Blended Learning Models

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INTRODUCTION

Technological advances and widespread access to information and communication technologies (ICTs) have facilitated the rapid growth of blended learning approaches in both higher education and corporate training contexts. In 2002, the president of Pennsylvania State University expressed his belief that blended learning was "the single greatest unrecognized trend in higher education" (Young, 2002, p. A33). At the same time, the American Society for Training and Development also identified blended learning as one of the top 10 emergent trends in the knowledge delivery industry (Finn, 2002). Since then, the visibility of blended learning environments has increased dramatically in both formal education and corporate training settings. At the third annual Sloan-C Workshop on Blended Learning and Higher Education, Frank Mayadas, the program director for the Alfred P. Sloan Foundation, predicted that "by 2010 you will be hard pressed to find a course that is not blended" (Mayadas, 2006). There is increasing interest in the concept of blended learning as evidenced by greater numbers of books, journal articles, and trade magazine articles that directly address issues related to blended learning. This article will provide an overview of current models of blended learning and provide references to the most recent resources in this emergent area of research and practice.

BACKGROUND

Definition

The use of the term blended learning is relatively new in both higher education and corporate settings. In higher education, the term "hybrid course" was often used prior to the emergence of the term "blended learning," and now the two terms are used interchangeably. Because term is relatively new, there are still ongoing debates regarding the precise meaning and relevance of the term (Driscoll, 2002; Graham, Allen, & Ure, 2003; Laster, 2004; Masie, 2005; Oliver & Trigwell, 2005; Osguthorpe & Graham, 2003). However, the most commonly held position is that *blended learning environments combine face-to-face instruction with technology-mediated instruction* (Graham, 2005; Graham et al., 2003). This definition highlights the ongoing convergence of two archetypal learning environments: the traditional

Figure 1. Blended learning combines traditional face-to-face and computer mediated instruction
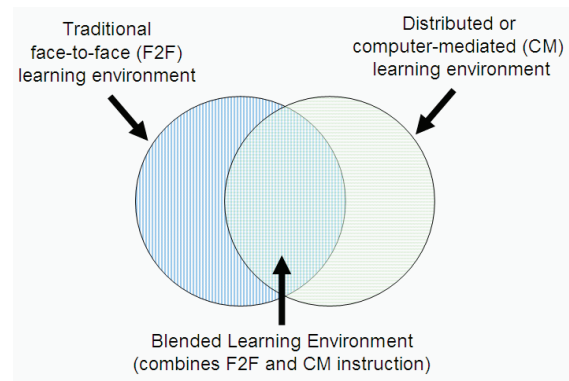
face-to-face (F2F) environment with the distributed (or technology-mediated) environment (see Figure 1).

Purposes

There are many reasons why a blended approach to learning might be selected. The three most common reasons for blending listed in the literature are:

- To increase learning effectiveness
- To increase convenience and access
- To increase cost effectiveness

Often educators adopt a blended approach in order to explore tradeoffs between more than one of these goals simultaneously (e.g., increasing the convenience to students afforded by an asynchronous distributed environment without completely eliminating the human touch from the F2F environment). While blended learning is appealing to many because it enables one to take advantage of the "best of both worlds" (Morgan, 2002; Young, 2002), blended learning environments can also mix the least effective elements of both F2F and technology-mediated worlds if not designed well.

MODELS

The concept of blended learning is simple and elegant. However, there are numerous ways that blended learning

Figure 2. Different levels where blended learning can occur
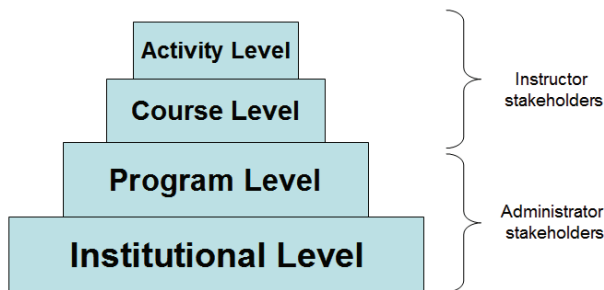
can be implemented in a wide variety of different contexts. For this reason, it is important to share successful models of blended learning so that all can benefit. Sharing *models* of blended learning can help to facilitate the *purposeful* and *disciplined* adoption of appropriate blended learning strategies. This section of the article will present several models of blended learning. Because of space constraints it is not possible to share all of the details of the models, but a rich

set of references is provided that will allow the reader to find additional details for the examples of interest.

