
Online Pedagogy and Practice: Challenges and Strategies

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This paper reports the findings of a study focusing on the challenges facing tertiary education instructors teaching in online environments, and the strategies they use to create a collaborative online learning environment. The greatest challenges instructors reported were forging instructor/student and student/student connections, and creating a productive learning environment that engaged all students. Most important instructional strategies appear to be those that provide a structured and detailed framework for learning with learner expectations clearly outlined, facilitate collaboration and interaction among students, create a safe environment for deep learning, knowledge creation and reflection, and provide regular and prompt feedback. Importantly, many instructors reported that they were trying to accommodate more diverse learning styles and move beyond solely text-based delivery by incorporating video and audio technologies. Online pedagogy was student-centered and constructivist focused on active learning and student interaction. Interestingly, while teaching online focused on collaboration, instructors own learning and professional development occurred most often in isolation. Instructors continuously monitored and modified their teaching strategies based on prior

experiences. An unexpected outcome was the ways in which instructors reported their online pedagogy and practice informed their traditional teaching.

Keywords: *Online Learning, Constructivism, Pedagogy*

“The universe is expanding at the speed of light, and Western civilization seems to be hurtling forward to keep up” (Wheatley, 2004, n. p.). Swenson (2007) sums up the rapid advances that have occurred in technology and how these have affected our lives.

In the space of one brief decade the Internet has changed our world – and most of us with it. Almost everything we do is different now. We don’t shop like we used to. We don’t read like we used to. We don’t make dates, find mates, or communicate like we used to. The digital revolution is dramatically changing the way we learn. (paragraph 2)

To be successful in a 21st century world, in which knowledge is generated at an ever-increasing pace, requires that learning is an on-going process of skill development and

knowledge creation. "Distance learning programs are a reflection of this new world. They offer education without borders" (Levine & Sun, 2003, p. 6). Distance learning presents opportunities conducive to the lifestyles of increasing numbers of non-traditional learners by providing flexibility of study at a time, place and pace convenient to the individual student. Moreover, according to Ebersole (2007), "in a society where people are changing jobs and careers more frequently, while simultaneously raising families, online learning is emerging as an essential and sensible alternative" (p. A21).

The key to a successful learning experience, whatever the mode of delivery, is neither the content nor the technology: What is critical is the pedagogy (Palloff & Pratt, 2001). Furthermore, although meeting students' flexibility needs is a vital factor of distance education, Ebersole (2007) emphasized "more important than mere popularity, is the quality of the educational experience" (p. A21). Although much research has been conducted on strategies that promote excellent teaching and learning in traditional settings, strategies for distance teaching are less well documented. According to Levine and Sun (2003), "Distance learning remains immature and experimental. Higher education institutions need to innovate and allow distance learning to evolve and develop, but they cannot do so wholly unchecked" (p. 6). Furthermore, Drago and Warner (2004) declared "online education is here to stay, but if quality education is expected through this mode of delivery, its relationship to various learning styles should be investigated" (p. 2).

Not all experiences online are positive for students (Bonk, Kirkley, Hara & Dennen, 2001; Hara & Kling, 2000; Palloff & Pratt, 1999, 2001) or for instructors (Duncan, 2005). Teaching strategies that add to the quality of distance teaching must be

documented. To this end, this article reports the findings of a cross disciplinary study that explores the challenges faced by university instructors teaching in an online environment and the pedagogy they use to engage learners and provide a quality learning experience. The research questions guiding this study were:

1. What are the challenges of teaching in an online environment?
2. What strategies do online instructors use to engage learners and provide a quality learning experience?

