# Benefits and Challenges of Blended Learning Environments

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## INTRODUCTION

The term "blended learning" has become a corporate buzzword in recent years (Lamb, 2001). Recently, the American Society for Training and Development identified blended learning as one of the top ten trends to emerge in the knowledge delivery industry in 2003 (Rooney, 2003). In higher education, the term blended learning is being used with increased frequency in academic conferences and publications. Issues related to the design and implementation of blended learning environments (BLE) are surfacing as technological advances continue to blur the lines between distributed learning and the traditional campus-based learning. Many universities are beginning to recognize the advantages of blending online and residential instruction. *The Chronicle of Higher Education* recently quoted the president of Pennsylvania State University as saying that the convergence between online and residential instruction was "the single-greatest unrecognized trend in higher education today" (Young, 2002). Along the same lines, the editor of *The Journal of Asynchronous Learning Networks* is predicting a dramatic increase in the number of hybrid (i.e., blended) courses to include as many as 80-90% of the range of courses (Young, 2002). The article provides an overview of blended learning environments (BLEs) and outlines the most common benefits and challenges identified in the research literature.

## BACKGROUND

The use of the term "blended learning" is a relatively new phenomenon in higher education. Historically, academicians have referred to blended learning environments (BLEs) as hybrid environments. But with the explosion in the use of the term "blended learning" in corporate training environments, the academic literature has increasingly followed suit, and it is common to see the terms used interchangeably (Voos, 2003). In this section of the article, we address the following two questions:

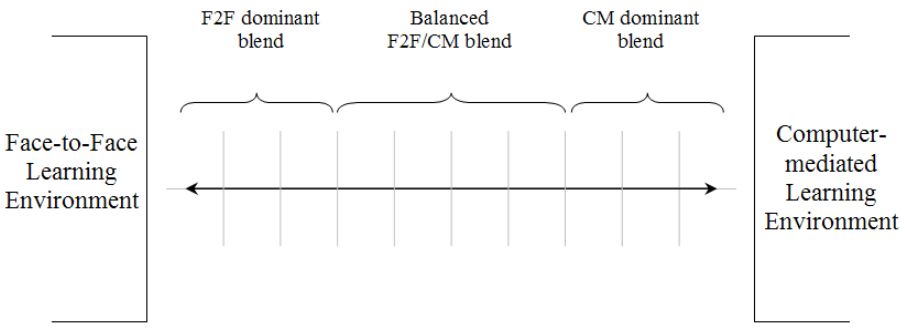
- What is being blended in a BLE?
- How much to blend in a BLE?

### What Is Being Blended?

By nature, both the terms "hybrid" and "blended" imply a mixing or combining of *something*. It is that *something* that people do not always agree upon. Some understand blended learning to be a combination of different instructional methods (soft technologies) (Singh & Reed, 2001; Thomson, 2002), while others define blended learning as a combination of different modalities or delivery media (hard technologies) (Driscoll, 2002; Rossett, 2002). Blended learning is most commonly considered to be the combination of two archetypal "learning environments" using *both* the hard and soft technologies most common in each instructional environment. In short, *blended learning environments combine face-to-face (F2F) instruction with computer-mediated (CM) instruction.*

Blending occurs at the instructional (or course) level as opposed to the institutional level. A whole body of literature talks about dual-mode institutions that deliver both F2F and distributed instruction, but don't explicitly blend these environments at a course level (Rumble, 1992). Historically, the on-campus and distributed education branches of dual-mode universities served different populations of learners. However, increasingly the lines between traditional on-campus learners and distance learners are being blurred. This same phenomenon is happening between on-campus course offerings and distributed course offerings. This blurring of boundaries is often referred to as the "hybridization" of the university (Cookson, 2002).

*Figure 1. Blended learning environments combine F2F and computer-mediated instruction*




## How Much to Blend?

As might be expected, no magic blend is optimal for all learning contexts. As Figure 1 suggests, a range of combinations can occur in a blended environment. Figure 1 divides this range into three general levels: blends that have a dominant F2F component, blends that have a dominant CM component, and blends that are fairly balanced in mixing the two environments. In higher education and corporate training, blends of all varieties exist. At the F2F end of the spectrum, many on-campus instructors and corporate trainers are enhancing their courses or training programs by using computer-based technologies. In these instances, the instructors and trainers may change what they do in the F2F environment because of the added CM portion, but they typically do not reduce the F2F contact time. At the computer-mediated end of the spectrum, an increasing number of higher education distributed education courses have a F2F component. These courses range from requiring F2F orientation activities and in-person testing (Martyn, 2003; Schrum & Benson, 2000) to allowing for optional participation in discussion or lecture sessions. In the corporate world, companies often add F2F sessions to e-learning training modules (Bielawski & Metcalf, 2002; Thorne, 2003) to give employees the chance to practice and apply skills and knowledge they've gained via the online instruction. In the middle of the spectrum, both university courses and corporate training modules reduce F2F class time by increasing the time the learners spend in online instructional activities.

## Why Blend?

There are many reasons why an instructor or corporate trainer might choose to design a BLE over a non-blended environment. The most predominant benefits and challenges in the literature are presented in the following two sections.

## Benefits to Blending

The phrase most commonly used by advocates of BLEs is that they allow one to have the "best of both worlds" (Morgan, 2002; Young, 2002). BLEs can also mix the least effective elements of both worlds if they are not designed well. Beyond this general statement, we identified three major themes that are often referred to as reasons for blending: (1) more effective pedagogy, (2) increased convenience and access, and (3) increased cost effectiveness.

## More Effective Pedagogy

The opportunity to improve upon prevalent pedagogical practices is one of the most commonly cited possibilities that blending provides. For example, in the on-campus environment much of teaching and learning is still focused on the "transmission" model with the lecture used by 83% of higher education instructors as the predominant teaching strategy (U.S. Department of Education, 2001). Constraints such as class duration, size, and location can provide a formidable barrier to making changes to that strategy. Introducing online instructional components opens the range of instructional strategies that can be used. Proponents of BLEs have mentioned such benefits as:

- an increase in active learning strategies used (Collis, 2003; Morgan, 2002);
- a change from a more teacher-centered to learner-centered focus (Hartman, Dziuban, & Moskal, 1999; Morgan, 2002);
- a greater emphasis on peer-to-peer learning (Collis, 2003);
- a change in the way faculty allocate time, allowing for increased mentoring of individual students