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Designing Learning Environments to Foster Affective Learning: Comparison of Classroom to Blended Learning

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Abstract

Affective learning is a key dimension of health professional education and involves teaching topics such as empathy or grief that impact student attitudes and beliefs to prepare them to be novice practitioners. The move in higher education toward online and *blended* learning (a mix of online and traditional, classroom-based learning) disrupts traditional approaches to teaching professional affect, which is heavily reliant on instructor *modeling*. This paper documents insight into the redesign process of a course, *Professional Identity: Behaviors and Attitudes*, from a traditional to a blended learning format, with a focus on affective learning. This study employed a survey approach to compare classroom and online student perceptions of learning across the seven affective topics of the course. The study also examined the contribution of various technology-enhanced learning activities to the students' perceptions of learning. Twenty-five classroom students and 64 blended learning students indicated that while both formats increased students' perceived understanding of topics related to affective learning, the blended learning group perceived a significantly greater understanding in four affective topic areas. Furthermore, blended learning students cited reading, online discussions, and unstructured out-of-classroom discussions as contributing to their learning significantly more than the classroom group.

Keywords: Affective Learning, Blended Learning, Occupational Therapy Education

Introduction

Affective learning, a key dimension of health professional education, involves teaching topics such as empathy or grief, that impact a change in student attitudes and beliefs. Affect is defined as an "emotional reaction associated with an experience" and is related to mood or mental state (Venes (Ed.), 2009, p. 56). The goal is to prepare the students to respond as professionals or as novice practitioners in health care settings.

In the 1950s, Benjamin Bloom defined affective learning as, "demonstrated by behaviors indicating attitudes of awareness, interest, attention, concern, and responsibility, ability to listen and respond in interactions with others, and ability to demonstrate those attitudinal characteristics or values which are appropriate to the test situation and the field of study" (Krathwohl, Bloom, & Masia, 1956). More recently, L. Dee Fink and Daniel Goleman have continued to refine the concept of affective learning and promote its fundamental importance. Affective topics fall within Fink's (2003) taxonomy of significant learning under the "human dimension." Fink, a prominent instructional consultant in higher education, defines this type of learning experience as "developing a new self-image - as a new, more competent kind of person" (p. 44). Another important aspect of Fink's human dimension is "acquiring a new understanding of and ability to interact with others" (p. 46). Learning experiences on topics such as developing professional behaviors, exploring self attributes, working with clients in pain, and working with clients through loss, grief, dying, and death engage the human dimension. This concept of the human dimension is similar to what Goleman (1998) refers to as emotional intelligence, which includes personal competence (self-awareness, self-regulation, motivation) and social competence (empathy and social skills). Goleman, in broadening the definition of affective learning, provides an underpinning for emotional learning that, along with intellectual learning, is fundamental to a student's professional development and preparation for leadership (Goleman, Boyatzis, & McKee, 2002).

At the same time that health professional educators are tasked with helping students develop emotional intelligence, trends in higher education present them with new challenges. The move toward online and *blended* learning (a mix of online and traditional, classroom-based learning) disrupts traditional approaches to teaching professional affect. It is no secret that online learning grows substantially each term; in fact, the 2008 Sloan Survey of Online Learning reports that online enrollments increased by over twelve percent from 2006 to 2007 and that nearly 3.94 million students enrolled in at least one online course in fall 2007 (Allen & Seaman, 2008). The *anywhere, anytime* nature of online learning offers a practical, cost-effective solution for professional development and life-long learning (Keramidas, Ludlow, Collins, & Baird, 2007). The convenience of online learning appeals to many who are balancing significant family responsibilities with the geographical, financial, and time constraints of higher education.

In the 1990s, interest in online learning was fueled by the false belief that online courses could accommodate a nearly infinite number of students, and therefore represented a considerable return on resources invested. As a result, in many institutions, administrators began putting pressure on their faculty to move their courses online as early as the mid-to-late 1990s. The result was disastrous and costly for the reputation of online learning. After all, online learning can replicate the worst of face-to-face instruction by representing learning as the transference of information—in effect, recreating the example of the lecturer dispensing information from the podium in the form of downloadable information on a course Web site. Years later, in retrospect, we know that effective online learning

requires more than technology: It requires new pedagogical paradigms and literacies (Selber, 2004), new environments (Palloff & Pratt, 2001), interactivity, feedback, and reflection (Mitchell & Batorski, 2009), and assessment-centered learning outcomes (Palloff & Pratt, 2008). In addition, this paradigm shift demands recognition of the true need for faculty skill development and support. The traditional model of an independent faculty is no longer adequate in an environment that requires them to be content expert, instructional designer, Web and media developer, teacher, etc. (Potenziani, 2003).

