Best Practices in Undergraduate Adult-Centered Online Learning: Mechanisms for Course Design and Delivery

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Abstract

This study was conducted to explore and identify best practices used by full-time and part-time faculty in adult-centered online learning environments. Using a modified version of the instrument made available by the Teaching, Learning and Technology (TLT) Group (2005), faculty were surveyed and asked to identify and describe teaching practices implemented in their online courses that paralleled those described by Chickering and Ehrmann (l996) in the Seven Principles of Good Practice in Undergraduate Education for online environments. In addition, researchers verified the usefulness of these practices with students by comparing them with comments on student evaluations. Results revealed three themes within best practices for online instruction: course design, instructional effectiveness, and interactivity or interconnectivity. Using these three themes, best practices in course design and delivery are proposed to improve opportunities for student-instructor interaction, teaching strategies that encourage retention and behaviors that influence learning and course satisfaction. This study has implications for planning faculty development activities which assists faculty in integrating best practices and effective teaching principles for online learning into undergraduate adult education.

Keywords: Adult Education, Distance Education, Faculty Development, Part-time Faculty, Non-traditional Students, Instructional Effectiveness, Interactivity, Interconnectivity, Qualitative Study

Introduction

An increasing number of higher education adult programs are offering web-based courses, certificates and degrees to provide access and convenience to their students and to reach future markets (Berge, 1999; Velsmid, 1997). The significant increase in the number of adults in online courses (National Center for Education Statistics [NCES], 2005; Sloan Consortium, 2005) and programs, credit and non-credit, requires a closer look at how effective teaching can maximize the value and benefits of distance learning for students and institutions. Adult programs in higher education will continue to face internal and external pressures to provide and expand distance-learning options while maintaining academic integrity and quality of instruction, raising critical issues of accountability for today's institutions, faculty and students.

The shift from traditional face-to-face to online learning environments encourages a closer look at the quality of instruction and instructional design. The instructional practices of faculty, course design and the opportunities for faculty-student interactions within the online environment can be predictors of student learning and satisfaction. The increasing use of part-time faculty to teach online courses prompts the need to include this cadre of faculty in formal processes to develop web-based teaching skills (NCES, 2005; Sloan Consortium, 2005).

Despite the proliferation of online courses and programs, there are few studies on what constitutes effective teaching and learning in the online learning environment (Newlin & Wang, 2002). A common mistake online course developers or instructors make is trying to emulate the traditional classroom with technology mediated interactions without the benefit of good pedagogy. Wilkes and Burnham (1991) reported that good online teaching practices are fundamentally identical to good traditional teaching practices and that factors that influence good instruction may be generally universal across different environments and populations. However, moving a course online requires new ways of thinking about teaching and learning (Bates, 2000)

This study examined the "Seven Principles of Good Practice in Undergraduate Education", as modified by Chickering and Ehrmann (1996), with respect to their effectiveness and applicability to online courses for adult learners. The purpose of the study was to investigate best practices in design, implementation and assessment of online instruction for adult learners, and to identify practices that capitalize on the potential of web-based instruction and promote positive learning experiences.

The teaching and learning mission of adult and continuing education will be significantly impacted as competition for students, declining resources, increasing online enrollments, and changing faculty demographics continue. Unless faculty are provided opportunities to recognize and implement best teaching practices in online teaching environments, educational imperatives, such as students learning, retention and outcome assessments will be compromised. In setting benchmarks for best practices, guidelines for effective teaching across disciplines in online environments could be established as well as a competency-based faculty development program that would ensure the implementation of these principles. Adult learning and constructivist learning theories, as applied to web-based education, provide the framework for benchmarking these practices (Berge, 1999; Diaz & Bontenbal, 2001; Huang, 2002).

Background

Online undergraduate courses were first offered in March 2003, in response to a feasibility study undertaken by a school of adult and continuing education at an urban private Midwestern four year institution, which identified advantages and recommended online learning formats for adult learners. The online courses were selected, designed and delivered, according to specific guidelines, to enhance learning experiences, expand access, and provide options for educational opportunities for adult learners, while sustaining learning outcomes consistent with those in similar face-to-face courses. No traditional undergraduate program at this university advocates or offers online courses.

