Blended Learning and UCCS Launching UCCS into the 21st Century through Technology-Based Education

Jennifer Andre Senior, Dept. of English, University of Colorado at Colorado Springs

Abstract

Due to budget constraints and student growth, educators are looking for innovative ways to deliver quality higher education. In the last few years, blended learning has emerged not only as a cost-effective educational option, but also as an educational method superior to the traditional classroom. Blended learning is a combination of the traditional face-to-face classroom model and online learning content. Research from premier journals indicates blended learning to a wider variety of learning styles. Student and teacher feedback on blended learning experiences is very positive, and researchers predict universities will continue to implement blended learning courses. Recommendations for successfully implementing blended learning courses at the University of Colorado at Colorado Springs are discussed within the report.

Introduction

In the 21st century, technology impacts every area of life, including higher education. Advances in technology are causing students, parents, and educators to re-think educational methods. Society's technological-orientation puts pressure on universities to "include technology-based practices in the curriculum" (Hicks, Reed, and George qtd. in Garrison and Kanuka). Not only is the growth of technology contributing to the changes in education, but the current economic crisis presents additional challenges to higher education institutions. The University of Colorado at Colorado Springs (UCCS) is the fastest growing university in the state of Colorado, but it will still be affected by the current economic crisis. College students are concerned about the economic impact on education, especially in light of the potential 300 million dollar budget cut from higher education during 2009 ("Colorado Budget Panel Votes to Cut Higher Ed by \$300M"). UCCS also envisions an increase in the current student enrollment (over 7,500) to 9,100 students by 2012 ("About UCCS"). With potential budget cuts, UCCS's projected growth plan cannot be supported without either significant cuts or increased tuition. Students, parents, administrators, and educators involved with UCCS cannot ignore the changes taking place in education. One of UCCS's core values is to "prepare . . . students to succeed in a rapidly changing global and technologically advancing environment" ("Vision Statement"). In order to continue offering high quality education while maintaining reasonable tuition costs, UCCS needs to implement innovative methods of

education, such as blended learning. Recent studies show that due to the advances in technology, blended learning is a promising option not only for reducing education costs, but it also offers a superior level of education over both traditional classroom and online methods.

What is Blended Learning?

While researchers dispute how much "blending" needs to occur for a course to be considered blended learning, "at its simplest, blended learning is the thoughtful integration of classroom face-to-face learning experiences with online learning experiences" (Garrison and Kanuka). Blended learning is also referred to as hybrid learning. Russell Osguthorpe and Charles Graham, researchers in the area of distance learning, prefer the term blended learning because it "focuses on the mingling together in ways that lead to a well-balanced combination" (229). In the last few years, blended learning has grown in response to demands to improve online learning, which students often find falls short, and re-think the traditional classroom environment. Yoany Beldarrain, an instructional leader at the Florida Virtual School discusses the 21st century student's role with technology: "The 21st-century learner requires educational opportunities not bound by time or place, yet allow interaction with the instructor and peers" (150). Beldarrain attributes the growth of technology-based learning to improvement in a number of technologies: "voice and videoconferencing, whiteboards, live presentation tools, application sharing, chats, and emails Blogs, wikis, and podcasts" (150). Beldarrain is one of the many researchers who contends blended learning will only continue to grow with the progression of technology and demands on education. As with many educational trends, the cost of blended learning is one issue at the forefront of studies and research.

The Cost

While blended learning requires initial costs to train instructors and implement the necessary technology, one of the major benefits of blended learning is the reduced cost over traditional classroom teaching. By supplementing even one classroom meeting time each week with online instruction, UCCS can double the amount of sections taught in one classroom, reducing building and facility costs while increasing student capacity (Young). For UCCS to implement blended learning there is an initial cost both in time and money. Effective blended learning requires time to train faculty and staff. Nevertheless, the investment in blended learning is relatively small compared to the potential gains.

The Promise of Blended Learning

Technology will continue to change the future of education. Universities that recognize the changes that are taking place and strive to implement dynamic learning methods will be able to launch well-prepared students into a technological society. More than ever, students are looking for a high quality education at a price they can afford. Researchers laud the benefits of blended learning not only as cost-effective, but also as the optimal educational method of the 21st century and beyond. The expansion of blended learning at UCCS will maintain UCCS's position as a university offering an affordable, high-quality, technologically-oriented education.