LITERATURE REVIEW

Online courses are becoming increasingly prevalent in higher education (Green, 2001; Lewis, Snow, Ferris, & Levin, 1999). Indeed, over 96% of US universities currently offer online learning opportunities, with over 3 million students enrolled (Ebersole, 2007), and several colleges and universities now offer degrees that can be accomplished entirely online. Whereas in the past, most distance learners studied largely in isolation, technology has provided the opportunity to focus on greater communication and interaction among learners and between learner and instructor. According to Draves (2000), the rapid development of technology over the past decade has caused the biggest change in education and learning since the first book was printed a little over 500 years ago. This change focuses not only on the medium of delivery, but also, and more critically on pedagogy. Therefore, the areas of this literature review focus on online learning, blended learning, pedagogy and teaching strategies, accommodating learning styles, providing support for students, and learner expectations.

ONLINE LEARNING

Online students report that they appreciate the convenience and flexibility of

online courses (Cantrell, Young, Shaw, & Thompson, 2002). Moreover, they appear to learn as much as students in comparable traditional courses (Schulman & Sims, 1999; Smith, 1999; Young, Cantrell, & Shaw, 2001). Students report that they give increased time and effort to their online courses (Cantrell et al., 2002; McGhee & Lowell, 2003). This is supported by the findings of the National Survey of Student Engagement (2006) detailed in the report, *Engaged Learning: Fostering Success for All Students*, in which distance education students across several disciplines reported higher levels of academic challenge and greater developmental gains than did their campus-based peers. More surprisingly, the study revealed that distance learners also indicated similar levels of interaction with faculty members to campus-based students, albeit through online forums. This finding is significant, as the study also revealed that students who participate in collaborative learning and who interact more with faculty members achieve higher grades, are more satisfied with their education, and are more likely to remain in college (National Survey of Student Engagement, 2006).

BLENDING LEARNING

There is a growing trend in further education as well as in the workplace to use a blended or hybrid approach to college courses and professional development. Kerres and De Witt (2003) defined blended learning as the mix of different instructional methods, for example, expository presentations, discovery learning, cooperative learning, as well as the combination of different delivery formats for example, e-learning, face-to-face learning, audio and video conferencing. Driscoll (2002) presented a more detailed view, and outlined four conceptions of blended learning: 1) using a combination of different modes of web-based technology, for example, live virtual classroom, self-

paced instruction, collaborative learning, streaming video, audio, and text, to accomplish an educational goal; (2) combining a variety of pedagogical approaches, for example, constructivism, behaviorism, and cognitivism, to produce an optimal learning outcome with or without instructional technology; combining any form of instructional technology including videotape, CD-ROM, web-based training, and film, with face-to-face instruction; (4) combining instructional technology with actual job tasks to create an interface between learning and working. Whatever the definition of blended learning, the objective is to create the most flexible, efficient and effective instructional environment for participants.

PEDAGOGY AND TEACHING STRATEGIES

Garrison and Anderson (2003) described three interdependent dimensions that frame the educational experience, namely social, cognitive and teaching presences. Social presence creates a supportive climate that fosters open communication and group cohesion. Cognitive presence is the cyclical process of inquiry that starts with questioning, from which follows exchange of information, connection of ideas, new ways of seeing and knowing, and finally testing of these concepts in new situations, which in turn may create another cycle of inquiry (Garrison & Vaughan, 2008). Teaching presence is the third and essential element of a quality learning experience. It provides the foundation for the social and cognitive presences through curriculum, course design, direction, guidance and facilitation. The interconnections of all three dimensions are key to a successful teaching and learning experience.

Constructivism. The constructivist focus is on student empowerment to explore and transform different sources of knowledge, contradictory explanations and diverse interests into situated knowledge and new

skills (Chalmers & Keown, 2006; Rüschoff & Ritter, 2001). Constructivism is based on the assumption that knowledge is built from experience and that learning is an active process. Learning is strengthened when adult learners can tap into real life experiences (Chalmers & Keown, 2006; ní Riain & O'Riordan, 2004; Roelofs & Terwel, 1999; Sandars & Langlois, 2005). Challenges to applying the constructivist learning theory are that it takes time and effort. It requires the instructor to have substantial subject knowledge (Smerdon, Burkam, & Lee, 1999) and the ability and inclination to develop relevant activities that actively encourage peer-to-peer collaboration (Morrison, Raya-Carlton, Henk, & Thornburg, 2007).