Faculty who volunteered to teach online were provided a modicum of training in course design and delivery and were paid a modest stipend for course development. The first four courses offered online in 2003 were in the general studies core curriculum and were taught primarily by part-time faculty concurrently teaching the same course face-to-face. This cadre of online faculty grew from 4 (3 part-time and I full time) in 2003 to 19 (17 part-time to 2 full time) and the number of online course offerings grew from 4 to 26 in academic year 2006-2007, with part-time faculty teaching 92% of the online course offerings. All faculty who taught online during that timeframe were provided the same training as the initial group, were similarly compensated for course development and retained intellectual property and copyright privileges.

Methods

Participants

This study utilized 12 returned questionnaires distributed to the 14 faculty teaching online in the school for adult and continuing education at the university at that time. Ten participants were part-time faculty while two were full-time. This sample of online faculty participants closely reflects the ratio of part-time to full time faculty (98 to 7) in the school teaching on ground. Most of the faculty responding to the survey had taught an average of four years online. The range of time for respondents teaching online varied from one to four years. All of the respondents had taught the face-to-face version of the online course about which they were queried. Of the faculty surveyed, over 73% had the terminal degree in the discipline in which they taught. Half of the faculty in the study were female. Disciplines represented included biology, theology, philosophy, psychology, history, mathematics and political science. All online courses are taught in an accelerated 9-week format. Approximately 500 students in this adult and continuing education program enroll in online courses each year, and 95% of those courses are in the general studies core curriculum. Sixty-three percent of the adult learners are female and 31% of these students African American. The average online student is 35 years old, works full time and earns a yearly income of about $36,000.

Responses were evaluated from 150 students enrolled in the online courses of interest during the study. Archival data from 150 end of course evaluations were collected and recorded for student responses on open ended questions about their learning experience.

Measure and Analysis

Using the survey instrument, personal interviews and focus groups, this study was conducted to investigate different aspects of the design and delivery of courses for teaching adult learners in the online environment. Qualitative data, collected from faculty survey responses, and individual, and focus group interviews, were analyzed for emerging themes and common patterns for teaching, learning and student engagement.

An eight-item survey was developed based on Chickering and Erhmann's (1996), "Implementing the seven principles: Technology as lever", article and adapted from a survey by the TLT Group (2005) integrating the seven principles with the use of technology. Survey questions were open-ended to allow for more descriptive responses and were minimally modified to include phrasing that related more appropriately to online courses. The first seven items of the survey referenced each of the original Chickering and Gamson's seven principles; the eighth item provided faculty with an opportunity to recommend an additional best practice based on their online teaching experience. Surveys were electronically distributed to online teaching faculty with instructions for completion and submission. In addition, participating faculty received a follow-up email reminder and telephone call requesting prompt submission of the completed survey. In this study, 14 online faculty, 12 part-time and two full-time, received the eight item survey to complete and submit electronically. A total of 12 completed surveys were returned. Faculty were asked to interpret each principle in terms of examples and practices implemented in online courses. Survey items were written as follows:

Item 1. Chickering and Gamson (1987) wrote that, according to decades of educational research, "Frequent student-staff contact in and out of classes is the most important factor in student motivation and involvement..." How do you utilize technology to encourage communication between yourself and your students?

Item 2. "Learning is enhanced when it is more like a team effort than a solo race," wrote Chickering and Gamson (1987). How have you promoted cooperation among students both during and outside of the classroom setting?

Item 3. "Students do not learn much just sitting in classes listening to teachers, memorizing pre-packaged assignments and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives" (Chickering & Gamson 1987).

How does your teaching style directly or indirectly foster active learning?

Item 4. It is important to offer feedback about students' abilities and performance, at the start of a program, as it goes on, and as it is ending. This feedback includes but isn't limited to assessment (e.g., laboratory experiments or simulations that immediately show students whether experiments have succeeded). How have you offered feedback in this manner for your online students?