Methods

In preparing research for my report, I searched UCCS library databases for articles on blended and hybrid learning as well as technology and higher education. The journals I found most helpful are <u>Distance</u> <u>Education</u>, <u>Internet and Higher Education</u>, and <u>Quarterly Review of Distance Education</u>. I focused my research by looking for scholarly sources, which provide evidence compiled by blended learning experts. I specifically sought out articles based on empirical studies, written by experienced researchers, integrating sound data, and/or incorporating teacher and student experiences with blended learning. My goal was to find valid evidence for the effectiveness of blended learning and statistical proof of the economic benefits.

Results

The Positives and Negatives of Blended Learning

Sharon Tabor, in her article exploring the outcomes of an experimental hybrid training course, includes a table summarizing the benefits and challenges of blended learning. This summary is shown in Table 1.

	Benefits		Challenges
	Time and place flexibility	•	Self managed time skills required
	 Strong appeal to working students 	•	Some missed excessive class meetings
	 Variety of learning methods & tools 	•	Less ability to observe learning success
	 Reduced lecture during the term 	•	Topics not covered in class perceived to be of lesser value
	 Multiple opportunities for social interaction in both for- mats 	•	Difficult to design challenging online activities for technical topics

Table 1: Benefits and Challenges of Blended Learning (Tabor 56)

Researchers agree with Tabor that flexibility is a key benefit of blended learning and also appeals to students. Tabor's proposition that blended learning offers a "variety of learning methods and tools" is echoed by other proponents of blended learning. The ease of access to resources as well as "multiple opportunities for social interaction in both formats" demonstrates blended learning's ability to cater to a variety of learning styles (Tabor 56).

Many researchers propose a negative of blended learning is the initial investment required to launch blended learning courses. An effective blended learning model requires intensive planning and strategic implementation, as well as dedicated commitment from teachers. As Tabor states in her article, "There is a large upfront commitment from the professor to redesign the course and prepare online materials, as well as ongoing computer time to respond to questions, observe discussion activity, and provide feedback (55-56). Garrison and Kanuka, in their article, "Blended Learning: Uncovering its Transformative Potential in Higher Education," propose blended learning requires strong resources in three areas: financial, human, and technical. Schools lacking financial resources, committed and well-trained staff, and the required technology will struggle to effectively initiate blended learning.

As listed in Table 1, a second negative is students must be more self-motivated to succeed in blended learning than in an exclusively face-to-face classroom model. However, this proposed negative is the subject of debate among researchers. Some researchers suggest blended learning, if done successfully, has the potential to teach skills such as student responsibility. In his editorial on blended learning, Michael Moore discusses the potential cultivation of student learning and access to resources:

With the potential offered by new technologies to provide many tools that were previously exclusively controlled by the classroom teacher—for example, student selfmanagement of much of the study process, including control of when and at what pace to study, individual self-testing with multiple reiteration of attempts to meet performance criteria, student-to-student virtual group interactions, cohort projects, access to audio and video archives as well as a vast virtual library—the student can be given access to the resources needed to achieve many learning objectives that do not require ad hoc, spontaneous, face-to-face interaction. (Moore 130-131) Moore's perspective is that more accessible resources in blended learning promote student self-regulation and independent learning, as opposed to some researcher's view that blended learning leaves students stranded without the face-to-face guidance of the traditional classroom environment. Even though blended learning has the potential to surpass traditional methods in encouraging student independence, most researchers agree the benefits of blended learning occur when instructors are committed to regulating the learning environment. Paul Ginnis and Robert Ellis, in their article, "Quality in Blended Learning: Exploring the Relationships Between On-line and Face-to-Face Teaching and Learning," agree teacher participation is key: "If teachers want students to get the most out of learning online in blended contexts, then teaching strategies that clarify the value of moderation of student postings, and the value of interaction between the students online, are likely to improve both the students' perceptions and their grades." Researchers agree effective blended learning is a delicate balance of incorporating proper resources and instructor ability to foster student success and motivation.