Pedagogy & technology. According to Rubens (as cited in Rubens, Emans, Leinonen, Skarmeta, & Simons, 2005), technological possibilities, instead of pedagogical principles, often drive the focus of online learning. The ultimate challenge of online instruction is to use the various course tools to develop a system that enhances rather than detracts from learning (Beason, 2005; Solem, Chalmers, Dibiasi, Donert, & Hardwick, 2006). In many cases an experimental approach has been used towards online course delivery, with little forward planning. Moreover, an additional concern is that with the rapid growth of distance education opportunities, a pedagogy of distance learning using technology has not yet emerged in academia (Levine & Sun, 2003). Investment in technical systems and faculty development towards establishment of robust online teaching and learning environments is paramount (Parker, 2004). When instructors move to an online environment, they must not only learn how to use the technology, but must also master new ways of instruction (de Simone, 2006).

ACCOMMODATING LEARNING STYLES

Drago and Warner (2004) highlighted the need to consider student learning styles when designing online instruction. Denig (2004) noted that learning styles play a key role in undergraduate students' educational performance. Several studies have recommended that educators must adapt content, materials and teaching style to provide a learning environment that accommodates individual learning styles (Green & Tanner, 2005; Sizemore & Schultz, 2005; Stewart, 2002). Online learning remains predominantly a textual environment, where reading and writing skills are to the fore (Green & Tanner, 2005; Schnitz, 2007; Zapalska & Dabb, 2002). Studies (e.g., Beck, 2001; Green & Tanner, 2005; Miller, 2000, 2001; Muir, 2001; Sizemore & Schultz, 2005) have shown that teaching strategies and delivery modes that are responsive to students' learning styles not only increased motivation but also led to improved performance.

According to Terryberry (2002), the method of presenting information online is a key factor to student success. Simply uploading syllabi, handouts, and course materials to a website for access by students supports only the read/write, logic/mathematic, analytical students. Academic achievement increases when instructional delivery and assignment options are congruent with student learning styles (Chavers, 2000; Chiang, 2000). Including diverse ways of teaching into the curricula not only increases students' performance, but also their satisfaction with the course of study (Chavers, 2000; Chiang, 2000). According to Ariwa (2002), instructor training, multimedia tools, support, and flexibility in working with students' individualized learning styles helps lessen inequalities in student achievement online.

PROVIDING SUPPORT

Schnitz (2007), in a study of students from underserved populations, claimed greater access to higher education does not guarantee student success when they enroll. Given the preponderance of independent learning materials in online course, such as articles, web pages, learning modules, labs, simulations, videos and books, students need to develop independent study skills, such as guided reading, note-taking and summarization, to be successful. Providing support is vital to student success. Online learning can be isolating. Life events may hit online students particularly hard as frequently they have no access to the support systems often available to campus based students. “[W]hether dealing with academic challenges or dealing with personal events, sometimes staying in school depends on a support structure and not academic skill” (Schnitz, 2007, paragraph 8). Building online community is important.

LEARNER EXPECTATIONS

More and more, students are being viewed as consumers of education. Courses and teachers are evaluated on students’ experiences. According to Davies (2002), increasingly learners demand flexibility and choice in the delivery of education, access to cutting edge technology, involvement and consultation in their learning experiences, accurate information about their courses and assessment procedures, and honesty with respect to whether their needs can be met or not. With around the clock access to courses, students have high expectations of instructor presence (Natriello, 2005). To this list of expectations, Tricker (2003) added quality and professionalism in the provision of services, access to suitably qualified teachers and appropriate learning support, and the value of the learning experience to career prospects. Importantly, student satisfaction is measured by the degree to

which their expectations are met, that is, the gap between expectation and experience (Burwood, 2002; Davies, 2002). As universities compete for students, more emphasis is being placed on the quality of the student experience, on identifying and enhancing the student experience, and determining to extent to which courses and learning experiences are meeting student expectations (Tricker, 2003).

