Preparing Instructors for Quality Online Instruction

Yi Yang
Ph.D. Candidate
Department of Instructional Systems, Leadership, and Workforce Development
Mississippi State University
yy47@colled.msstate.edu

Linda F. Cornelious, Ph.D.
Professor
Department of Instructional Systems, Leadership, and Workforce Development
Mississippi State University
lcornelious@colled.msstate.edu

Abstract

With a growing number of courses offered online and degrees offered through the Internet, there is a considerable interest in online education, particularly as it relates to the quality of online instruction. The major concerns are centering on the following questions: What will be the new role for instructors in online education? How will students' learning outcomes be assured and improved in online learning environment? How will effective communication and interaction be established with students in the absence of face-to-face instruction? How will instructors motivate students to learn in the online learning environment? This paper will examine new challenges and barriers for online instructors, highlight major themes prevalent in the literature related to "quality control or assurance" in online education, and provide practical strategies for instructors to design and deliver effective online instruction. Recommendations will be made on how to prepare instructors for quality online instruction.

Introduction

With a growing number of courses offered online and degrees offered through the Internet, there is a considerable interest in concerns and problems associated with online education, particularly as it relates to the quality of online instruction (Allen & Seaman, 2003). According to Twigg (2001) many problems that arise from online education as it relates to quality include, but is not limited to: (a) the requirement of separate quality assurance standards, (b) programs having low (or no) quality standards, and (c) there being no consensus on what constitutes learning quality.

Online instruction , according to Khan (1997), is an innovative approach for delivering classroom instruction to a remote audience, using the Web as the medium. Volery (2000) further noted that online delivery is a form of distributed learning enabled by the Internet. Ascough (2002) suggested that online education has the following features: (a) it provides a learning experience different than in the traditional classroom because learners are different, (b) the communication is via computer and World Wide Web, (c) participation in classroom by learners are different, (d) the social dynamic of the learning environment is changed, and (e) discrimination and prejudice is minimized. More recently, Allen and Seaman (2003) in conducting a survey on online education delivered by higher education institutions in the United States defined an online course as one that had at least 80 % of the course content delivered online. Regardless of the definition, an early indication of the widespread popularity of online courses can be found in a survey

conducted by the U.S. Department of Education, which revealed that more than 54,000 online courses were being offered in 1998, with over 1.6 million student's enrolled (Lewis, et al., 1999). Moreover, Allen and Seaman (2003) in their study on online education reported that: (a) over 1.6 million students took at least one online course during the Fall of 2002, (b) over one-third of these students (578,000) took all of their courses online, (c) among all U.S. higher education students in Fall 2002, 11 percent took at least one online course, and (d) among those students at institutions where online courses were offered, 13 percent took at least one online course (p. 1).

Background of the Problem

Controversies as to the quality of online education have not diminished over the past decade. Many people are suspicious of online education because courses are often offered by divisions of extended studies or continuing education (Husmann & Miller, 2003) and are taught by adjunct faculty or instructors who have not earned doctoral degrees. Therefore, many individuals have concluded that online education programs are left outside of formal faculty structures that have traditionally had oversight for instructional course quality. Both proponents and opponents have been concerned about online education quality. Opponents view online education as inferior, see it as a substitute for the traditional "brick and mortar" university, and conclude that it is a rather profit making venue. This type of delivery is often viewed by "administrators as a 'cash cow'-a means of delivering instruction to a large number of paying customers without the expense of providing things such as temperature controlled classrooms and parking spaces" (Brown & Green, 2003, p. 148-149). Opponents have also suggested that online courses lower the quality of academic standards (Buck, 2001). Some opponents even question the quality of online courses when students do not actually attend a college, and have face-to-face interaction with instructors. Moreover, Weiger (1998) asserted that the quality of instructors who teach online courses cannot be guaranteed since anyone can put a course online.

While arguments have been made in opposition to online education, there are proponents who are in support of this mode of instruction. They suggest that the lack of face-to-face interaction can be substituted by online discussions in bulletin board systems, online video conferences or on listservs (Blake, 2000). Online education can also promote students' critical thinking skills, deep learning, collaborative learning, and problem-solving skills (Ascough, 2002; Rosie, 2000). Donlevy (2003) asserted that online education may help schools expand curricula offerings with less cost and can help graduates gain important technology skills to improve their marketability. Proponents also argue that online education can encourage non-discriminatory teaching and learning practices since the teachers and students, as well as students and their classmates typically do not meet face-to-face. Palloff and Pratt (1999) have concluded that because students cannot tell the race, gender, physical characteristics of each other and their teachers, online education presents a bias-free teaching and learning environment for instructors and students.

Concerns regarding the quality of online education are also raised by both students and faculty. Arguments are made that as consumers of online education, students are unlikely to be able to find out information about the quality of the courses that are provided (Twigg, 2001). Schools or universities that offer online courses typically do not provide comparative information for students. For example, how would a student know which online course meets his/her needs? Moreover, prerequisites that are essential for taking a particular online course are usually not clearly stated on course websites for students, and "when students are encountering technical problems, whom they can ask for assistance is not available to them" (Twigg, 2001,p. 15).

Regardless the opinions of proponents and opponents, instructors need to seriously consider what they can do and should do to provide quality online instruction students deserve. This article will

examine new challenges and barriers for online instructors, highlight major themes prevalent in the literature related to "quality control or assurance" in online education, and provide practical strategies for instructors to design and deliver effective online instruction.