Item 5. "Time plus energy equals learning," wrote Chickering and Gamson (1987). Technology can play a role here in attracting students to spend more time in their studies, reducing wasted time (e.g., commuting time, standing in lines, waiting for books), and in helping communicate to students how much time and energy you expect them to invest in their work. How has the format of your courses increased the time students spend working productively?

Item 6. "High expectations are important for everyone -- for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated" (Chickering & Gamson, 1987). Expectations are communicated not only by what students hear you say but also by the nature of assignments. How are your expectations communicated by what students hear you say and by the nature of your assignments?

Item 7. Students are different from one another. In different ways, each of them needs "the opportunity to show their talents and learn in ways that work for them" (Chickering & Gamson, 1987). Then they can be pushed to learning in new ways that do not come so easily. Can you describe one or two activities that, directly or indirectly, help <u>all</u> students learn despite their differences and/or in ways that take advantage of their differences?

Item 8. Are there other ways of using technology to improve learning that you would like to share and that you have not yet mentioned? In addition, if you had the opportunity to create a principle that you believe would benefit the online classroom environment, what would it be?

Personal interviews with all faculty respondents and two focus group sessions were conducted to cross – validate what was learned from survey responses. Interview questions were open-ended and less specific than survey questions to gather faculty experiences. In follow-up focus groups more probing questions were asked and responses recorded. Data sets from the interviews and focus groups were used to explain emerging themes and relationships between categories of teaching strategies and best practices.

All faculty responses were collectively analyzed for similarities, common patterns, and emerging themes in accordance with the grounded theory analysis method introduced by Glaser and Strauss (1967). In order to verify that faculty best practices were viewed by students as effective, student end of course evaluations were examined for congruence with those practices.

Students' responses to seven open-ended questions on the end of course evaluation that corresponded with survey items given to faculty for best practices were recorded and analyzed. Open-ended questions queried students about: (a) satisfaction with the way the instructor handled the course, (b) how the instructor could improve the course, (c) how the instructor encouraged student participation and interaction in the classroom, (d) if course objectives were met, (e) if the student contacted the instructor outside of class and a description of the experience, and (f) if there were any additional comments.

Results

Interpretation of the survey, as well as interview and focus group, responses and student evaluations revealed three distinct themes in relation to the best practices identified: course design, instructional effectiveness and connectivity (see Table 1). Student responses that parallel each theme are listed in Table 2. Even though there is some crossover among principles, practices that best support the need for effective course design include those under Principle 2, encouraging cooperation among students, Principle 5, increasing time on task and Principle 8, incorporating pedagogically sound practices. Support for instructional effectiveness come from practices in Principle 1, encouraging staff-student contact, Principle 6, communicating high expectations and Principle 7, respecting diverse talents and

ways of learning. Within the third theme, practices in Principle 3, encouraging active learning, and Principle 4, giving prompt feedback, support interconnectivity or interactivity. Erhmann (2005) reported similar results about teaching strategies and activities across faculty, institutions and disciplines for each of the seven principles of good undergraduate education.

Discussion and Conclusion

In this study, researchers identified best practices in undergraduate adult education in online learning environments and determined which practices promoted most desirable educational goals and outcomes for adult learners. This study also provides basic information and insights into teaching adult undergraduates online which can be used by college administrators to plan and implement faculty development programs to meet the needs of online faculty and the institution in maintaining high standards of instructional quality and organizational integrity. The results herein are consistent with adult learning and constructivist theories and what we know about distance learners (Charp, 2000; Knowles, l984; Kuh & Cracraft, l986; Truman-Davis, Futch, Thompson, & Yonekura, 2000).