In study of a graduate online learning experience, Duncan (2005) identified the following factors that increased student satisfaction in the distance learning environment: the relevance of the course content; self reflection time; the opportunity for self expression; sense of accomplishment; increased technology skills; opportunity to participate and to network with colleagues; flexibility of study, and interaction with other participants and the instructor. While students find the workload of online learning to be higher than traditional face-to-face courses, if the tasks are meaningful, they are willing to put in the extra effort. Conversely factors impacting negatively on the students’ perceptions of the learning experience included reduced instructor input, lack of face-to-face contact, including the opportunity for conversation, the absence of body language, and immediate clarification of questions that is available in a traditional situation. Of these, the most important factor was instructor input. Coming to know the humanness of the instructor is vital (Brookfield, 1990; Garrison, 1996). Students want to *see* instructor presence online (Duncan, 2005), and look to the instructor as the main source of support (Cain, Marraro, Pitre, & Armour, 2003). To meet the changing lifestyles and demands for choice and flexibility of traditional as well as non-traditional students, distance delivery is becoming a major component of most universities’ course and program offerings.

Prior research has indicated the need to explore effective pedagogy and instructional strategies for alternative course delivery methods (Draves, 2000; Levine & Sun, 2003; Palloff & Pratt, 1999, 2001). The role played by the instructor is vital to students' perceptions of the effectiveness of the learning experience (Beason, 2005; Duncan, 2005; Solem et al., 2006). Yet that role in distance education is very different from traditional face-to-face teaching (de Simone, 2006; Natriello, 2005). Therefore the purpose of this study was to explore the strategies online educators use to overcome challenges of distance, and thus to enhance teaching and learning by engaging students in online environments.

METHOD

The research followed the qualitative tradition and included the collection of data by survey and interview from online instructors at a US four-year college. An email was sent to all faculty members (92) who were teaching distance courses in the spring semester of 2007, requesting their participation in a short 10-15 minute web-based questionnaire. The questionnaire collected demographic data, including online teaching experience, subject areas taught, modes of delivery, and a set of open-ended questions that asked participants to describe challenges they faced and the strategies they used to improve distance teaching. The email contained a link to the questionnaire. After two weeks had passed, a reminder email was sent. Twenty-six instructors responded to the questionnaire, producing a response rate of 28 %. The instructors who responded all indicated a high level of commitment to distance learning. One limitation to this study may be that the response rate was fairly low, and there is no way of knowing whether the respondents are representative of the entire online instructor population at

this university. After initial data analysis, follow-up interviews were conducted with a sample of participants to better understand their perspective.

DEMOGRAPHICS

Of the 26 distance educators who completed the online survey, years of teaching in higher education averaged 12.83 years, with a range from 2 years to 31 years. Thirty-three percent of respondents had taught for 5 years or less. Twenty-five percent had 6-10 years of teaching experience; 17 % had taught for 11-15 years, and 25 % for over 15 years. The 26 participants in this study represented a broad diversity of subject areas, including: literature, writing, women's studies, horticulture, family and consumer science, physical and biological sciences, computer science, child development, education, religious education, nursing, languages, counseling and psychology. Reported delivery methods included: solely online (58%) and blended learning, which in each case comprised an online plus a video or audio conferencing component (42%).

DATA ANALYSIS

Qualitative data were initially coded; several sub themes emerged, which were then recoded and condensed into three main themes. The first was *creating a productive learning environment*. The second was *structure - balancing flexibility with feasibility*, and the third was *time and professional development* to keep up-to-date with technology innovations, and to learn how to use and incorporate them into their courses.

FINDINGS

Participants were asked to describe the challenges they encountered and the strategies they used to enhance the quality of the distance learning experience for their

students. The first and most prominent category was creating a productive learning environment.