Another positive of blended learning is the recent discovery that students may not learn best in a fully face-to-face environment. Chris Dede, a Harvard professor of learning technologies believes his research and experience in teaching blended learning courses shows blended learning can be superior to traditional classes. He says, "Face-to-face is not the gold standard that it's held up to be . . . A strong case is beginning to be made on the basis of research evidence that many students learn better online than faceto-face, and therefore a mixture is the best way" (qtd. in Young). Chuck Dziuban, who directs the Research Initiative for Teaching Effectiveness at the University of Central Florida, has studied and compared student success rates in blended and traditional courses. He relates student success is "equivalent or slightly superior" in blended courses over traditional face-to-face courses (Dziuban qtd. in Young). Dziuban and Dede's research illustrates the academic benefits of blended learning. Jeffrey Young confirms and expands on Dziuban and Dede's research by saying student participation is higher in blended learning courses. Because students in blended learning courses participate in focused discussion on online forums, they are held accountable for the class information and are better prepared for class meetings. As a result, when the class meets in-person, lecture time is more productive. In addition to studying the academic benefits of blended learning, researchers are also seeking students' and teachers' feedback on their blended learning experiences.

Student Experiences and Feedback

El Mansour and Davison, in their article, "Students' Positive and Negative Experiences in Hybrid and Online Classes," discuss student feedback on blended learning experiences. The authors' study of college students in both hybrid and online courses reveals that students favored the hybrid learning method for a number of reasons. First of all, students enjoyed the flexibility of working both face-to-face and online. Student statements of positive experiences with the blended learning format also included the following: "Physical presence of the instructor to provide additional input, explanations, etc"; "The option to catch up on what I missed in class on the web"; "Face-to-face sessions offered more personalized attention [compared to fully online courses]" (El Mansour and Davison). Many of the student's positive statements indicate a preference for the best of both worlds: online and face-to-face interaction. According to the results of El Mansour and Davison's study, students enjoy flexibility, but not to the extent they are willing to sacrifice physical interaction with a professor or other students. Blended learning meets student preferences for increased flexibility while maintaining elements of face-to-face interaction.

The majority of student complaints in blended learning involved problems with technology: "Internet connections were bad during the online sessions" (El Mansour and Davison). Technological glitches create frustration for students, leading to a negative perception of the blended learning course. One student in El Mansour and Davison's study found the blended learning course "Confusing, especially the shifting from class sessions to web sessions." A classroom environment based on technology also

presents the negative of being difficult for students to adjust to an unfamiliar format (El Mansour and Davison).

Teacher Perspectives

In their study, El Mansour and Davison discovered instructor resistance to blended learning. The authors cite the lack of resources and knowledge to effectively manage a blended learning course as one of the major reasons instructors are reluctant to teach blended learning classes. In addition, instructors are hesitant to try something new. Young proposes "Hybrid models appear less controversial among faculty members than fully online courses have been, though some professors worry about any move away from an educational system that has worked for centuries." Researchers agree supplying resources, support, and training for blended learning instructors is the answer to solving instructor disinclination.

Researchers also sense frustration among instructors over traditional classroom teaching. Walter Cummins, an English professor at Fairleigh Dickinson University, expresses exasperation with student apathy during his lectures; he asks the question "Why do we have to meet twice a week? Why can't there be another type of activity that substitutes for a class?" (qtd. in Young). Many professors see blended learning as a positive change: "students can log in when it is convenient for them And some students who rarely take part in classroom discussions are more likely to participate online, where they get time to think before they type and aren't put on the spot" (Young). Many teachers see blended learning as an opportunity to ignite student participation and excitement and even increase student performance. The majority of instructor feedback on blended learning is positive, especially in light of the frustration over getting students involved and motivated in the face-to-face classroom.