Ensuring Effective Online Instruction

Challenges and Barriers for Online Instructors

Some of the challenges and barriers for online learning that have been identified by researchers are the change of roles and responsibilities for instructors (Zheng & Smaldino, 2003; Murihead, 2000), use of technology (Valentine, 2002; Palloff & Pratt, 2000; Berge, 1998; Volery, 2000), interaction with students and the changes in interpersonal relations (Bower, 2001), and academic dishonesty of online learners (Muirhead, 2000). O'Quinn & Corry (2002) in conducting a study on online education delineated several factors that may deter faculty from teaching online. The factors include a lack of professional prestige, delivery method used, change in faculty role, and lack of monetary support.

New Roles of Instructor

Instructors have many concerns about online education. Their primary concern is how online education changes their roles and responsibilities, and how they can adapt to this change. Online education is widely accepted as student-centered education, and the traditional education is regarded as professor-centered education. Due to a shift to online education, the instructor's role has become more of a facilitator than a traditional lecturer. Therefore, the traditional professor-centered educational environment and student-centered online educational environment will have many differences. Besides their role shifting, the role of the virtual instructor is to select and filter information for student consideration, to provide thought-provoking questions, and to facilitate well-considered discussion (Kettner-Polley, 1999).

Wu and Hiltz (2004) conducted a study of 116 students enrolled in two undergraduate courses and one graduate course at the New Jersey Institute of Technology. The three courses were "mixed mode" courses; students had face-to-face class meetings three hours a week, and weekly asynchronous online discussions. Based upon the findings in this study, the authors concluded that variations among instructors or courses are associated with differences in perceptions of student motivation, enjoyment and learning. Wu and Hiltz also found that in traditional professor-centered education, the roles of professor and student are regimented; the professor disseminates knowledge, and the student reflects that information. However, as Knowton (2000) has argued, in the student-centered online education course, the professor and students are a community of learners. The professor serves as coach, counselor and mentor; the students become active participants in learning. During the processes of learning, in teacher-centered classroom, professor lectures while students take notes. In online student-centered education, the professor serves as the facilitator, while students collaborate with each other in order to develop personal understanding of course content.

Murihead (2000) indicated three areas considered to be changed when courses are put online: (a) the provision of instructional and emotional support to students, (b) the expectations associated with authoring online courses while maintaining a full teaching load, and (c) the requirement to provide ongoing technological support to students and parents (p. 322). According to Ascough (2002), the role of instructor in an online learning environment should be more of a facilitator or moderator due to less control of the class environment. He noted that because most instructors are more likely to have been trained in traditional instruction, it is a somewhat foreign practice

for them to plan interactive strategies in course delivery, and adjusting their change in role from the leading speaker to that of a facilitator. Volery (2000) also suggested that the academic role of instructor should be shifted from intellect-on-stage and mentor towards a learning catalyst because the level of interaction has changed in online delivery. Therefore, besides being a facilitator, the instructor should also be an instructional designer (Zheng & Smaldino, 2003).

New Roles of Online Learners

Because the online environment is different from the traditional classroom, it is important for the instructor to motivate students to adjust their roles when becoming an online learner. In online education, the interaction between students and their instructors have been changed from synchronous in face to face (F2F) instruction to an asynchronous virtual community. Thus, a significant role adjustment for students may be required if they are to experience success. Students must move from being a more traditional passive classroom learner into a more active online inquirer. Hughes (2004) has suggested that online learners should ask themselves, " Am I ready for university (or college)?" "Am I ready for online learning?" "What is my preferred learning style?" "Do I have the skills to be successful in my chosen program?" (p. 369-370).

Garrison, Cleveland-Innes, and Fung (2004) conducted a study to validate an instrument regarding online students' role adjustment. Their findings suggest that students do see a difference in the learning process and a need for their role adjustment. The online learning should be viewed as more cognitive or internally oriented. Online learners must take more responsibility, adjust to a new climate, adjust to new context, synthesize ideas, know how to participate, synthesize ideas, apply ideas or concepts, and stimulate their own curiosity. In addition, Palloff & Pratt (2003) have suggested that online learners should be "open" about personal details of his or her life, work and other educational experiences; should be "flexible" and "humor" to create a warm, inviting course environment; should be "honest"; should be willing to take "responsibility" for online community formation; and should be willing to work "collaboratively" (p. 17-28). To ensure students' online learning to be successful, instructors should inform students in advance that the roles students must take in online learning environment.

New Technologies

Technology, as the inter-medium for instructors to delivery courses becomes more important when the level of face-to-face communication is decreased in online courses. Consequently, how to appropriately use technology to serve an instructional purpose tends to be another challenge for online education instructors. Muirhead (2000) reported teachers' frustration with the reliability of computer technology, working with multiple versions of a software package, providing technology support to students using multiple operating systems, and the absence of mature integrated content development tools. Palloff and Pratt (2000) also noted that the instructor must be trained "not only to use technology, but also to shift the way in which they organize and deliver material" (p. 3). Valentine (2002) indicated that misuse of technology could also be a problem for the instructor, although this problem may arise from lack of training, instructor's attitudes, or hardware problems. Faculty should learn how to use technology, but not completely rely on the technologies. Instead, they should be able to identify and recognize the strength and weakness of technologies, and select the most appropriate delivery mechanism for their lessons (Gunawardena, 1992, as cited in O'Quinn & Corry, 2002).