Course redesign for blended or online learning is not merely about the technology or the transference of course content to a new medium, but creating effective learning environments that optimize learning. Effective learning (not to be confused with affective learning, which we present in this paper as a discipline-specific pedagogical strategy) occurs when learning outcomes are evaluated successfully and positively. Based on the evidence, effective learning environments are learner-centered, knowledge-centered, assessment-centered, and community-centered (Bransford, Brown, & Cocking, 2003; Garrison & Vaughan, 2008). A learner-centered environment is one that prioritizes active learning, seeks to motivate students, and takes into account the skills, knowledge, and attitudes that students bring with them to the classroom. A successful learning environment is also knowledge-centered and organized around learning outcomes that represent significant learning in the field (Fink, 2003). Furthermore, it is assessment-centered and structured so that instructors receive frequent information about students' progress as well as their misconceptions, and in turn provide students with opportunities to rethink and revise in response to feedback (McTighe & O'Connor, 2005). Finally, and perhaps most importantly, a successful learning environment is community-centered, because a cohort of learners provides the support, motivation, and challenge to foster growth (Wenger, 1998). Although these components are largely the same regardless of whether one is designing for the face-to-face classroom or an online learning environment, designing for an online environment raises the stakes. Given the investment of time and resources required to create effective online learning environments, we need to take a systematic, methodological approach to course development with strategies that are grounded in evidence-based pedagogy and evaluate the effectiveness of our efforts (Garrison & Vaughan, 2008).

Thus, in addition to these typical challenges presented by online learning environments, the colossal challenge for health professional educators remains how to reach the goals of affective learning in a blended learning format. What is needed is a model of online learning that is transformational, not transactional, and focused on developing personal and social competence along with knowledge acquisition. Can we effectively teach affective topics that alter student attitudes and behaviors, ultimately impacting patient/client interactions, in an online environment? What types of designed interactions contribute to health professional student learning in an online learning environment?

The Course and the Challenge

In 2007, to meet the health care needs of the state and promote rural practice, an entry-level, master's degree occupational therapy program in a large, public, Midwestern university in the United States adopted a hybrid, or blended, learning format and expanded to a second campus, 90 miles from the primary site. The revised curriculum as a whole was transformed to 60% online, 40% traditional (face-to-face), with more online learning initially (80% online first semester) and increasing classroom learning as the student moves through the four-semester didactic program (20% online fourth semester).

The didactic portion is followed by a six month, supervised Level II fieldwork experience. This article focuses on the curricular redesign of one course in this program, *Professional Identity: Behaviors and Attitudes*. This course, taught in the first semester of this program, was transformed from a classroom-based to a blended learning format.

The *Professional Identity* course goal is to initiate the professional development process in the student by exploring self-attributes, attitudes, and shared beliefs that prepare the student to become a novice health care professional. In the classroom format, students met weekly on campus for three hours per week for fifteen weeks, and they were taught through lecture, readings, and in-class, small group reflection and discussion. There was a Web-based discussion board, two take-home essay exams, and two guest lecturers; students also had a Level I fieldwork experience. The fieldwork was a 20 hour observational experience in a long-term care facility with one structured client interview assignment. In contrast, the blended course has two face-to-face sessions in the semester: a one-hour introductory session in week two and a six-hour, self-awareness seminar utilizing the Myers-Briggs Type Indicator (MBTI) during the seventh week. In the blended format, the same fifteen topics used in the face-to-face course were redesigned as fifteen online modules, with seven modules focusing on affective learning (exploring professional behaviors, therapeutic use of self, exploring self attributes, the nature and language of disability, spirituality and empathy in practice, working with clients in pain, and coping with a client's loss, grief, dying, or death) and eight modules covering professional roles, organizations, ethics and enforcement, and interprofessional teams. There was no fieldwork included in the blended course. The affective learning topics were designed to mold student impressions and attitudes around core occupational therapy concepts such as the nature of disability, developing empathy, and spirituality in practice (See Appendix A for full course topic list and sequence). The focus of this study is on the student learning outcomes for the affective topics/modules.

Although the topic content was equivalent in the classroom and blended learning formats, the instructor was concerned about losing the rich, guided discussions and reflections, as well as the sense of community that was the foundation of the face-to-face experience. The role of the instructor in the blended format, in addition to writing the course, was to be highly engaged through frequent electronic communication and to provide timely feedback in learning activities. The overarching ambition of the course redesign was to elicit in the online environment the same kinds of affective learning and professional development that took place in the classroom format. One challenge was to explore and identify new learning activities--designed interactions between the student and the topics that would facilitate and engage the student in the learning process.

This paper, then 1) documents significant insights into the redesign process for this course; 2) compares student perceptions of learning in the two learning environments across the seven affective topic areas of the course; and 3) examines the contribution of various *learning activities* to the students' perceptions of learning in affective topic areas. The intent is to focus not merely on the technologies used to create the online learning environments and activities, but on their use and effectiveness in creating student-to-topic interactions--to emphasize the dynamic process of learning in the online designed environment rather than the application of technology per se.

The course redesign was heavily influenced by the course instructor's participation in the year-long Faculty Fellowship Program (FFP), sponsored by the Office of Information Technology (OIT), during the development of the blended learning course. This program

allowed the instructor to explore course design, online pedagogies, and learning technologies, and to develop a project--teaching affective topics--in the context of a small interdisciplinary group of faculty and with the support and guidance of OIT consultants. The FFP offered a community of peers who acted as a first audience, willing to engage in the instructor's technological and pedagogical innovations and provide feedback. In this setting, the instructor was able to reflect on the elements of a successful learning experience in the context of scholarship and her own teaching practice in order to answer the question, "How can an online learning module be used to facilitate the degree of self-reflection that is needed to increase emotional intelligence?"

