwalla, L., & Tello, S. (2000). Distance learning on the Internet: An exploratory study. *The Internet and Higher Education*, 2(4), 253–264.

Steinbronn, P. E., & Merideth, E. M. (2008). Perceived Utility of Methods and Instructional Strategies Used in Online and Face-to-face Teaching Environments. *Innovations in Higher Education*. 32:265–278

Swan, M. K., & Jackman, D. H. (2000). Comparing the success of students enrolled in distance education courses vs. face-to-face classroom. *The Journal of Technology Studies*, 26, 58–63.

Appendix: 3-Year SPOT Evaluations

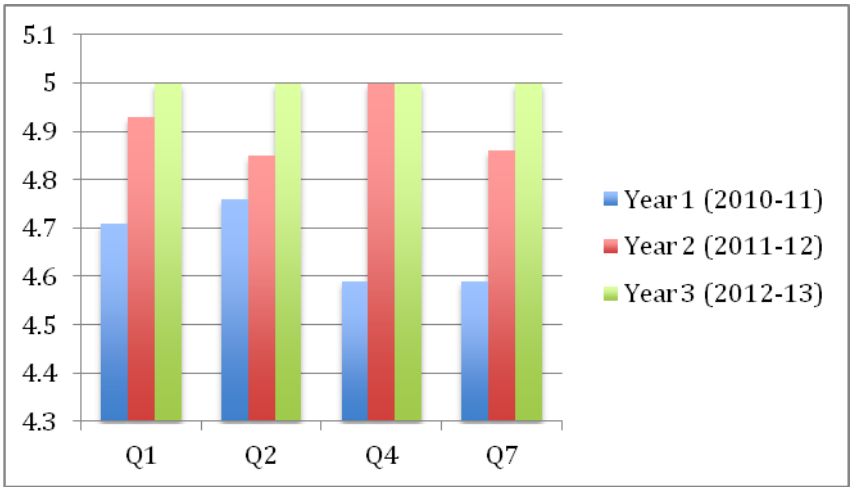

Figure 1. EDL 512 School Law Online Course 3-Year SPOT Evaluations.

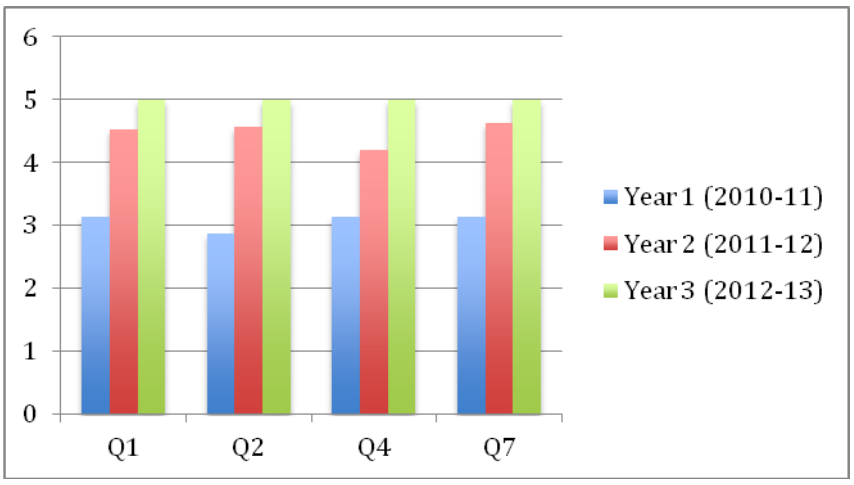

Figure 2. EDL 513 Organizational Management Online Course 3-Year SPOT Evaluations.

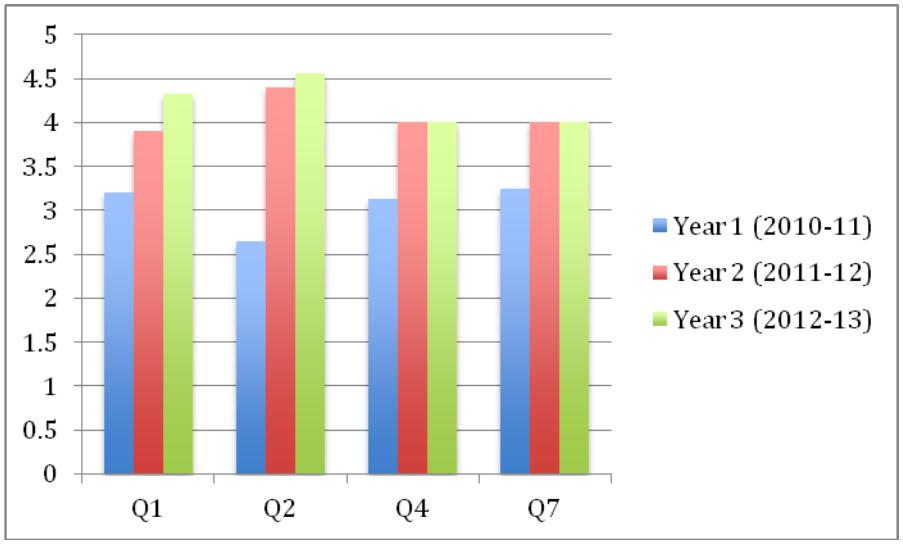

Figure 3. EDL 526 Essentials of Management Online Course 3-Year SPOT Evaluations.