McGreal and Elliott (2004) summarized the technologies being used in today's online instructional environment as multimedia, streaming audio, streaming video, instant messaging,

and web whiteboarding. The authors also indicated some of the new technologies may be used in tomorrow's online instruction are push technologies and data channels, audio chat and voice over Internet protocol, hand-held and wireless technologies, and peer-to-peer file sharing.

New Interaction and Communication with Online Learners

How to interact with online learners is always a challenge for instructors. Muirhead (2000) reported that the teachers he interviewed in his study regarding online education in schools noted their perplexity on how to initiate interactions with students to build relationship while doing their online teaching job. Because most faculty are trained in "hand to hand" teaching, they have to face the challenge of lack of direct interpersonal contact with students, and they have little contact or feedback to gauge the clarity of their communications (Bower, 2001). Also, because managing electronic course materials, student participation, student achievement, and course evaluations can be problematic (Schott et al., 2003), interaction with students appears to be more important for online instructors on encouraging students self-directed, disciplined, and self-motivated. Moreover, because of the needs of different interaction methods to be employed, changes are also needed in the interpersonal relations between the instructor and students (Bower, 2001).

New Way of Learning and Testing

Since face to face instruction is usually eliminated in online classes, instructors may lack sufficient information on how well learners actually perform. Thus , ensuring academic honesty and integrity in online courses is another challenge for instructors. Muirhead (2000) reported that all online teachers in his study worried if the completed assignments received through the Internet have been completed by students themselves. The concerns expressed by those teachers Murihead interviewed may also partially relate to other online educators' complaints, relative to the lack of direct teacher supervision of online learning and testing. McAlister, Rivera, & Hallam (2001) raised another concern about the difficulty of ascertaining the students' identity when communicating over the Internet. Cheating, plagiarism, and integrity in taking test are also other issues in ensuring quality online instruction (Hanson, 2001; Simonson et al, 2003). While many critics have suggested that there is no sure way to hold students accountable for academic dishonesty, Heberling (2002) concluded that while maintaining academic integrity in the online instructional setting may be a challenging, many strategies may be employed to detect and prevent plagiarism, such as reversing an Internet search, tracking back to an original source.

Berge, Muilenburg, & Haneghan (2002) grouped identified barriers to quality online instruction into 10 clusters. They are technical expertise, administrative structure, evaluation and effectiveness, organization change, social interaction and quality, student support services, threats by use of technology, access to technology, faculty compensation and time, and legal issues. Understanding these challenges and barriers will help instructors know how their roles have been changed, what qualifications they need, and how to ensure the quality of online instruction with the help of various strategies.

Facing the Challenge

As the primary key to ensuring the quality of online instruction, instructors need to adjust their attitudes to teach online, understand what qualifications are needed, and know what they can do ensure the quality of online instruction. As Deubel (2003) has argued, an instructor's attitude, motivation, and true commitment affect much of the quality of online instruction. High quality online instruction encourages discovery, integration, application, and practices. Instructors need

to discover students' learning preferences, integrate technology tools, apply appropriate instructional techniques, put them all into practices, and generate the most suitable method for individuals. Furthermore, Cooper (2000) stated:

Online instruction can offer new challenges and opportunities to both students and instructors. Most students do not view online instruction as a replacement for traditional classroom instruction. However, with the right subject matter, with the right instructor and facilitator, and for the right student, Internet or online courses can provide an effective educational environment that is a viable alternative to traditional classroom instruction. (p. 54)

Since the role of instructors has been changed in online courses to facilitator, mentor and coach, the instructors will need to adjust their attitudes towards technology and new teaching styles to meet the challenge. Attitudes towards technology, teaching styles, and control of technology are the three instructor characteristics that influence learning outcomes (Webster & Hackley, 1997 as cited in Volery, 2000). Therefore, students are likely to experience more positive learning outcomes when their instructors hold positive attitudes toward online delivery of course content (Volery, 2000). Contributing factors on faculty's positive attitudes are the instructor's prior experience of teaching online, intellectual change, monetary support or promotion/tenure, availability of online courseware, improved training and facilities, feedback from students, and flexibility of teaching schedule (Clay, 1999). To become an online teacher, Deubel (2003) suggested that instructors could read literature about online learning environments first, and then get trained to use required technology, and finally seek assistance from experienced instructors when needed.

In order to design and deliver effective online instruction, instructors should know what qualifications they must have. First, they need to upgrade their technical skills in order to keep abreast of technological developments (Volery, 2000). Second, instructors need to know how to design interactive activities and course syllabi, how to operate the learning platform, and troubleshoot with problems online learners may encounter (Cuellar, 2002). Therefore, faculty receiving training before actually delivering online courses is crucial.

Many researchers have reported the importance of faculty training (McKenzie, Mims, Bennett & Waugh, 2000; Levy, 2003). The question is what training instructors should receive to qualify them to deliver online courses. The instructor must be trained in using the designated software, managing online course, integrating web sources, and interacting with students through the web (Ko & Rossen, 1998). Some online facilitation skills, such as giving negative feedback, encouraging students to become actively involve in online learning, and dealing with disruptive students, could be offered in training programs to prepare qualified online instructors (Hitch & Hirsch, 2001). This training is best offered online, since it provides the instructors the same learning experiences as their students (Ko & Rossen, 1998; Hitch & Hirsch, 2001).