The biggest challenge was to design an online learning experience that would have the same positive outcomes as the classroom experience. The instructor had been effective in designing in-class learning experiences that modeled professional behaviors and shaped professional attitudes. In health professional education, the term *modeling* describes the practice of instructors demonstrating professional behaviors and attitudes. With an OIT consultant, the first author reviewed what worked in the classroom and discovered that she was "scaffolding" teaching and learning activities in two ways: building a progression from simple to complex concepts and from self-focused to other-focused perspectives. The former represents cognitive scaffolding; the latter can be considered *affective scaffolding*. In this course, affective scaffolding comprises structured engagement that moves the student from a focus on the self to a focus on others through the lens of professional identity, characterized by empathy and respect for the occupational therapists role and responsibilities. Initially, in the classroom, the instructor would create student interest using a brief introductory exercise designed to challenge the students to think differently about the topic. This exercise *set the tone*--one that communicated that the environment was safe, supportive, confidential, and reflective. Next, there would be a *personal reflection on the student's own experience*. Then *topic content* was delivered through lecture or guest presentations. Students then would break into smaller groups for an exercise of *guided disclosure and discussion*. Finally, the instructor would bring the small groups back *for large group discussion and summary*.

In designing the online modules, the instructor needed to identify a different strategy that would provide both cognitive and affective scaffolding. She utilized the initial screens of the module to *set the stage* by orienting the student to the module objectives and work plan. The remainder of the module was designed to achieve, first, *self-awareness on the topic* through sharing personal insights and experiences; second, *engagement with the content* through readings and online activities; third, the *experience of others* through video; fourth, *reflection* through online written or Wimba (voice-based) discussions; and finally, *application of the topic* to a professional context in working with others. The instructor's role was designed to model professional behaviors through participation in sharing personal insights (voice-based discussions), providing thought-provoking responses in online discussions, conducting the video interviews, and selecting and promoting student responses that she considered to be exceptional contributions to the topic. The next several paragraphs detail how this was achieved.

Sharing personal insights and experiences can be a difficult task for students. Online, communicating that the environment is safe, supportive, confidential, and reflective presents a challenge. For this instructor, the "aha!" moment in this part of the course redesign process occurred when she engaged the faculty fellows in a prototype class activity featuring Horizon Wimba voice tools, which allow participants in an online discussion to create and post voice-based (audio) clips and listen to those posted by

others. Each fellow was asked to share an experience with pain. It was apparent during the exercise that most seemed comfortable responding to personal sharing and that using one's voice lent a quality of intimacy to the exchange. Adding vocal qualities seemed to generate a more profound degree of honesty and openness among the faculty fellows; there was spontaneity with the tool that elicited sharing. Talking and listening seemed to personalize the experience. This convinced the instructor that Wimba voice recordings could be effective for sharing and achieving self-awareness. Wimba discussions, along with Web-based text discussions, were used for this purpose as well as for reflection later in the module.

In order to engage the students in the content, the instructor wrote the online text in a familiar, first-person voice, talking directly to the student. She focused the readings by assigning fewer, select pages, and designed interactive activities to allow students to engage with and "play" with the content. These activities included click-and-drag matching; writing a response into a text field, then clicking a button to compare one's response to a "correct" response; and mousing over an image to get more information in a pop-up window. To help develop a sense of community, wikis (group-written documents) and Web-based text discussions were employed. Content and related activities were interspersed through each module in a sequence that provided the desired scaffolding.

The traditional face-to-face class featured two guest speakers, one talking about the experience of living with a disability and the other, working with clients at end-of-life. In order to make this kind of narrative available to students in the blended format, the instructor proposed to interview clients on video. A prototype video interview, to teach students about working with a client in pain, was demonstrated to the faculty fellows and elicited a strong emotional response. This supported the instructor's view that the video case could be used to sensitize students to the pain experience and allow the therapist (interviewer) to model professional interactions. One advantage of using video, in addition to its capacity for re-use and viewing on demand, was the ability to edit the recording, giving the instructor more control over shaping the content to meet the learning objectives.

Arranging Level 1 fieldwork for students in the blended format course was no longer feasible. Instead, as they worked through each module, additional interactive activities and case studies allowed students to practice their responses to professional situations and obtain immediate feedback in the form of pop-up windows. While the exact structure of the modules varied somewhat, depending on the topic, the last item in each module was a short, ungraded quiz, so that students could review and test their learning. Table 1 presents the learning activities and frequency of use employed in the seven classroom sessions contrasted with the seven online modules.