CREATING A PRODUCTIVE LEARNING ENVIRONMENT

Instructors in this study were unanimous that active student participation was key to a productive learning environment online. However, when most online classes last for such a short time frame, usually from 12- 16 weeks, it is a challenge at a distance to create and maintain the conditions necessary for a productive and caring 'classroom' for all participants, and to generate an effective instructional environment that maximizes active collaborative learning and interaction. While the instructor has a captive audience in that learners must participate to succeed, the challenge is to engage students so that participation becomes the internal motivator. Building the trust, commitment and reciprocity among a diverse group of e-learners, who are often situated across the US as well as abroad, in a short time frame is difficult and requires careful pre-planning of activities that encourage interaction. One instructor commented:

The greatest challenges for me when I teach online are making personal connections with students and helping students connect with each other. These kinds of connections help students build a learning community rather than simply engage in course content in isolation.

As noted by Garrison and Vaughan (2008), social presence online is less frequent and more intentional than in a face-to-face environment. Whatever the discipline in which they taught, instructors in this study were highly aware of the need to connect personally to their students, to create avenues for connections among learners, and to engage learners in their own

learning, that is foster an environment in which learning was an intrinsic motivator.

Making personal connections with the students. Forming relationships is an integral part of the teaching and learning process. The human dimension, the personal touch, and the feeling that someone is interested is so very important in all types of learning situations, but may be more so online where everyone is physically isolated. Instructors noted that student anxiety was highest in the beginning stages of each course and, in addition, students had differing needs for support. They shared that although body language and voice intonation were absent, they worked to inject warmth, encouragement, spontaneity and humor into their email communications.

Several instructors pointed out that technology cannot connect people; it merely provides pathways for people to develop connections. Connecting with students online requires a conscious effort on the part of the instructor. Priority must be given to establishing presence and to performing actions that indicate sincerity. Thus instructors emphasized the importance of establishing oneself as reliable and well intentioned by commitment to quick, respectful, and supportive responses to queries. Instructors also stressed the need to be explicit in delineating timeframes for responses, for example within 24 hours or 1-2 days, as some students had expectations of 24/7 instructor attention. Additionally, instructors underlined that they always informed students when they would be off-line or have limited Internet access. Similarly, they expected students to keep the group informed of periods of absence. Instructors placed emphasis on the need to make prompt contact with students who 'got lost in cyberspace', either by email or telephone. *"I call them when I can tell that the sound of another voice may be what the student needs to either walk them through something, or*

to support them in some way." The human connection is vital to keeping students engaged and active in the class.

Making connection requires initiating interaction, being open, sharing the personal stories, and creating an identity as both a professor and a person. To this end most instructors posted a photograph and biography that provided some personal as well as professional details. In addition, aware that most of her students would never set foot on campus, one professor made a video of a campus tour, where she introduced herself, and interviewed other professors whom her students might encounter online, but would not have the opportunity to meet face-to-face. The professor indicated that although creating the video was a time consuming process, she learned much about video editing and increased her skills. But, had it not been in the summer session, when work life was less hectic, she would not have had the time. However, she believed the effort was worthwhile in that it gave students a sense connection to place and to people. As indicated by Hara and Kling (2000), the most successful distance learning courses are taught by instructors who are committed and dedicated. Adding to that observation, this study found that instructors' dedication and commitment was not only to student learning, but also to their own, in that they were continually challenging themselves to master new skills that would improve the online experience and help forge connections with their students.

Helping students connect with each other. Online there are few opportunities for the serendipitous meetings or informal chats during shared coffee breaks that facilitate connections in the 'real world' - the discovery of the shared interests that help to build confidence and trust. Therefore, conscious effort is needed to create spaces for sharing online.

Establishing a physical presence as well as a cyber-presence, even if vicarious, promotes connections. One instructor shared how she did this by creating a video.

One video in particular has been helpful in building classroom community. This is one that is a collection of students' digital photos and brief biographies, created as a movie that appears to be a book with pages that turn from person to person as the bio is read. Students often comment at the end of the course about how much they appreciate getting to see and hear each other and how comfortable that helps them feel with each other.