Strategies for Designing and Delivering Effective Online Instruction

The promise for effective online instruction is not guaranteed when instructors adjust their attitudes to new teaching methods, or when they receive training in the use of technology. The key is how to put theory into practice, and bring them both. Instructors should understand that online education is not merely uploading teaching materials, receiving and sending e-mail messages, and posting discussion topics onto the Internet. More importantly, it provides an arena for an interactive, deep, collaborative, and multidimensional thinking and learning environment (Ascough, 2002).

McAlister et al. (2001) suggested that using a self-evaluation process in the online courses that instructors teach should help them better prepare, design and deliver online courses. The self-evaluation questions might contain: what are the congruence between the web-curriculum and the institution's mission and strategy, how available is the administrative support, what are the chances of institutional obstacles, what are issues of intellectual property, will any compensation from institution be given, how to select the courses, how available is assistance of facilities and capabilities on preparation and delivery of the course material, what are the choices of instructional methods, how to asses student's progress, how to adopt a delivery platform, and maintain the class materials online.

Designing an Effective Online Learning Environment

To ensure the quality of online instruction, the online learning environment must be designed first before the instructor embarks on the online course delivery . Wu & Hiltz (2004) asserted in their study, which examined students' learning from asynchronous online discussion, that the instructor plays an important role in motivating effective online discussion. Therefore, more online guidance, more structured discussion topics and considerate time devotion are required for instructors.

T he online learning environment also embraces pedagogical use of technology (Ascough , 2002; Yeung, 2001), integration of instructional design elements (Zheng & Smaldino, 2003), various types of medium and media (Deubel, 2003; Palloff & Pratt, 1999; McAlister et al., 2001), and diversified learning methods include deep learning, critical thinking, collaborative learning, and problem-based learning (Ronteltap & Eurelings, 2002; Rosie, 2000; Wheeler, Waite & Bromfield, 2002; Ascough, 2002).

Several researchers (Ascough, 2002; Ronteltap & Eurelings, 2002; Rosie, 2000) have r eported that online education can encourage students' deep learning and critical thinking skills when learned collaboratively or under problem-based scenarios. Ronteltap and Eureling's (2002) experimental study revealed that when students are learning in a problem-based practical learning, more interaction of students are caused, and students learn more actively. Therefore, integrating deep learning, critical thinking, collaborative learning, and problem-based learning methods into instruction is critical for instructors to improve the quality of online instruction. How to promote students' deep learning via online education is a critical factor for online instructors to consider. This requires the instructor to design collaborative and problem-based projects which will involve students to think critically, actively, and deeply.

To ensure the effectiveness of the online learning environment, a detailed course plan is required. The course plan should include, but not be limited to analyzing both students' and instructor's needs and class objective; selecting course materials for students' knowledge construction; designing activities, discussion topics, projects, and tests; envisioning any potential technical or academic problems; and testing the feasibility of the online course.

In developing the course plan, instructors must analyze their own teaching styles first, and then analyze learner's characteristics (Ascough 2002). Who are the online learners and how fluently can they use computers and the Internet? The students' learning styles should also be examined. Are they visual, print, aural, or interactive learners? It might not be possible to gather all the information before the online course begins, but a simple online survey or questionnaire can help the instructor know more about his/her students' learning styles. One type of questionnaire could be a course experience questionnaire, which not only can help the instructor to gain information about students, but can also improve the students' perception on the academic quality of the

course (Richardson & Price, 2003). Paulsen (1995 as cited in Palloff & Pratt, 2003) have also suggested that incorporating various activities can successfully address all learning styles of the virtual student. Those activities could be one-alone, one-to-one, one-to-many, and many-to-many.

When organizing the content for online courses, the learner's needs must be taken into account. The amount students learn, their ability to apply learned skills into practice, and their satisfaction with the learning experience should be considered. Evaluation is also an important component when implementing instructional design principles into online course design, because it is the way to gauge students' learning outcome and the quality of course instruction (Zheng & Smaldino, 2003).

Instructors should keep in mind that online learners need program orientation and course orientation before getting started. The program orientation should be offered by the institution, and the course orientation should be provided during the course, as well as by the institution. Palloff & Pratt (2003) recommended that the program orientation should include orientation to the courseware, basics of Internet use, how and where to get help when needed, technology requirements for online courses and programs, and information about any course or program policies. The authors also contended that course orientation should provide course descriptions, syllabus, faculty bios, specific information on course expectations, course requirements, assignments, grades. A "Frequent Asked Questions" file about the course and how to complete it, as well as course or program policies should be made available.

Several strategies may be used by instructors to help them to build the effective learning environment. The strategies include, but are not limited to: (a) p roviding background information for the course, topics on the unit, key concepts and readings for the course; (b) incorporating PowerPoint presentations, video lectures and demonstrations (this is especially important for application classes); (c) designing some activities or discussion questions which can trigger students' interest to explore the answer, which will ultimately foster students' critical thinking and deep learning; and (d) requiring students to play roles in certain scenarios in online discussion or virtual classroom. Successful implementation of those strategies should enormously improve the quality of online instruction.