With regard to best practices in teaching adults in the online environment, the traditional practices associated with the seven principles of good undergraduate education, were adaptable, as reported, for online instruction and support the three themes, content design, instructional effectiveness and interactivity/interconnectivity that surfaced in the content analysis of the faculty responses. These themes serve as a pathway to bridge face-to-face and online learning practices. In addition, best practices were verified for their efficacy from student comments collected and reported on end-of-course evaluations. With regard to best practices derived from the seven principles, it can be concluded from the respondent's comments that:

Principle 1. Encouraging staff-student contact

Principle one included practices that created an environment for interaction and communication. Most faculty used e-mail and discussion to create an online community where students felt welcomed, comfortable and safe and where student progress could be monitored and evaluated. Stein and Glazer (2003) recommended that interactivity between student and instructor is fundamental to building community in the online environment. Dialogue and discussion in a constructivist atmosphere promotes expanded learning and fosters critical thinking relevant to adult learners' everyday life experiences. This was confirmed in the works of Truman-Davis et al. (2000) and Saba (2000) who recommended that virtual learning models should be learner-centered and dialogue based. The results may indicate that faculty, cognizant of the "distance", creates communication bridges to extend their roles as facilitators and mentors, and maintain a "visible" social and teaching presence. Anderson, Rourke, Garrison, and Archer (2001) recommended that online instructors be "seen" and establish a presence in the online environment to solidify connectivity with students.

The majority of student responses confirmed that online courses provided immediate feedback from a professor who was present, available and organized. Students commented that online courses allow for more student-faculty interaction. E-mail and forum discussions were sited as best ways to connect to the instructor and other students, as well as to get information and feedback about course assignments.

Principle 2. Encouraging cooperation among students

Principle two included practices that provided opportunities for peer review for various assignments and in discussion postings. The peer review process was often used in conjunction with team projects where students were encouraged to share experiences and sources of information. This was in accord with Gibbons and Wentworth (2001) who stated that adult learners have a life-centered orientation to learning that is relevant and application-based. It can be concluded that as more adult students bring life experiences into the online environment, faculty should incorporate authentic experiences that are applicable to real world situations.

Students commented on increased freedom of expression with classmates and the instructor. Some students also noted that the discussions were valuable in understanding other perspectives and allowed

for additional time to process information. Students who participated in peer review of writing assignments mentioned improved writing skills as a result of these activities and more confidence in their own abilities to provide feedback and support to other students.

Principle 3. Encouraging active learning

Principle three was emphasized by the predominant use of assignments that encouraged reflection and required students to relate course content material to their personal lives. This indicates that faculty recognize the need for variety when assigning learning activities to motivate student interest and encourage control over their own learning environment. These results are in concert with the theories of constructivism and engagement that allow students to choose assignments that are relevant, interesting and useful for them (Kearsley & Schneiderman, l999). It can be concluded that online environments are advantageous for providing opportunities for students to search beyond course content and construct their own knowledge.

Students reported that online course completion resulted in improved critical thinking skills which enhanced writing ability. Many responded that the course taken was interesting and user-friendly. Furthermore, many students revealed that they were more self-directed and self-motivated than they thought they were.

Principle 4. Giving prompt feedback

Principle four included the practice of setting a time and schedule for feedback on discussions and other assignments, including tests and papers. This indicates that with a plan for providing timely feedback, faculty time constraints throughout the term would not disrupt and compromise the flow of acknowledgment and information. This is consistent with the recommendations of Graham et al. (2001) who found that while instructors have good intentions for providing feedback in the beginning of a course; they often become lax in responding as the semester becomes busier. Faculty who reported that they provided personalized feedback did so to commend exemplary performance or to offer suggestions for improvement.

It is concluded also that feedback plays as important role in student retention in relaying different types of information needed by students to remain involved and connected in the online environment. Students reported that they interacted more often with the instructor in an online course than a face-to-face course. Students also commented on the increased interaction and personalized support received from other students as well as the instructor.

Principle 5. Increasing time on task

Principle five was primarily achieved with repeated postings of timelines and deadlines for assignments. The nature of the online environment is double edged for the adult learner. On one hand the environment is conducive to procrastination because students have the flexibility and freedom to learn in their own time and space. On the other hand this flexibility allows students to access the learning environment when they are ready and mentally present to do so. Regular posting of due dates, use of a reminder calendar and scheduled tests help the adult learner keep on task. This confirms the work of early adult learning theorists who reported that busy adults want more direction and less ambiguity in the learning process (Knowles, 1984) and that their readiness to learn is a significant factor influencing academic achievement (Gibbons & Wentworth, 2001). It can be concluded then, that providing students with the opportunity of taking practice tests, as well as redoing tests and papers, and organizing study groups increases time on task with the content material. Student responses verified that online courses require more self-discipline and helped improve time–management skills.