Similarly, several instructors indicated that they asked students to post photographs and a brief biography during the first week of class which focused on getting to know each other, the course site, and community building activities. Some instructors set up chat room times for meeting socially and to ask questions in real time, but reported few students took advantage of it. For students, if the course work is interactive, there seems to be less need for social interaction, and of course, time is at a premium.

The aim of many instructors was to create a community of inquiry where students learned together by questioning, reasoning, reflecting, challenging, and developing problem solving skills. However, the instructors noted that this does not just happen; it requires careful structuring of the course content and assignments, as well as providing clear guidelines for students of what was expected of them. Furthermore, they indicated that as instructors, their role, initially, was to model the way, demonstrate how to challenge ideas in a non-threatening way, and elicit deeper responses by posing questions. They

indicated that the majority of students very quickly took on-board these processes.

Engaging all students. Prior learning experiences may not have equipped students for learning in a situation in which they are responsible for reflecting critically on the material, actively participating in their own learning, and interacting with others in the creation of new and shared meanings (Schnitz, 2007). Not all adult learners are self-directed. One instructor commented, "Some expect a LOT of hand holding and a lot LESS responsibility on their part.... I spell out my expectations in my syllabus, but they don't always accept that up front." Most instructors indicated that they structured their courses to create active learners in their virtual classrooms. "I believe the most helpful strategy that I use is to expect students to be accountable for their own learning, to take responsibility for engaging in the context and to help their classmates do the same." To achieve this aim requires clear expectations and the requirement that these expectations are met. Instructors emphasized the importance of regular feedback as key to ensuring students are aware of the extent to which they are meeting those requirements.

Opportunities for engagement. Instructors agreed on the importance of actively creating opportunities for students to dialogue on course related activities and to relate content to their own experiences. They emphasized that online learning provided an excellent vehicle for this process in that it allowed all student voices to be heard, and in addition, the asynchronous nature of discussion boards lent itself to deeper reflection. All instructors used threaded discussions a major component of their online courses. Differences appeared in their approaches. Some instructors were active participants, while others gave ownership to students, allocating each student a moderating role. All agreed that instructor visibility was a

vital component, although they were careful not to let their voices dominate. One comment was "an instructor can't expect students to be engaged if the instructor himself does not appear to be engaged".

Group work was another strategy instructors used to actively involve students in their own learning. Again instructors indicated that clear expectations are required. One instructor commented "I have group work, which facilitates interaction in smaller peer groups and requires greater immersion in content – which they then teach to others". Most instructors included an evaluation component to group assignments that required students to reflect on what worked, what didn't, and how they came together as a group to make it happen. Instructors reported different levels of success for group work online, and similar to traditional classes, engagement depended to a large extent on the commitment of individual members. "Some stick closely to those bottom line expectations and offer little else beyond that; other groups get into the discussions and go far beyond the minimum. The latter have the better learning experience across the semester." Some instructors reported while students readily worked in groups to contribute to discussions, there was high resistance to collaborative group projects. Some students used the term 'forced', and felt that online collaboration was cumbersome, time consuming, and reduced flexibility. Groups who functioned well used multiple methods of communication, for example, the chatroom, telephone, email, as well as discussion boards to collaborate towards the final product. As in traditional classes similar variation in motivation levels exist online.

Reflective journals. Some instructors reported the use of journals to promote reflective practice skills, to build students' capacity to evaluate their role as learning

community members, and to grow as thinkers and practitioners from what they learn from that process.

Role of grades. Several instructors mentioned the role of grades in student engagement. “Although our ultimate aim is for students to be internally motivated to learn, grades, whether at undergraduate or graduate level, play a huge role.” Thus most instructors had detailed rubrics for quality and quantity of participation online, which they used to provide feedback and grade each discussion or activity. One instructor commented:

In my first online classes, I thought, I don’t grade traditional class discussions, and so I won’t grade my online discussions. So I just provided clear expectations for participation. I found that for most students, participation was minimal. When I started grading each discussion, participation levels and quality of responses increased dramatically. It’s a case of ‘learn what works.’