Economic Benefits

Many researchers discuss the economic benefits of blended learning. One of the economic benefits of blended learning is it reduces required classroom space. Young quotes Stephen Sorg, a university vice president who sees blended learning as the answer to his school's space issues: "In courses that might have met Tuesday and Thursdays," if meeting time is "reduce[d]" by "half, [universities] can put two sections in the same space' as one used to take." Not only do universities struggling with space demands see reduced classroom use as a benefit, but researchers propose other resulting benefits. The major result is universities can increase their enrollment without needing to build more classroom space. Ron Bleed of the Maricopa Community College District sees the substantial economic advantages of blended learning as "the only way colleges and universities can keep up with the continuing population growth and the demands for lifelong learning" (qtd. in Young).

Carla Garnham, an "instructional innovator," discusses time and environmental benefits of blended learning: "[blended learning] saves some commuting time and it saves the parking," as well as being appealing to commuter students "who have got busy lives and no time" (qtd. in Young). Garnham's opinion is echoed by many researchers who come to the conclusion that "[Blended learning] courses, free up classroom space, allow faculty to reach a wider audience using technology; and are therefore cost effective" (El Mansour and Davison).

Discussion

While researchers agree blended learning has drawbacks, the conclusion is these drawbacks are fairly minor and can be worked through with adequate planning and training. Researchers predict higher education is on the brink of entering a new area – one brought about by student demand and incorporating technology-based learning like never before. Researchers not only agree higher education will change due to economic pressures and student demands, but many researchers turn to blended learning as an integral part of this movement. Professors and students alike are asking whether the traditional classroom

environment still stands as the epitome of higher education. The flexibility, decrease in lecture time, access to more resources, and the ability to participate in the best of both face-to-face and online methods in blended learning appeals to students. When given the training and tools to feel comfortable teaching blended learning courses, teachers embrace blended learning as a way to reach more learning styles and promote student participation. Educators appreciate that blended learning offers relief for demands on classroom space, prepares students to interact in a technological society, and saves money while still offering high quality education – possibly even better than education using only traditional methods. Studies show blended learning is cost-effective, encourages student independence, offers flexibility, and caters to a wider variety of learning styles. Garrison and Kanuka, along with many other researchers come to the conclusion "blended learning is consistent with the values of traditional higher education institutions and has the proven potential to enhance both the effectiveness and efficiency of meaningful learning experiences." UCCS is in an optimal position to incorporate blended learning classes in their curriculum because of budget cuts, student growth, and facility limitations.

Recommendations: The Successful Implementation of Blended Learning at UCCS

Initial Considerations

Before implementing blended learning courses, UCCS needs to consider which courses to convert. Blended learning may not be the best choice for all courses. UCCS should start by converting fully online classes or classes already incorporating a high level of online content. Online courses such as math or science, where students perform better with some face-to-face interaction, are the best choice for blended learning formats. UCCS should also begin to convert general education and core requirement courses to a blended learning format. Many general education courses are held in large, impersonal lecture halls. Also, in classes with forty or more students, a blended learning format will allow for increased student involvement and student-instructor contact. Courses with content that changes or is updated from semester to semester (such as courses teaching rapidly changing technologies) are not good choices for blended learning because of the cost and time required to change the course content. UCCS courses that meet only one day a week for a long block of time are also good choices for a blended learning format. For one-day courses, a blended learning approach allows for shorter meeting time, spreading out the course material over the week and increasing student retention. After working through the initial process of planning blended learning courses, UCCS needs to ensure they have the technology necessary for blended learning.

The Role of Technology

Skill and Young, in their article, "Embracing the Hybrid Model," discuss a number of the technologies necessary for blended learning courses. Wide-spread access to computers, especially on campus, is a critical component of blended learning (Skill and Young 30). Another need is not only wireless internet, but server capacity (30). With a larger number of students needing access to campus servers for classes, increased server capacity is a crucial element. To be able to support increased demand for server access, UCCS needs to establish adequate server capacity before launching blended learning classes on a large scale.

Training and Support

For professors to successfully teach blended learning courses, they need support and training resources. To successfully implement blended learning, UCCS should create a central office dedicated to teacher and student support. This staff of blended learning experts will provide students with an orientation on how to use the online content of the course, engage in forum discussions, and gain a successful experience in a blended learning course. UCCS should hire instructional designers and multimedia experts to help teachers design optimal course content. The blended learning staff should also include an

IT support department for teachers and students. Having full-time technological support cuts down on the frustration caused by technology glitches and errors.