It is important to understand that blending occurs at many different levels including the institutional level, the program level, the course level, and the activity level (see Figure 2). Typically, models at the course and activity levels have instructor stakeholders who are primarily interested in issues of learning effectiveness and productivity. Blended learning that occurs at the program and institutional levels typically has administrator stakeholders who are often driven by issues of cost effectiveness and expanding access of the learning to untapped audiences. Specific examples of blended learning at each of these levels can be found in *The Handbook of Blended Learning* (Graham, 2005) and *The Encyclopedia of Distance Learning* (Graham & Allen, in press).

Because there is such a wide range of possible blends in the different contexts, it can be helpful to think of three major categories of blends: enabling blends, enhancing blends, and transforming blends. Table 1 contains a description of each category and specific examples for each.

The distinctions here are particularly important when considering the impact of blended learning on learning ef-

Table 1. Three categories of blends with examples

Category	Description	Examples
Enabling Blends	Enabling blends primarily focus on addressing issues of *access* and *convenience*. They often use information and communication technologies as a way to provide "equivalent" learning experiences to the predominant face-to-face modality.	1. Many of the for-profit institutions like University of Phoenix (Lindquist, 2005) have models that focus on making educational opportunities available to those who do not have access due to time and location constraints. 2. National University has a teacher preparation program geared toward access and flexibility (Reynolds & Greiner, 2005). 3. Many international education and training programs are also focused on providing access (e.g., World Bank, Jagannathan, 2005, Mexico's Red Escolar program, Acuña Limón, 2005, etc.).
Enhancing Blends	Enhancing blends allow for incremental changes to the pedagogy. They are often characterized by the inclusion of supplemental online resources and/or the implementation of online activities that are small in scope when compared to the overall course.	4. University of Glamorgan, Wales (Jones, 2005) has a continuum of e-learning that includes four levels, the first two of which represent enhancing blends: (1) Basic ICT usage (e.g., PowerPoint presentations) and (2) E-enhanced (e.g., access to online resources, use of Bb for productivity such as announcements, lecture notes, etc.). 5. University of Waikato, New Zealand (Wright, Dewstow, Topping, & Tappenden, 2005) has a model for enhancing F2F courses that includes levels such as "Supported Online" (e.g., traditional F2F with access to materials provided online) and "Somewhat Online" (e.g., includes an online course component for on-campus students). 6. University of Central Florida, U.S. (Dziuban, Hartman, Juge, Moskal, & Sorg, 2005) has a model that includes "W courses" (e.g., fully online), M courses (e.g., mixed, reduced F2F contact courses), and E courses (e.g., Web enhanced courses). E courses use online or Web components to enhance a traditional F2F course.
Transforming Blends	Transforming blends allow for a significant change in pedagogy that facilitates active learner construction of knowledge.	7. Use of instructional simulations such as the Virtual Audiometer and Virtual Chem Lab at Brigham Young University are changing the ways in which students learn and solve problems (Graham & Robison, in press; West & Graham, 2005). 8. Authentic learning environments that bring real world contexts into the classroom (Oliver & Trigwell, 2005) or integrate formal learning with workplace learning (Collis, 2005; DeViney & Lewis, 2005; Singh, 2005) can be supported through the use of blended learning approaches. 9. Mixed reality technologies facilitate the blending of F2F and virtual worlds and are transforming the kinds of learning and performance support that is taking place in industrial and military contexts (Kirkley & Kirkley, 2005; Wisher, 2005).

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