Principle 6. Communicating high expectations

Principle six was achieved most often by faculty through their course syllabus. Inclusion of course learning objectives and specific rubrics for course assignments and participation clarified expectations for academic success in the course. This is confirmed in Newlin and Wang (2002) who stated that instructors should clearly communicate expectations through course goals and objectives and specify

how they can be attained. It can be concluded that clarification of expectations in another opportunity for faculty to model expected behaviors, highlight and comment on exemplary student performance and provide detailed feedback for student improvement. Students responded that online courses are more rigorous when compared to face-to-face courses. Students also reported more focus placed on participation requirements and attendance expectations than in face to face courses.

Principle 7. Respecting diverse talents and ways of learning

Principle seven was promoted by most faculty in practices that incorporated various ways to present course material, design assignments and format assessment within an "open atmosphere" for learning. This indicates a genuine regard for the different learning styles of adult students and the "democratization" of the online learning environment. Confirmed by Diaz and Cartnal (l999) an awareness of different learning styles aids in the instructional design and ultimately the retention of students in online courses. It is also concluded that exposure to different learning styles, points of view and perspectives increases student versatility and ability to adapt to real world situations.

Students responded that the online environment allowed more time to process, reflect, and respond. Many students reported increased self-confidence when participating in class discussions and appreciated the anonymous environment. Students also commented that online courses had more variety. Learning was extended through online resources, web-based activities and other content expanding sources.

Principle 8. Personal Best Practice

Principle eight included practices that augmented those presented in the initial seven principles. For an overwhelming majority of faculty in this study the practice of good pedagogy was the most important aspect of designing teaching experiences and facilitating adult learning in online environments. This indicates that the use of technology is secondary to the value of good pedagogy for course design and instructional effectiveness in distance learning (Christie & Ferdos, 2004; Covington, Petherbridge, & Warren, 2005; Erhmann, 1997; Kozma, 2004). It can be concluded that the environment most conducive to online learning is one that balances the interactions between the human players and the technology medium.

Implications for the Future

The results of this study will benchmark future online course planning and have practical implications in faculty development and policy implementation. The common themes that emerged in this study serve as pathways for the mechanisms of best practices in moving faculty from the traditional to the online teaching environment.

As the demand for online learning increases, so will the demand for qualified instructors. Transitioning from teaching in the traditional classroom to the online environment is not a simple task for most faculty, particularly veteran faculty who have taught in the traditional mode for eons. It can be a threatening experience as well as one that goes unrecognized and unrewarded. Unless tenure and promotion guidelines recognize and reward the efforts and effectiveness of online teaching, most online courses will be taught by part-time faculty.

The contextually informed design of this study allows for more thoughtful interpretations of familiar undergraduate best teaching practices for transition to the online environment using a constructivist approach. The interdisciplinary commitment to best practices identified in this study enhances the interpretability of effective teaching and thereby transforms new information from one environment to another. Benchmarking best practices for online education will strengthen processes to achieve and maintain quality educational programs and sustain institutional accountability for teaching and learning outcomes.

Institutions that make a conscious decision to assist faculty in the transition process and provide opportunities to discover mechanisms for optimizing best practices for teaching online will compete more favorably for adult students than those that do not. The results of the study may also provide schools

with a foundation upon which to build faculty development programs that meet the needs of all online instructors and simultaneously match institutional goals to maintain high standards for online instruction. Part-time faculty must continue to be included in development activities and encouraged to lead programs to develop and mentor other faculty.