Alley and Jansak (2001) have also identified 10 keys to quality online learning. The authors suggested that online courses will be high quality when they are student-centered and when:

- Knowledge is constructed, not transmitted.
- Students can take full responsibility for their own learning.
- Students are motivated to want to learn.
- The course provides "mental white space" for reflection.
- Learning activities appropriately match student learning styles.
- Experiential, active learning augments the Web site learning environment,
- Solitary and interpersonal learning activities are interspersed.
- Inaccurate prior learning is identified and corrected.
- "Spiral learning" provides for revisiting and expanding prior lessons,
- The master teacher is able to guide the overall learning process. (p. 6-17)

Developing an Interactive Online Teaching-Learning Community

To ensure the quality of online instruction, an interactive online teaching-learning community should be developed by the instructor. Unlike instruction in the traditional classroom, in online

courses, greater attention must be paid to the development of a sense of community within the virtual classroom in order for students' learning to be successful (Palloff & Pratt, 2000). This online community will augment the interaction between instructor-to-student, student-to-student, and student-to-content. Brown (2001) concluded there are three levels of community from his qualitative study on a graduate educational administration online course offered by a midwestern university. The three levels are: (a) making on-line acquaintances or friends; (b) building community conferment, which is like a membership card for the community of learners. This level requires online learners to be part of a long, thoughtful, threaded discussion on a subject; and (c) camaraderie, which was achieved after long-term and/or intense association with others involving personal communication (p. 24).

According to Edelstein & Edwards (2002), developing an effective system for students' ongoing interaction is one of the chief tenets for a successful and engaging online course. The characteristics of e-learning community are learner centered, active learning, instructor guided and greater participated by all students (Palloff & Pratt, 1999). Ascough (2002) suggested that the online interaction can be done through exploration, reflection, and discussion, which ultimately should lead to students' deeper learning.

The e-mail, listserv, threaded discussion, and chat room provide an efficient communication tool to build an effective online community. Threaded discussions could be a means of generating or promoting interaction. Threaded discussions can be constructed and created a home-like atmosphere by instructor whereby students can visit and embrace the joy of learning (Edelstein & Edwards, 2002). In this environment, the interaction between instructor-to-students predominantly consists of email interactions about assignments, questions about a particular aspect of a lesson, and general messages about the lesson. The student-to-student interaction is mainly discussing the group project, or discussion questions posted by the instructor. Setting online office hours may be a good option for the instructor to bridge the gap between instructor and student interaction, since students can get immediate answers to questions when the teacher is online (Serwatka, 1999).

Brown (2002) presented several tips for instructors to improve the impact of their online discussions, including: (a) maintaining an informal tone in the online community built by online discussion, (b) relating online discussions to issues raised and happened in class, (c) structuring discussion topic, stay focused around a being solved problem, (d) defining roles for various discussants, such as "original proposer", "idea extender", "constructive critic", "responder to critic", or "consolidator", (e) providing incentive for active participant in discussion by enhancing grade, (f) requesting backup for the points student have raised, and (g) keeping the discussion board to be a open and free speech platform (p. 9).

Establishing Performance Assessments

A variety of performance assessments should be established by instructors for quality online instruction. The assessments should be aligned with course objectives and subject aims, and should enhance students' vocational and disciplinary skills (Morgan & O'Reilly, 1999 as cited in Zheng & Smaldino, 2003). An assignment is one of the major assessment tools used to measure students' performance. To ensure the quality of assignments in the online learning environment, the instructor could design collaborative assignments, also include exemplary student work, permit revision of students' work, and encourage students to initiate course-related discussion topic (Deubel, 2003).

Testing is another assessment tool used in online courses. However, due to the special features of

online education, teachers and their students might not meet face to face. Therefore, academic integrity of the testing process is a crucial issue. One way to ensure integrity is to require that students come to school to take the test, or to give students an essay-type test alternatively (Serwatka, 1999). According to Olt (2002), options to prevent cheating in the testing process would be to disseminate a special username and password to students prior to the assessment being made available, make all assessments open-book, set time limits and number of permissible accesses, randomize questions from question pool, and use courseware, such as WebCT to track the time, duration, and number of attempts that a student accesses the tests. Therefore, it is clear that the quality of online instruction can be ensured from the instructors' perceptive when they hold positive attitudes towards teaching online, design an effective learning environment, develop an interactive online teaching-learning community, and establish reliable and valid performance assessments.

Assisting Students to Achieve Learning Outcomes

To ensure the quality of online education, the instructor must ensure that the students' learning outcomes can be achieved. However, this does not seem as easy as the teaching in traditional face-to-face classroom. Several researchers have expressed their concern about how students' learning outcome could be achieved through online education (Wu & Hiltz, 2004; Koory, 2003). Does asynchronous online discussion improve students' perceived learning (Wu & Hiltz, 2004)? Does online teaching and learning have particular strength in ensuring students' learning outcome (Simonson, Smaldino, Albright & Zvacek, 2000)?