Table 1. Classroom and Blended Learning Activities Employed in Seven Classroom Sessions and Online Modules

Classroom Learning Activities (Frequency of Use)	**Description of Learning Activity**
Lectures (7)	*classroom lecture 3 hours per week*
Written assignments (3)	*short non-graded essays written in class or brought to class*
Guest lecturers (2)	*classroom presentation of a self-advocate speaking on living with a disability & an occupational therapist speaking on working with clients at end of life*
Exams (2)	*take-home, open-book, case-based essay exams for midterm & final*
Level I fieldwork (7)	*20 hours in a long-term care or transitional care facility*
Readings (7)	*textbook chapters & articles in course packet*
Web-based discussion boards (7)	*online text-based discussion response to guided question posed on each topic*
In-classroom discussions (7)	*large group or small group, generated by instructor*
Out-of-classroom discussions (7)	*informal interactions with other students outside of class time, not required in course*
Blended Learning Activities (Frequency of Use)	**Description of Learning Activity**
Web-based text (7)	*written text-based content in each online module, 12- 14 screens*
Online interactive activities (7)	*click-and-drag matching, mouse-over for more information, fill-in-the-box with feedback*
Video (6)	*interview format with self advocate or occupational therapy practitioner, 5 to 7 minutes*
Quizzes (6)	*ungraded, 5 question review of module*
Wikis (3)	*online small group collaboratively-written essays*
Wimba voice recordings (5)	*online audio recorded responses to guided questions*
Readings (7)	*textbook chapters and articles in pdf format or linked*
Web-based discussion boards (4)	*online text responses to guided question posed on each topic*
In-classroom discussions (1)	*in seventh week, self awareness face-to-face workshop, with small and large group discussions*
Out-of-classroom discussions (7)	*informal interactions with other students, not required in course*

Method

This study employed a survey approach to examine the students' perceptions of learning in seven affective topic areas in a classroom format and a blended learning format and identified the learning activities that contributed to that learning. While the survey captures student perceptions, it does not measure student performance in applying affective learning to clinical skills. Those learning outcomes are measured in the intensive six-month fieldwork experience that follows the didactic portion of the curriculum. In the first semester, the instructor's assessment of affective learning is gauged by the student's report of learning. This is a limitation of the study and more refined measures of affective learning need future development.

Participants were enrolled in a master's of occupational therapy professional program in the Midwestern United States. In 2006, 25 occupational therapy students were surveyed at the end of the classroom course and in 2007 and 2008, 34 and 39 blended learning students were surveyed in the same manner. Their demographics were reflective of occupational therapy graduate student groups in a large public university; classroom students were female 100%, mean age 26, EuroAmerican 88%, Asian 8%, Hispanic 4%. The blended learning group was 88% female, mean age 28, EuroAmerican 88%, Asian 2%, Hispanic 5%, and other 5%. All 25 classroom students and 64 of 72 hybrid students consented to participate (two hybrid student surveys were incomplete and six did not consent or were not present for the survey).

At the completion of the course, students were asked to note both their understanding of each affective topic at the beginning of the course and their understanding of each topic at the end of the course on a ten-point scale (1 = minimal understanding, 10 = maximum understanding). The difference between these estimates was used to represent students' *post-hoc* perception of learning for each topic. Because some students entered the program with extensive knowledge in one or more topic areas, this change from the beginning to the end of the course was considered a better reflection of the total learning that occurred through course participation than ratings taken at the end alone. To determine if the retrospective measure of initial understanding of the topic was overestimated or underestimated, a sample of blended learning students also marked their initial understanding of the topic at the beginning of the course; no statistical differences were found among these comparisons, so retrospective data were used in the analysis.

The survey also included a list of all of the learning activities used for each topic and students identified all that had had an impact on their learning of that topic. Because the frequency of use of specific learning activities varied (see Table 1) contribution of each activity to learning was divided by the number of times the learning activity was available in that format (classroom or blended). This procedure standardized the mean contribution of all learning activities to a scale of 0 to 1. This affords the opportunity to compare directly the four learning activities that occurred in both the classroom and blended learning formats (readings, Web-based text discussions, in-class discussions, out-of-class discussions). Unpaired differences of means tests were used to test for differences in the average contributions to learning when the same tools are used in different formats.

Finally, qualitative data were obtained from a focus group of the second cohort of blended learning students conducted by an OIT Research and Evaluation consultant after

completion of the course. Five students from the blended learning format discussed the concept of a professional identity and the contribution of the course to their understanding of professionalism. They also discussed their experiences with the online teaching strategies and overall course design.

Results

Perceptions of Learning in Classroom and Blended Learning Student Groups

Students perceived that they had learned in all seven affective topic areas in both the classroom and blended environments. This indicates that both formats, and the teaching strategies used by the instructor in each one, were effective in increasing students' perceived understanding of topics related to emotional intelligence. Learning in the blended learning group was perceived as greater than in the classroom group in all seven affective topic areas and was significantly higher in four: exploring professional behaviors ($p < .001$), spirituality and empathy in practice ($p < .05$), working with persons in pain ($p < .05$), and exploring self attributes ($p < .05$). Total perceived learning across topics was significantly greater in the blended group than in the classroom group ($p < .05$) (See Table 2).