Learning from experience was a common theme that emerged. Most instructors worked in isolation to develop and deliver their courses, experimenting and modifying content and instruction according to student feedback.

Learning styles. Several instructors acknowledged that they were trying to move their courses beyond the text-based norm to accommodate students with different learning styles. “This is the major reason I’m exploring technologies like podcasting – I need to be providing different types of experiences to reach students who do not excel in a solely text-based environment.” In the same vein, another instructor shared how she infused the content with a variety of different activities and media.

I use videos that include interviews with experts on topics. I ask students to read supplementary materials that

have applications of the concepts; then they discuss them in asynchronous online threaded discussions. I develop video, voice-over tutorials to help students learn to use applications they need for the course content.

Although most instructors indicated they tried to accommodate different learning styles in the way they delivered their courses, the extent depended on levels of skill and confidence using more sophisticated technology, and significantly, on the amount of time and support available. Rubens (as cited in Rubens, Emans, Leinonen, Skarmeta, & Simons, 2005) claimed technological possibilities, instead of pedagogical principles, often drive the focus of online learning. In this study, although participants’ skill levels in technology innovations drove the extent to which they incorporated new media experiences into their course, their focus was primarily on pedagogy, namely creating the social, cognitive and teaching presences framed by Garrison and Vaughan (2008).

BALANCING STRUCTURE, FLEXIBILITY, AND FEASIBILITY

One of the most highlighted benefits of online learning is its flexibility. Students have access 24 hours a day. However, for an effective online experience, the flexibility must be bounded by structure. And in a sense, an online course must be very structured. Organization and pre-planning are vital. Instructors agreed on the importance of providing a clear ‘roadmap’ online so that students can easily locate all materials on the course website, as well as clear step by step instructions on tasks and assignments, with clear learning objectives and detailed rubrics on grading. They recommended breaking up course materials into manageable chunks so that students can follow the flow of the class and

schedule their time accordingly. If learning is to be interactive, then students must complete their tasks within a bounded timeframe. One instructor noted the need for finely tuned balance by

...providing enough structure to respond to their information needs (and to keep them engaged and accountable) but not so much structure that it stifles the flexibility that makes online learning work for them. They do need some structure to get started, otherwise it's too easy to wait until the last minute, post only sporadically, and otherwise not work toward creating a rich and active learning community.

The course must be structured to balance the goal of learner centeredness and learner responsibility. Instructors indicated that while holding students accountable to deadlines is important, within those deadlines, certain flexibility is necessary that allows for life events. They observed that learning online can be isolating; it is easier for students to disappear if they have a setback, and so support is very necessary. However, the flexibility and convenience of teaching and learning online also add to the challenge for instructors. These two factors add to the 24/7 demands and expectations of teaching in this environment.

TIME AND PROFESSIONAL DEVELOPMENT

There is no doubt that successful teaching online requires a heavy time commitment. Instructors indicated the importance of finding a balance between providing students with prompt feedback and encouragement while at the same time maintaining a reasonable workload. In addition, time for professional development to enhance technical skills that allow instructors to use the increasing array of tools and technology to augment and improve the educational experience for their learners can be hard to find. While

instructors indicated that some university and college professional development opportunities were available, most indicated that if they wanted to learn a new skill, frequently they experimented on their own or with help from colleagues. Bates (2005) noted that most current workload models in higher education fail to consider the full staff costs and disregard the time required for online learning and teaching, particularly the extra time required for staff to learn how to teach in new ways. There appears to have been little progress by university administrators in recognizing the additional time and expertise online teaching demands.

In contrast to the focus on collaborative and interactive learning online, most instructors indicated that their own learning about how to teach online was in isolation and by trial and error. Instructors acknowledged that they continually monitored and modified their teaching "My instructional methods seem to always be evolving - I haven't taught the course the same way twice I don't think." This reflection may add weight to Levine and Sun's (2003) comment on the experimental nature of distance education. It also has implications for university administrators in that ways must be found to reduce isolation among faculty members and to build a community of online educators who share innovations and have conversation and collaboration around pedagogy and process.