As early as in 1997, Althaus examined 142 undergraduate students' learning outcomes through comparing the blended (face-to-face and computer-mediated) discussion and the traditional classroom discussion. The author found that this combination provides a superior learning environment compared to the traditional classroom alone. Koorey (2003) taught two years of "An introduction to Shakespeare" at the University of California Berkley . One course was offered online, and the other was in a traditional face to face (F2F) class. Through two years' teaching and observation, the author found that her online students achieved dramatic higher learning performance than her traditional lecture class. The author's conclusion was determined by whether course objectives have been fulfilled, and measures of course grade distribution. Koorey reported that fifty-eight percent (58%) of her online students received an A or A - , as opposed to the more usual 15% of students making similar grades in the face to face course.

Learning outcomes should not be only measured through students' grades, but also through their deep learning, higher order thinking, critical thinking, or problem-solving skills. Online discussion is usually regarded as the major communication tool between the online instructor and learners, and is regarded as the major vehicle to promote deep learning, and high quality learning outcomes. Larkin-Hein (2001, as cited in Wu & Hiltz, 2004) reported a research study addressing the role of students' understanding in physics using an online discussion group format. The author found that: (a) online discussion provided an additional learning and teaching vehicle, (b) online discussion facilitated the acquisition of higher-order thinking skills, and (c) students became more adept at transferring and applying information learned in class to novel situations (p. 141).

In addition to ensuring the online students' learning outcomes with effective online teaching, the instructor should be able to accommodate the students' learning styles. Koorey (2003) concluded from her two year field study that students who possess the following learning styles are more likely to be successful in online class: experienced, self-directive, task-oriented, independent, value composed, textual communication, less social, but values some give-and-take, interested in

problem-solving and immediate application.

Clark (2002) pointed out that online learner must be a constructivist learner. This suggests that the learner must be active in the process, cognitively complex and motivated. According to Clark , motivating factors in the learning process include self-reference, personal goals, control and autonomy . Howland & Moore's (2002) study examined 48 students' experiences in online environments. Their results confirmed that the students who were the most positive in their perceptions of online learning were those with attributes consistent with constructivist learners. The most positive students were more independent, proactive and responsible for their learning.

Conclusion and Recommendations

To ensure the quality of online instruction, the qualification of the instructors should be a first consideration. Since the preparation of instructors is also paramount, those who teach online courses should understand what their roles are and adjust their attitudes for this role change. Second, it is important for instructors to master, design, and delivery strategies, techniques, and methods for teaching online courses. Third, the institution should provide technical and financial support for faculty. Fourth, school administrators should also realize what their role and responsibilities are in ensuring quality online instruction. Critical to this process, administrators should recruit qualified faculty or instructors for their online education programs. Moore (2001) also noted that to effectively deliver online courses, faculty must promote student-to-student interaction with minimal faculty intervention, engage students in regular assignments, cultivate students' self-directed abilities, and then provide specialized attention to students who lack self-directedness.

The increasing diversity of the nation's student population and advancements in the development of educational technology has encouraged the popularity of online instruction

(Bi, 2000). However, academic institutions that offer courses online still face many challenges. Therefore, administrative support is crucial if programs are to be successful. Administrators must consider issues related to intellectual property, pedagogical rigor and methods, course management, and instructional compensation of faculty (McAlister, Rivera, & Hallman, 2003). In essence, successful online instruction does not happen by magic. It is a collaboration of instructors, administrators, students, and the community at large. The courseware development industries should keep the instructors tuned in about their product updates and provide training and technical service support to instructors. The government, community, and parents should also help the school to ensure the quality of online instruction.

Moving from traditional methods of teaching to online methods of instruction often create dramatic shifts in the perspectives of instructors and their students (Dringus, 2000). Moreover, many issues have been raised about the quality of online instruction. To provide quality online instruction, qualified instructors must be prepared first. The following recommendations are made for preparing instructors who provide quality online instruction:

- Administrators should not force faculty to teach online courses who do not wish to do so.
- Training in WebCT should be made more user friendly.
- Mentors should be available in each department or college who can answer questions that come up from faculty who have limited experience in teaching online courses.
- Departments should limit the enrollment in online courses so that instructors will be more focused on communicating and interacting with online students.
- Instructors need to take courses to better understand technology; specific classes need to be

taken in order to design websites for online courses.

- Instructors must have the support of other instructors who have taught online courses before, as well as administrative and technical support.
- Instructors should consider how to increase the interaction between students-instructor and peer-interactions by using various types of instructional design methods.
- Instructors should encourage students to evaluate the courses continuously and periodically so as to improve online teaching

---

References

Allen, I. E. & Seaman, J. (2003). *Sizing the opportunity: The quality and extent of online education in the United States , 2002 and 2003.* The Sloan Consortium, Needham , Massachusetts . Retrieved February 12, 2004 from http://www.sloan-c.org .

Alley, L. R. & Jansak, K. E. (2001). The ten keys to quality assurance and assessment in Online Learning. *Journal of Interactive Instruction Development, 13* (3), 3-18.

Althaus, S. (1997). Computer-mediated communication in the university classroom: An experiment with on-line discussion. *Communication Education 46* , 158-174.

Ascough, R. S. (2002). Designing for online distance education: Putting pedagogy before technology. *Teaching Theology and Religion, 5* (1), 17-29. Retrieved October 4, 2003, from EBSCOhost database.

Blake, N. (2000). Tutors and students without faces or places. *Journal of Philosophy of Education, 34* (1), 183-199. Retrieved October 4, 2003, from EBSCOhost database.