Table 2. Differences in Perceived Understanding of Seven Affective Topics Between Classroom and Blended Learning Students

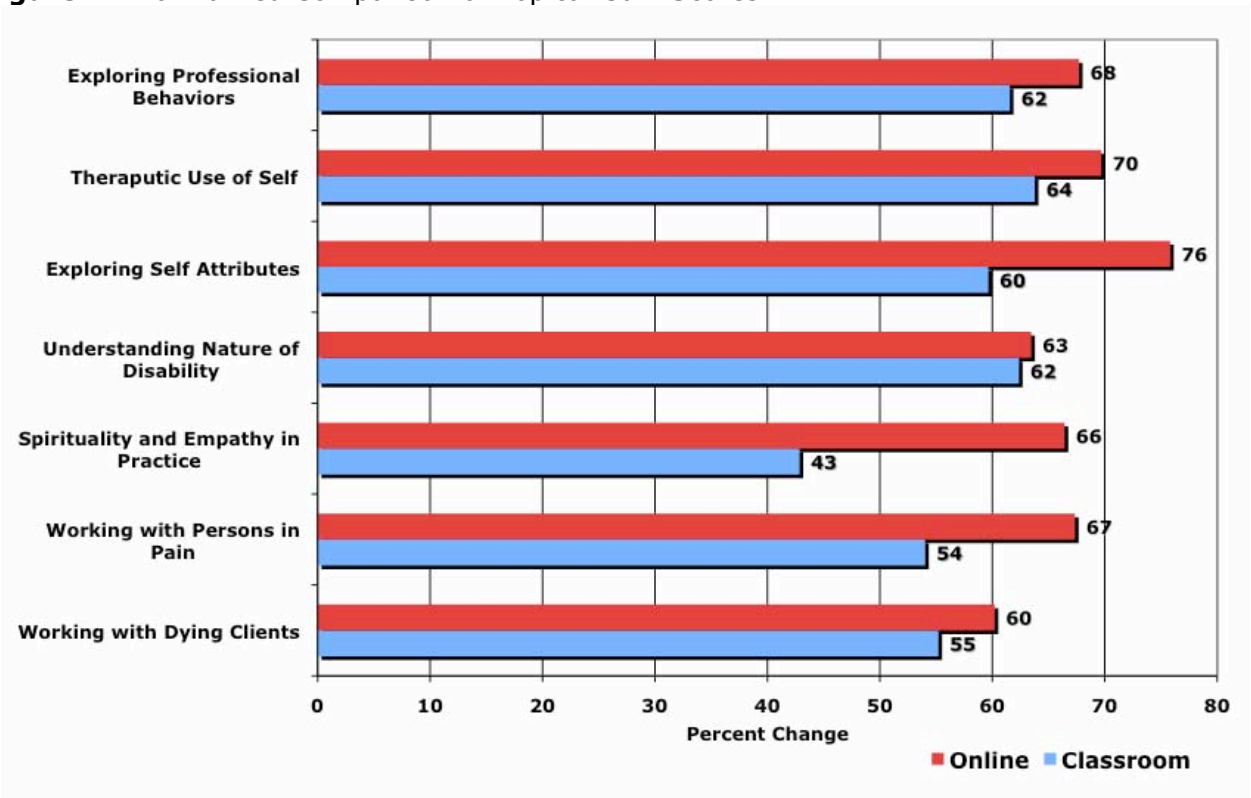
Topic	**Classroom M (SD) N**	**Blended M (SD) N**	**t**
Exploring Professional Behaviors	3.62 (1.61) 25	4.90 (1.70) 64	-3.242**
Therapeutic Use of Self	4.72 (2.05) 25	5.03 (2.02) 64	-0.650
Understanding Nature of Disability	3.68 (1.83) 25	3.97 (1.71) 63	-0.700
Spirituality and Empathy in Practice	2.46 (1.70) 25	3.77 (2.01) 63	-2.876**
Working with Persons in Pain	3.77 (1.65) 24	4.65 (1.85) 63	-2.037*
Working with Dying Clients	3.18 (1.46) 25	3.58 (2.07) 63	-0.881
Exploring Self Attributes	3.54 (1.59) 24	4.70 (2.13) 64	-2.425*
Total	24.57(7.68) 23	30.49(9.01) 62	-2.797**

*p<.05, **p<.01; range is 1 = minimal understanding to 10 = maximum understanding of topic.

Normalized gain scores that measure the percent of change were calculated (dividing the difference in pre and post scores by the possible amount of change, multiplied by 100) to compare the classroom and online student responses. This takes into account differences among students in their initial understandings of the topics--students starting with less understanding could improve more than others who came into the course with greater understanding of a topic. In keeping with the findings reported in Table 2, students in the blended environment reported larger gains than their peers in the classroom environment on every single topic (See Figure 1). Of the topics for which the blended format students reported significantly larger gains, the largest normalized difference is on the topic of spirituality and empathy in practice (+23%), the smallest was on exploring professional

behaviors (+6%), with moderate differences in exploring self-attributes (+16%) and working with persons in pain (+13%).

Figure 1. Normalized Comparison of Topical Gain Scores



Effectiveness of Learning Interactions in Classroom and Blended Learning Student Groups

Students identified learning activities that contributed to their learning in the seven topic areas (See Table 3). The classroom group cited lectures as being the most effective contributor to learning (73.7% of total possible contribution), with guest lecturers (62.0%) and in-class discussions (58.9%) ranking second and third, respectively. Readings (28.0%) and fieldwork (24.6%) were next. Exams (16.0%), Web-based discussions (14.3%), written assignments (8.0%) and out-of-class discussions (1.1%) were regarded as the least effective.