Table 1. Faculty Survey Results

Themes in Best Practices	Number of Responses	Principle Involved and Response Results
Course Design		**Principle 2. Encouraging cooperation among students**
	6	Incorporate other activities to encourage cooperation among students
	5	Discussion forum use
	5	Learning community (i.e., group activities)
	3	Peer reviews
	2	Assign team projects
		Principle 5. Increasing time on task
	3	Use other methods to increase student time on task
	2	Provide opportunities for students to expand learning beyond content
	2	Round-the-clock access to lecture notes and course materials
	1	Require students to redo poorly written papers and tests
	1	Encourage more focused discussions
	0	Use timelines and deadlines
		Principle 8. Personal Best Practice
	2	Practice good pedagogy
	1	Reinforce reading and good writing skills
	1	Using and expanding web resources
	2	Emphasizing assignments by repeating the assignment in several places
	2	Use only appropriate technology and make application to real world
Instructional Effectiveness		**Principle 1. Encouraging staff-student contact**
	8	Use email as primary means of communication
	6	Use an open bulletin board
	3	Use introductions at the beginning of the course
	1	Use virtual office hours
	1	Use online announcements
		Principle 7. Respecting diverse talents and ways of learning
	4	Teach to different learning styles
	3	Recognize and accept diverse backgrounds and experiences
	2	Encourage students to follow self-directed paths
	1	Create an open environment and even playing field in which students can
	1	Respond to each student as an individual
	0	Assess for different learning styles
	0	Use students' words when responding to them
Instructional Effectiveness (cont.)		**Principle 6. Communicating high expectations**
	4	Encourage students to improve performance
	3	Provide challenging learning experiences
	1	Use syllabus
	1	Give praise and recognition for exemplary work
Interactivity/Interconnectivity		**Principle 3. Encouraging active learning**
	6	Give writing assignments
	2	Encourage internet exploration
	2	Assign problem solving exercises
	2	Require journaling
	1	Use inquiry and discovery based online activities
	5	Use other methods to encourage active learning (i.e., web quests)
		Principle 4. Giving prompt feedback
	5	Respond to students' questions in a consistent and timely manner
	3	Include an automatic grading system for tests/quizzes and/or discussion forums for prompt feedback
	1	Use peer review
	1	Utilize question and answer sessions after each course module
	1	Supply virtual grade book
	2	Use other methods of providing prompt feedback

Table 2. *Student Survey Responses*

Themes in Best Practices	Response Results
Course Design	Facilitated discussions
	Timelines and deadlines
	Online courses provide immediate feedback
	Online course was interesting with a variety of activities
	Less reading was required
Instructional Effectiveness	Professor is more present (teaching presence)
	Professor is more available
	Facilitated Discussions
	Professor was very organized
	Professor remained on task
Interactivity/Interconnectivity	Technology was user-friendly
	Easy to communicate with instructor and other students
	Valuable discussions
	Online courses allow for more instructor-student interaction
	Online environment allows for more time to process content, reflect and respond

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How to best integrate mobile devices into course delivery and assessment is a field of continuing exploration. New forms of assessment. Programs, including Child and Youth Worker for practice in dealing with difficult clients, Justice Studies with a simulation for border security training, and clinical practice for health care students. At Seneca College in Ontario, social media tools are used in courses in the School of Marketing, not only to share content and insights, but also for increased student engagement, responsibility for learning, and skills for independent and interdependent learning. Lectures, theory, and best practices are provided online, while the active learning is through practice, participation, and reflection in the workplace. This online course covers the following topics: Why HR Matters, HR Professionalism in Practice, Enabling and Organization's Strategy Through HR, Workforce planning, recruitment and retention, and Workforce Engagement and Managing Performance. Chartered Institute of Personnel and Development not only offers training for HR professional but accreditation as well. The Diploma in Modern Human Resources is a course for individuals in HRM looking to update their knowledge of MHR or even for supervisors and anyone who may need to step into a HRM role. This 15-module course requires about 10-15 hours to complete and culminates with an assessment. The curriculum is divided into two segments: recruiting employees, and managing employees. Through specific examples and practical suggestions from experienced e-learning leaders, readers will be introduced to concrete strategies for how to create a climate of creativity and innovation that can lead to more successful and scalable online programs and initiatives. The Business of Innovating Online demystifies the relationship between business, creativity, and innovation by describing the logistics required to create an agile online education enterprise.