Berge, Z. L.(1998). Barriers to online teaching in post-secondary institutions: Can policy fix it? *Journal of Distance Learning Administration, 1* (2). Retrieved October 19, 2003, from http://www.westga.edu/~distance/Berge12.html

Berge, Z. L., Muilenburg, L. Y., & Haneghan, J. V. (2002). Barriers to distance education and training. *Quarterly Review of Distance Education, 3* (4), 409-419. Retrieved October 4, 2003, from EBSCOhost database.

Bi, X. (2000). *Instructional design attributes of web-based courses* . WebNet 2000 World Conference on the WWW and Internet Proceedings, San Antonio , TX . ERIC Clearinghouse on Information and Technology, Clearinghouse No: IR020509.

Brown, A., & Green T. (Jan/Feb 2003). Showing up to class in pajamas (or less!): The fantasies and realities of on-line professional development. *Clearing House, 76* (3), 148-151.

Brown, D. G. (2002). The role you play in online discussion. *Syllabus, 16* (5), 9.

Brown, R. E. (2001). The process of community-building in distance learning classes [Electronic version]. *Journal of Asynchronous Learning Network, 5* (2), 18-35.

Buck, J. (2001). Assuring quality in distance education. *Higher Education in Europe , 26* (4), 599-602.

Clay, M. (n.d.). *Faculty attitudes toward distance education at the State University of West*

Georgia . Retrieved October 19, 2003, from http://www.westga.edu/~distance/attitudes.html.

Clark, D. (2002). Psychological myths in e-learning. *Medical Teacher, 24* (6), 598-604.

Cooper, L. (2000). On-line courses tips for making them work. *Technological Horizons in Education Journal, 27* (8), 87-92.

Cuellar, N. (2002). The transition from classroom to online teaching. *Nursing Forum, 37* (3), 6-13. Retrieved October 4, 2003, from EBSCOhost database.

Deubel, P. (2003, September 15). Learning from reflections – issues in building quality online courses. *Online Journal of Distance Learning Administration* , *6* (3). Retrieved October 11, 2003, from http://www.westga.edu/~distance/ojdla/fall63/deubel63.html

Dringus, L. P. (Winter 2000). Towards active online learning: A dramatic shift in perspective for learners. *Internet and Higher Education, 2* (4), 189-195.

Donlevy, J. (2003). Online learning in virtual high school. *International Journal of Instructional Media, 30* (2), 117-122. Retrieved October 4, 2003, from EBSCOhost database.

Edelstein, S. & Edwards, J. (2002, March 29). If you build it, they will come: Building learning communities through threaded discussion. *Online Journal of Distance Learning Administration* , *5* (1). Retrieved October 11, 2003, from http://www.westga.edu/~distance/ojdla/spring51/edelstein51.html

Garrison, B., Cleveland-Innes, M. & Fung, T. (2004). Student role adjustment in online communities of inquiry: Model and instrument validation [Electronic version]. *Journal of Asynchronous Learning Network, 8* (2), 61-74.

Heberling, M. (2002). Maintaining academic integrity in online education. *Online Journal of Distance Learning Administration, 5* (2). Retrieved October 27, 2003 from http://www.westga.edu/~distance/ojdla/spring51/heberling51.html

Hitch, L. P. & Hirsch, D. (2001). Model training. *The Journal of Academic Leadership, 27* (1), 15-19. Retrieved October 4, 2003, from EBSCOhost database.

Howland, J. L. & Moore, J. (2002). Student perceptions as distance learners in Internet-based courses. *Distance education, 23* (2), 183-196. Abstract retrieved November 13, 2003 from EBSCOHost Database.

Hughes, J. A. (2004). Supporting the online learner. In T. Anderson & F. Elloumi (Eds.), *Theory and Practice of Online Learning* (pp. 369-370). Athabasca , Canada : Athabasca University .

Kettner-Polley, R. B . *(* 1999 *).* The making of a virtual professor. *ALN Magazine, 3* (1). Retrieved September 25, 2004 from http://www.aln.org/publications/magazine/v3n1/kettner.asp

Khan, B. (1997). Web-based instruction: What is it and why is it? In B. H. Khan (Ed.), *Web-based instruction* (pp. 5-18). Englewood Cliffs, NJ: Educational Technology Publications.

Knowlton, D. S. (2000). A theoretical framework for the online classroom: A defense and delineation of a student-centered pedagogy. *New Directions for Teaching and Learning, 84* , 5-14.

Ko, S. S. & Rossen, S. (1998). *Faculty development for online instruction: Two models for effective teaching.* Paper presented at 1998 Third Annual TCC Online Conference. Retrieved October 19, 2003, from http://leahi.kcc.hawaii.edu/org/tcon98/paper/ko.html.

Koory, M. A. (2003). Differences in learning outcomes for the online and F2F versions of "An introduction to Shakespeare"[Electronic version]. *Journal of Asynchronous Learning Network, 7* (2), 18-35.

Lewis, L., Snow, K., Farris, E., & Levin, D. (December 1999). Distance education at postsecondary education institutions: 1997-98. *Statistical Analysis Report, National Center for Education Statistics* . Retrieved on October 30, 2003 from http://nces.ed.gov/pbs2000/200013.pdf.