The most effective activities for the blended learning group were videos (83.9% of total possible) and in-class Discussion (70.3%), followed by similar values for readings (64.1%) and Web-based text (61.8%). Next were Wimba voice discussions and online interactive activities (48.1% and 41.3%, respectively) and Web-based discussion boards (30.5%). Quizzes (19.3%), wiki activities (12.0%) and out-of-class discussions (11.8%) were cited as least effective.

Table 3. Average Standardized Perceived Effectiveness of Learning Activities in Classroom and Blended Learning Groups

Learning Interactions	**Classroom M (SD) N = 25**	**Blended M (SD) N = 64**	**Difference**
Lectures	0.737 (0.19)		
Written Assignments	0.080 (0.22)		
Guest Lectures	0.620 (0.39)		
Exams	0.160 (0.28)		
Fieldwork Level I	0.246 (0.25)		
Readings	0.280 (0.23)	0.641 (0.33)	0.361**
Web-based Discussion Boards	0.143 (0.14)	0.305 (0.32)	0.162*
In-class Discussions	0.589 (0.32)	0.703 (0.46)	0.115
Out-of-class Discussions	0.011 (0.04)	0.118 (0.23)	0.107*
Web-based Text		0.618 (0.33)	
Online Learning Activities		0.413 (0.32)	
Videos		0.839 (0.24)	
Wiki Activities		0.120 (0.25)	
Wimba Voice Discussions		0.481 (0.37)	
Ungraded Quizzes		0.193 (0.33)	

*$p < .05$; **$p < .0001$; *range 0 to 10*

While both groups had readings assigned from the text or from journal articles, the blended learning student group identified them as contributing to their learning significantly more than the classroom learners ($p < .0001$). The classroom group did make use of one online activity, a Web-based discussion board, but rated it as contributing significantly less to their learning than the blended group ($p < .05$), even though they had greater opportunities to use the online discussion board (seven online discussions vs. four online discussions in the blended learning group). In contrast, both groups found value in the in-class discussions, with no significant difference in the means, even though, once again, the classroom group had seven opportunities for this while the blended learning students had only one. Out-of-classroom discussions around the affective topics through face-to-face or other means of communication were not required or promoted as a learning activity. It was included to determine if blended learning students, who attended class on campus two times during the semester (only once in conjunction with an affective topic) and classroom-based students, who attended seven on-campus sessions, discussed the affective topic areas with other students to different degrees. While this was rated the least effective of all the activities in both groups, the blended learning students still found

out-of-classroom discussions more effective in contributing to their learning than did the classroom students ($p < .05$).

Focus Group Results

In December 2007, an OIT consultant hosted a focus group of blended learning students to gain a richer understanding of the students' learning experiences in the new format. The primary purpose of the focus group was to learn about the experience of the students in the new blended learning environment. While the focus group was conducted for the blended learning students and not the classroom students, it served to highlight the supports and barriers in using technology with affective learning content. Five students attended the focus group session and shared their views on a variety of topics, including how the course helped them see themselves as novice OT practitioners, what activities helped their learning, and what suggestions they had for improving the course. The qualitative data gathered via the focus group supplemented the above quantitative results for the blended learning format.

Focus group results indicate that these students do understand professionalism and affective learning experiences. When asked an open-ended question about professionalism, they reported that occupational therapists:

- Have "empathy and [are] client-centered";
- Use "therapeutic relationship skills" and approaches;
- Are "open and avoid biases";
- Project themselves as "part of the OT community and help the OT community move forward";
- Understand how to "communicate across disciplines"; and
- Are comfortable and knowledgeable "about [their] role."

While students reported having an understanding of their role, they also felt that they were missing opportunities to apply their skills. One student commented, "I know what I need to be, but have no way to apply it." There were nods and agreement from each of the other participants.

Participants also were asked about their experiences with technology-supported activities in this course. They emphasized the value of the videos as a "big strength" of the course. The video interviews were found to be "personal" and "real." One participant was encouraged and impressed by the fact that practitioners were willing to take time and share their experiences "to help us learn."

The participants commented on a number of learning activities. One participant suggested that interactive online activities would be more effective if they were condensed, indicating that shorter case activities were beneficial while lengthy case studies were not effective. Also, making the Wimba voice recordings was identified as "awkward" because one is "talking to no one." This may be reflected in their rating of the Wimba tool as 48.1% effective. Yet one participant suggested that "they might not share as much" if that "stuff" were done face-to-face. When asked if any activities seemed like busy work, the wikis were cited. The participants noted that the wiki was meant for collaboration, but they described it as "awkward" and "not truly the wiki experience." In the blended learning group survey, wiki-based activities were rated as the second least effective in contributing to an understanding of the topics. Finally, the participants all felt that the module on grief, death, and dying would have been "better face-to-face" because "it would have been a

fascinating in-class discussion," although it is unclear how this would have enhanced their understanding of the topic.