The Future of UCCS with Blended Learning

Implementing blended learning at the University of Colorado at Colorado Springs will not only be costeffective and contribute to student growth, but it will launch UCCS into the 21st century of education. With blended learning, UCCS will be able to offer the highest quality education possible, while still being known as an affordable and reputable institution.

Works Cited

- "About UCCS." <u>University of Colorado at Colorado Springs</u>. 21 April 2009. http://www.uccs.edu/~pages/about.html.
- Beldarrain, Yoany. "Distance Education Trends: Integrating New Technologies to Foster Student Interaction and Collaboration." <u>Distance Education</u> 27.2 (August 2006): 139-153.
- "Colorado Budget Panel Votes to Cut Higher Ed by \$300M." Colorado Springs Gazette. 1 April 2009. 12 April 2009 http://www.gazette.com/articles/higher_51030_article.html/300m_panel.html>.
- El Mansour, Bassou, and Davison M. Mupinga. "Students' Positive and Negative Experiences in Hybrid and Online Classes." <u>College Student Journal</u> 41.1 (March 2007): 242-248. <u>Academic Search</u> <u>Premier</u>. EBSCO. Kramer Family Library, Colorado Springs, CO. 9 Apr. 2009
- http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=24628953 & site=ehost-live>. "EI Pomar Chair of Business and Entrepreneurship." <u>The University of Colorado at Colorado Springs</u>.
 - 16 Feb. 20009. 2 May 2009 < http://business.uccs.edu/html/el_pomar_chair.html>.
- Garrison, D. Randy, and Heather Kanuka. "Blended learning: Uncovering its Transformative Potential in Higher Education." Internet & Higher Education 7.2 (June 2004): 95-105.
- Ginns, Paul, and Robert Ellis. "Quality in Blended Learning: Exploring the Relationships between Online and Face-to-face Teaching and Learning." <u>Internet & Higher Education</u> 10.1 (Jan. 2007): 53-64. <u>Academic Search Premier</u>. EBSCO. Kramer Family Library, Colorado Springs, CO. 9 Apr. 2009 <<u>http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=24313217&site=ehostlive></u>.
- Moore, Michael Grahame. "Editorial: Blended Learning."<u>American Journal of Distance Education</u> 19.3 (Sep. 2005): 129-132. <u>Academic Search Premier</u>. EBSCO. Kramer Family Library, Colorado Springs, CO. 17 Apr. 2009

<http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=18105838&site=ehost-live>.

Osguthorpe, Russell T., and Charles R. Graham. "Blended Learning Environments." <u>Quarterly Review of</u> <u>Distance Education</u> 4.3 (Fall 2003): 227-233. <u>Academic Search Premier</u>. EBSCO. Kramer Family Library, Colorado Springs, CO. 17 Apr. 2009

http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=11164018&site=ehost-live. Skill, Thomas D., and Brian A. Young. "Embracing the Hybrid Model: Working at the Intersections of

Virtual and Physical Learning Spaces." <u>New Directions for Teaching & Learning</u> (Winter2002 2002): 23. <u>Academic Search Premier</u>. EBSCO. Kramer Family Library, Colorado Springs, CO. 17 Apr. 2009

<http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=9178794&site=ehost-live>.

 Tabor, Sharon W. "Narrowing the Distance." <u>Quarterly Review of Distance Education</u> 8.1 (Spring 2007):
 47-57. <u>Academic Search Premier</u>. EBSCO. Kramer Family Library, Colorado Springs, CO. 17 Apr. 2009

<http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=24958021&site=ehost-live>. "Vision Statement." <u>University of Colorado at Colorado Springs</u>. 21 April 2009.

<http://www.uccs.edu/~pages/visionandvalues.html>.

Young, Jeffrey R. "'Hybrid' Teaching Seeks to End the Divide Between Traditional and Online Instruction." <u>Chronicle of Higher Education</u> 48.28 (22 Mar. 2002): A33. <u>Academic Search</u> <u>Premier</u>. EBSCO. Kramer Family Library, Colorado Springs, CO. 17 Apr. 2009 <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=6641300&site=ehost-live>.