UNEXPECTED OUTCOMES

Many instructors commented on the impact of teaching online on their traditional classes. One instructor noted that as she reflected on and implemented strategies to engage a diversity of online students, she found that by using a similar variety of instructional techniques in traditional classes, student engagement also increased there. Another instructor

observed that since teaching online, she used a more student centered, facilitative approach to traditional classes. Furthermore, many instructors reported that they had added an online component to traditional classes. They found that it gave voice to a less vocal group of students and provided time for deeper reflection. Adding an online component can also provide continuity to intensive weekend classes, often spread several weeks apart. One instructor commented:

They [students] take out their books on Friday morning, drive up to seven hours to come to class on Friday evening, pack everything away on Sunday at noon for a month, and then drive home ready to start work Monday morning. Replacing the Sunday morning hours with an online component ensures that they reflect on the course regularly, interact with classmates, and provides an avenue for reflection in action as they relate work experiences to course theory.

While the intensive weekend format allows students who are in employment to meet on-campus for classes, and provides opportunities for professional, support, and social networking, time traveling, and the stress and strain of a busy week may result in fatigue which may compromise the quality of learning. Not only did students indicate a preference for the blended learning format, but also interestingly, and in contrast to other research findings that highlighted the higher workload and increased stress of teaching online (for example, Duncan, 2005; Hara, Bonk, & Angeli, 2000; Hiltz, 1998), some instructors in this study commented that although the workload of teaching online was high, it was not as stressful as preparing for 15 hour face-to-face teaching weekends that are the format for many on-campus graduate courses.

Much research has indicated that the role of an online instructor differs significantly from traditional teaching (de Simone, 2006; Palloff & Pratt, 2001; Sandbothe, 2000). Interestingly, findings of this study indicate that, not only have online instructors developed new strategies for engaging students online, but their online teaching has also informed their approach to engaging students in traditional classes.

CONCLUSION

Rapidly developing information and computer technologies capabilities that form the infrastructure for distance education fuel an expanding niche for distance education. Student expectations for high quality any-time, any-place education demand new approaches to teaching and learning.

Unquestionably, it is a challenge to create and maintain a productive and caring online classroom that engages all students and maximizes active collaborative learning and interaction. Evident from this study is that higher education instructors are continually evolving their teaching strategies to provide a quality distance education experience for students. Most important strategies appear to be those that focus on the social, cognitive and teaching presences framework (Garrison & Vaughan, 2008) , that is creating a safe and collaborative environment, in which deep learning, shared meaning-making and knowledge creation, and reflection are the objectives. To create such an entity requires a focus on building relationships and promoting student interaction, a structured and detailed framework for learning and creating opportunities to connect experience to new knowledge in dialogue with peers.

This study highlighted the diversity of subject areas and disciplines that deliver courses using technology in post-secondary education. One of the main findings of this

research was the dedication of the instructors who participated in this study to finding ways to improve on their online teaching strategies, to continuously seek ways of making their courses more engaging to all students, and to move from a solely text-based delivery system to one that accommodates a diversity of learning styles. The following comment was a recurrent theme in participant's responses: "I will continue to learn ways to engage students in this virtual and sometimes lonely classroom." Of note was the fact that experiences in online pedagogy often informed instructors' practices in traditional teaching settings, leading to a more facilitative, learner-centered approach, as well as in some cases to a blended component embedded in traditional face-to-face settings. Instructors experimenting with incorporating video and audio components into their online courses commented on how time consuming it was to learn the skills necessary. Most relied on colleagues for technical guidance, although at least one college offered workshops on creating podcasts. As we race towards an ever expanding technologically enhanced future, it is important that higher education administrators consider support systems for faculty teaching in this medium as they strive, often in isolation, to create online learning environments that reach out to a diversity of students with a diversity of learning styles.

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