Discussion

For this instructor, although learning about various Web-based tools and strategies produced a few "aha!" moments, the real "aha!" was the recognition that teaching in the new environment requires new pedagogies and different paradigms of education. Participation in the OIT Faculty Fellowship Program led to the realization that transforming a course was not about obtaining and inserting more technology-based modalities for content delivery; it was about altering the learning environment. The focus shifted away from the instructor's delivery of content towards designing an engaging, active learning experience for the student, what Bransford, Brown, and Cocking (2003) identify as a learner-centered environment. Another insight was that the instructor could no longer work in isolation, but needed to organize a team to create the desired experience. As the course development progressed, the instructor needed continually to evaluate and consider how the learning activities could be brought together to provide the critical *affective scaffolding* (that structured engagement that moves the student from a personal perspective to a professional perspective) necessary to developing the emotional intelligence that characterizes the effective health care professional. The instructor needed to be highly engaged throughout the course to guide student outcomes by providing timely feedback and altering any learning activities that were not meeting the intended objectives. Although this study was framed to identify primarily what was working well in the blended format, it has provided insights into teaching in face-to-face and blended learning settings. What follows is a summary of these findings.

Content, chosen and used with care, can be delivered effectively in a number of ways.

In terms of basic content delivery, the classroom students found lecture to be most effective, while readings (textbook and articles) were much less so (73.7% lecture vs. 28.0% reading). In prior course evaluations, classroom students seemed to minimize the importance of the textbook and articles in understanding affective content. This suggests that classroom students may perceive that lecture can take the place of the readings or that the readings contribute less to affective learning. This perception was not shared by the blended learning students, who found readings and the Web-based text (used to convey content previously offered through lecture) to be similarly effective (64.1% readings and 61.8% web based text), and only somewhat less so than classroom lecture. *Lessons learned*: In the classroom setting, care needs to be taken that lectures don't simply present the same material that is in the readings; instead, face-to-face time might be used to present additional material or engage the students with previously-read material in more active ways. With more reliance on readings and Web-based text to provide content in online or blended environments, careful consideration should be given to content selection and delivery, as well as opportunities to engage the student with the content in more meaningful, thought-provoking ways.

Engagement with practitioners and self-advocates is highly valuable, but need not be "live."

Guest lecturers, in person in the classroom format and through video in the blended format, were the second highest and highest contributors, respectively, to affective learning (62.0% in classroom and 83.9% online). The challenges and costs of bringing guest lecturers into the classroom limit the feasibility of doing this often. Furthermore,

guiding guest lecturers to cover content specific to a course objective can be challenging. Video not only creates a reusable resource that students can view as many times as they need to, but also allows the instructor to edit and refine the video clips that are used. *Lesson learned*: These results suggest that well-crafted videos can serve as an effective alternative to guest lectures.

Personal sharing in support of learning can be accomplished online, but students need support and practice with the technology.
The Wimba voice discussions used by the blended learning group were not seen as being quite as effective (48.1%) as the in-class discussions experienced by both groups (58.9% and 70.3%, classroom and blended learning groups, respectively). Focus group comments suggest that some students found it awkward or unsettling to be talking "to no one," but also remind us that this activity provided at least some students with a forum for sharing more openly than face-to-face discussions might have done. *Lesson learned*: It might be useful to have students practice using the Wimba voice tool with some low-stakes assignments to get them more comfortable with speaking into the microphone rather than to another person.

Community-building can be achieved in a blended learning environment.
Wenger (1998) and Bransford, Brown, & Cocking (2003) found that a successful learning environment is community-centered, using a cohort of learners to provide the support and motivation to foster growth. This was a real concern in moving toward a blended learning format with considerably less face-to-face time. From this perspective, it is also noteworthy that the blended learning students found their one face-to-face session related to affective learning as valuable as the seven sessions engaged in by the classroom group. It would be interesting to know if this was due in part to a "novelty" effect, as there was little other opportunity for the blended learning group to meet in person for this course. In addition, the blended learning group also found the Web-based discussions only somewhat effective, but significantly more so than did the classroom group. *Lesson learned*: These results may suggest that this first year, first semester student cohort, although seldom on campus together for their courses, found ways to develop community in which some cohesion and trust was emerging.

Informal learning can take place even with little face-to-face contact, but would benefit from planning.
It was recognized that some informal learning of affective topics might be accomplished through unassigned, out-of-classroom discussions; thus, this item was included in the survey. Although neither group found them particularly useful in their learning (1.1%, classroom group; 11.8%, blended learning group), the blended learning group found these interactions significantly more effective than the classroom students. Although blended learning students had far fewer opportunities for face-to-face encounters, they may have sought out or created other opportunities to discuss the affective topics in ways that led to greater understanding. *Lesson learned*: With fewer naturally-occurring opportunities for informal communication in the blended learning environment, these kinds of interactions need to be intentionally encouraged and fostered.

Collaborative writing requires attention to support and skill-building, including technology skills and group dynamics.
Writing assignments, in the form of short, ungraded individually-written essays in the classroom format, or wiki-based small-group collaborative writing assignments in the blended format, were not judged as very effective in learning affective topics by either

group (8.0% and 12.0%, respectively). From the focus group comments, we know that some students felt that they had not had a "true wiki experience." Merely asking a group of students to write in a common space does not ensure collaboration. *Lessons learned*: First, these results suggest that writing assignments, in either format, need to be carefully designed to meet learning objectives and that it may require some experimentation to find online writing activities that work well in helping students master affective content. Second, when using wikis or any collaborative tool, the instructor must recognize that students need support both for using the technology and building skills around working collaboratively.