McAlister, M. K., Rivera, J. C., & Hallam, S. F. (2001, July 1). Twelve important questions to answer before you offer a web based curriculum. *Online Journal of Distance Learning Administration* , *4* (2). Retrieved October 4, 2003, from http://www.westga.edu/~distance/ojdla/summer42/mcalister42.html

McGreal, R., & Elliott, M. (2004). Technologies of online learning (e-learning) [Electronic version]. In T. Anderson & F. Elloumi (Eds.), *Theory and Practice of Online Learni* ng (pp. 115-135). Athabasca , Canada : Athabasca University .

McKenzie, B. K., Mims, N., Bennett, E. & Waugh, M. (2000, September 25). Needs, concerns and practices of online instructors. *Online Journal of Distance Learning Administration* , *1* (3). Retrieved October 4, 2003, from http://www.westga.edu/~distance/ojdla/fall33/mckenzie33.html

Moore , M. G. (2001). Surviving as a distance teacher. *The American Journal of Distance Education, 15* (2), 1-5.

Muirhead, W. D. (2000). Online education in school [Electronic version]. *The International Journal of Educational Management, 14* (7), 315-324.

Olt, M. (2002, October 9). Ethics and distance education: Strategies for minimizing academic dishonesty in online assessment. *Online Journal of Distance Learning Administration* , *5* (3). Retrieved October 4, 2003, from http://www.westga.edu/~distance/ojdla/fall53/olt53.html

O'Quinn, L. & Corry M. (2002, December 16). Factors that deter faculty from participating in distance education. *Online Journal of Distance Learning Administration* , *5* (4). Retrieved October 4, 2003, from http://www.westga.edu/~distance/ojdla/winter54/Quinn54.html

Palloff, R. M., & Pratt. K. (1999). *Building learning communities in cyberspace: Effective strategies for online classroom.* San Francisco , CA : Jossey-Bass.

Palloff, R. M., & Pratt, K. (2000). Making the transition: Helping teachers to teach online. *Paper presented at EDUCAUSE: Thinking it through. Nashville , TN.* (ERIC Document Reproduction Service No. ED 452 806). Retrieved October 4, 2003, from ERIC Database.

Palloff, R. M., & Pratt, K. (2003). *The virtual student* . (pp.17-28). San Francisco , CA : Jossey-Bass.

Parker, D., & Gemino, A. (2001). Inside online learning: Comparing conceptual and technique learning performance in place-based and ALN formats [Electronic version]. *Journal of*

Asynchronous Learning Network, 5 (2), 64-74.

Paulsen, M. F. (2002). *Online education systems: Discussion and definition of terms* . NIK Distance Education. Retrieved July 17, 2004, from http://home.nettskolen.com/~morten

Richardson, J. T. E., & Price, L. (2003). Approaches to studying and perceptions of academic quality in electronically delivered courses. *British Journal of Educational Technology, 34* (1), 45-56. Abstract retrieved October 17, 2003, from EBSCOhost database.

Ronteltap. F., & Eurelings, A. (2002). Activity and interaction of students in an electronic learning environment for problem-based learning. *Distance Education, 23* (1), 11-22. Retrieved October 4, 2003, from EBSCOhost database.

Rosie, A. (2002). Online pedagogies and the promotion of "deep learning". *Information Services & Use, 20* (2/3), 109-116. Retrieved October 4, 2003, from EBSCOhost database.

Schott, M., Chernish, W., Dooley, K. E., & Lindner, J. R. (2003, June 17). Innovations in distance learning program development and delivery. *Online Journal of Distance Learning Administration* , 6(2). Retrieved on October 4, 2003, from http://www.westga.edu/~distance/ojdla/summer62/schott62.html

Serwatka, J. A. (1999). Internet distance learning: How do I put my course on the web? *THE Journal, 26* (10), 71-75. Retrieved October 4, 2003, from EBSCOhost database.

Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2003). *Teaching and learning at a distance* . Upper Saddle River , N.J. : Merrill Prentice-Hall.

Twigg, C. (2001). *Quality assurance for whom? Providers and consumers in today's distributed learning environment.* The Pew Learning and Technology Program, Center for Academic Transformation, Troy , New York . Retrieved February 12, 2004 from http://www.center.rpi.edu .

Valentine, D. (2002, October 9). Distance learning: Promises, problems, and possibilities. *Online Journal of Distance Learning Administration* , 5(3). Retrieved on October 4, 2003, from http://www.westga.edu/~distance/ojdla/fall53/valentine53.html

Volery, T. (2000). Critical success factors in online education [Electronic version]. *The International Journal of Educational Management, 14* (5), 216-223.

Weiger, P. R. (1998). What a tangle (world wide) web we weave. *Community College Week* , *10* (22), 11-13. Retrieved October 4, 2003, from EBSCOhost database.

Wheeler, S., Waite, S. J., & Bromfield, C. (2002). Promoting creative thinking through the use of ICT. *Journal of Computer Assisted Learning, 18* (3), 367-378. Retrieved October 4, 2003, from EBSCOhost database.

Wu, D., & Hiltz, S. R. (2004). Predicting learning from asynchronous online discussions [Electronic version]. *Journal of Asynchronous Learning Network, 8* (2), 139-152.

Zheng, L., & Smaldino, S. (2003). Key instructional design elements for distance education. *The Quarterly Review of Distance Education, 4* (2), 153-166. Retrieved October 4, 2003, from EBSCOhost database.

Back to the Online Journal of Distance Learning Administration Contents