

## Chapter 4

# Trends of Blended Learning in K–12 Schools: Challenges and Possibilities

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### ABSTRACT

*Blended learning is a well-known and successful instructional model used in higher education and K-12 schools (International Association for K-12 Online Learning, 2012; Watson, 2012). It is estimated that about 37 percent of school districts in the United States had students enrolled in technology-supported distance education courses during the 2004/2005 school year (Zandberg & Lewis, 2008). An increased student population, coupled with the need to reduce educational costs, has led to a high demand for virtual instruction (Watson, 2010). Blended learning is a hybrid of traditional face-to-face and online learning in which instruction occurs through both classroom and online formats, with the online component being a natural extension of traditional classroom learning (Colis & Moonen, 2001). As such, the process may involve a combination of instructional technology formats (e.g., videotape, CD-ROM, Web-based training, film) and face-to-face instructor-led instruction (Driscoll, 2002). Despite its hybrid nature and the potential it holds for transforming classroom instruction, to date, little research exists that examines trends in blended learning and the challenges and possibilities of utilizing this method of instructional delivery at the K-12 level. Further, even less is known about best practices in K-12 blended learning and instruction (Ferdig et al., 2009). Given these considerations, in this chapter, the authors first explore trends in blended learning in K-12 schools. Subsequently, they examine the benefits and challenges of K-12 blended learning. In the final phases of the chapter, the authors highlight possible solutions to the challenges, discuss recommendation, and identify directions for future research.*

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## **INTRODUCTION**

Recent yearly costs and budget deficits have made it difficult for many school districts to purchase and supply textbooks to students. In 26 states, K-12 schools in the United States received less state funding in the 2012-13 school year than they did last year, and in 35 states, school funding now stands below the levels of that observed in 2008. In support of these statistics, reports indicate that 35 states currently receive less funding per student than they did five years ago. And, as an example of the increase in costs for school funding, Florida's school funding demonstrated an increase of approximately \$273 per pupil in 2013 despite reduction in funding to the state at a rate of \$569 per-pupil over the past four years, 2008-2012 (U.S. Census Bureau, 2010).

As a result of these shifts in school and state funding, resources such as "Open Educational Resources" (OER) have emerged as a pathway for the delivery of engaging, customized, and up-to-date content at a faster and more cost effective rate. However, with the increasing population of students in K-12 schools, as well as the shortage of teachers, certain courses remain unavailable in schools. As an instructional model that allows students to enroll in courses or recover course credits from missed or failed classes (Watson et al., 2012), blended learning provides a feasible alternative.

Blended-learning involves integration of various event-based activities, such as face-to-face classrooms, live e-learning, and self-paced learning (2003). Given the flexibility involved, the International Association for K-12 Online Learning (iNACOL, 2012) estimates that more than 1.5 million students in K-12 schools took one or more online courses in 2010 (Wicks, 2010). Moreover, in the year 2012, 31 states including Washington, DC had instituted statewide full-time online schools at the K-12 level (Watson et al., 2012). Further, states such as Alabama, Florida, and Michigan offered full or part-time online delivery options to students in grades K-12 (see Tables 1 & 2).

With the rapid increase in student and teacher access to the Internet over the past ten years, blended-learning as an instructional model has become a more reasonable option for K-12 schools. For instance, in 2009, 97% of teachers had one or more computers located in the classroom every day and 54% were allowed to bring computers into the classroom. In fact, daily Internet access was available for 93% of the computers located in the classroom and the ratio of students to computers in the classroom was 5.3 to 1 (National Center for Education Statistics, 2009). Such availability has not only increased teachers' ability to cater to the needs of a larger number of students while maintaining the quality of learning outcomes (Riel & Polin, 2004), but has also held potential for greater accessibility to course content and instruction.

Given the potential of blended learning as an instructional tool, in this chapter, we first provide background information concerning blended learning, and then explore the current trend of this instructional model in K-12 schools. Through examination of the benefits and challenges of K-12 blended learning, we subsequently highlight possible solutions to challenges, and make recommendations for future research.

## **BACKGROUND**

Blended learning involves the use of instructional tools such as multimedia and virtual Internet resources, classroom websites, Course Management Systems, and synchronous and asynchronous discussions. These tools are necessary to help implement and develop a successful blended learning program in K-12 schools (Rovai & Jordan, 2004). In blended learning, instruction may occur in online and offline settings (Singh, 2001). In the online setting, instruction occurs using the Internet. In the offline setting,

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