Opportunities for skills application are desired by students but may not automatically lead to better understanding of affective content.
The classroom students had a 20-hour Level I fieldwork experience that was intended to provide an opportunity to practice the skills learned in the course. The benefits of authentic learning are widely recognized; however, coordinating a Level I fieldwork is labor intensive for the instructor, requiring multiple mailings, frequent contacts, site visits, and scheduling. Based on their low ratings of the effectiveness of the fieldwork (24.6%), it does not appear that the classroom students made the connection between the fieldwork experience and affective course content or perhaps they simply didn't use the clinical experience to practice what they had learned in the classroom. On the other hand, the blended learning students who participated in the focus group felt they were missing an opportunity to apply the skills they were learning, although they did reveal an understanding of professionalism. *Lesson learned*: This indicates a need to make a stronger link between course content and fieldwork activities in a traditional format or a need to provide blended learning students an opportunity to practice professionalism in the field.

Students may not understand that well-designed assessments also can be opportunities for learning.
Finally, although the take-home exams in the classroom format and the ungraded quizzes in the blended learning format might have been considered opportunities to review and consolidate their learning, the students in this study did not see them as effective learning activities. One exception was a focus group student who expressed an appreciation for the no-risk opportunities to test her learning. *Lesson learned*: In the future, in order for online, ungraded quizzes to be seen as contributing to learning affective content, quiz questions could be redesigned to include a feedback feature for correct and incorrect answers to make them more of a learning exercise than an assessment tool.

Implications for Education

This study concludes that both classroom and blended learning formats are effective in the student's perceived understanding of affective content and that, at least in this course, the blended format was judged to be even more effective than the classroom format used previously. This supports the idea that teaching the human dimension can be accomplished with different pedagogies. We hope that our examination of the perception of student learning in the classroom and in a blended learning format will put instructors at ease about broadening the range of teaching and learning activities they use to meet student needs and about expanding institutional directions in investigating new pedagogies. Innovations can promote creativity in course design processes and overcome the perception that affective content can only be modeled by the instructor/professional in person.

The instructor's initial concern in teaching affective topics in an online format was that it would not be effective without direct instructor-student contact. Yet, students in the blended learning format perceived their learning in affective topics to be equal to or greater than the classroom students' learning. This study suggests that modeling need not be centered on the performance of the instructor but may be achieved through the multiple interactions mediated by video, voice, written responses, reflection, and discussion. This may dismantle the traditional notion of modeling. Modeling professional behaviors can extend beyond a person in the classroom to a person in a video interview, a written response in a Web-based discussion board, or carefully-crafted interactive online activity that provides the student with feedback. In other words, the modeling of professionalism is larger than the individual instructor.

Transforming a course from a classroom to a blended learning format is a complex and labor-intensive process that necessitates not only sufficient time but resource availability at an institutional level. Many higher education institutions are viewing information technology centers as key to successful innovations in online formats. Experts in teaching and learning with educational technologies are needed to engage instructors in new pedagogies, online course design processes, the proper use and selection of tools, and evaluation of course effectiveness. Good online learning is not attained by "just adding technology"; thoughtful course design and tool selection and employment are paramount for effective learning experiences. A common view in education is that a technology tool for teaching is either "good or bad." It's not the technology but the design and application of the learning interaction that it facilitates that contributes to an effective or ineffective learning experience.

The opportunity to employ online and blended learning formats provides the chance to put the focus on the student experience and off the instructor's presentation skills. In addition, one needs to design a learning experience that can be continuously assessed and improved. While there are costs related to transforming a classroom course to a blended learning format in the form of course development time, faculty training, and video and online activity production, there are costs savings related to guest lectures and, in this case, travel to a second teaching site. Students also benefit from less traveling and being able to fit their studies into their daily schedules. In addition, initially developing, piloting, evaluating, and refining one effective module allows the development of a template that can then be used repeatedly. Striving for best practice in teaching can keep one's work as an instructor stimulating and challenging, and ultimately rewarding.

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Appendix A

Week/Topic
1/ Welcome to course
Unit I: **OT Profession and the OT Professional**
2/ Professional Identity and Roles* (Exploring Professional Behaviors)
3/ Professional Competence* (Exploring Professional Behaviors)
4/ Professional Organizations
5/ Licensure Requirements
Unit II: **Self Exploration of Attributes and Attitudes**
6/ Therapeutic Use of Self*
7/ Face-to-face Seminar on Self Awareness*
8/ Language and Nature of Disability*
9/ Empathy and Spirituality in Practice*
10/ Working with Clients in Pain*
11/ Working with Clients with Loss, Grief, Dying, or Death*
Unit III: **Professional Ethics**
12/ Core Values & Code of Ethics of Occupational Therapy
13/ Enforcement Agencies
Unit IV: **Interprofessionalism**
14/ Interprofessional Teams/ OTR/COTA Collaboration
15/ Centennial Vision

* Affective Topics in Professional Identity: Behaviors and Attitudes