

Chapter 26

K–12 Online Education: Issues and Future Research Directions

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ABSTRACT

It is growing increasingly evident that online learning is the future of K-12 education, both in the United States and the rest of the industrialized world. Improved technology, coupled with the perceived cost-effectiveness of online education, has resulted in growing numbers of states and K-12 school districts embracing “anytime, anywhere” education. Research on K-12 online education, however, has not kept up with its growth. This chapter explores three structural issues that are currently limiting online learning from being a viable alternative to K-12 face-to-face instruction in the United States: inadequate training of online K-12 teachers, issues related to accessibility for students with diverse learning needs, and the importance of structuring courses in a way that responds to the diverse backgrounds of K-12 students. Although this chapter is framed from an American perspective, largely because the vast majority of K-12 online learning occurs in the United States, future research on these issues is essential to K-12 online education in any context.

INTRODUCTION

Over the past two decades, advancements in technology and increased availability of the Internet have led to an increase in online learning throughout the world. It is common practice for

institutions of higher education to offer courses and even full degree programs completely online. In the United States, for example, online courses represented 31.3% of total enrollments in American colleges and universities during the Fall 2010 semester (Allen & Seaman, 2011). This number is only expected to grow as more students and

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university faculty embrace the idea of “anytime, anywhere” learning.

Given the relative success of online learning in higher education, the next logical step for online education is K-12 schooling. Although currently restricted to primarily the United States and Canada, K-12 online education is a rapidly growing phenomenon with global implications (Clark & Berge, 2012). In the United States alone, over one million secondary students take online courses each year. Many school districts are creating their own online curricula, and nearly every state has developed a virtual high school system designed as an alternative to traditional classroom instruction (Picciano & Seaman, 2009; Watson, Murin, Vashaw, Gemin, & Rapp, 2011). Moreover, online K-12 course offerings are likely to increase as school districts are asked to do more with less in the wake of continued economic stagnation (Journell, 2012).

Research on K-12 online education, however, has not kept pace with its growth. The literature base on effective teaching in K-12 environments is limited, at least when compared to what we know about online learning in higher education. Although much of our knowledge of online higher education can be transferred to a K-12 context, the demographic composition and specific learning needs of secondary students prohibits an exact comparison (Journell, 2013). The purpose of this chapter is to identify underexplored aspects of K-12 online education and offer recommendations for future research.

HISTORICAL CONTEXT

K-12 online education is merely the latest incarnation of a push for distance education in the United States that has its roots in the mid-nineteenth century (Larreamendy-Joerns & Leinhardt, 2006; Moore, 2003). The advents of the personal computer in the mid-1970s, the World Wide Web in the 1990s, and high-speed networks in the 2000s stimulated

a myriad of ways to provide online instruction to the masses. Since the mid-1990s, colleges and universities in the United States have been turning to online education with increased frequency (Allen & Seaman, 2011), and it did not take long for policymakers to envision similar success at the K-12 level.

Although the origins of K-12 online education actually occurred in Canada (Barbour & Reeves, 2009), two highly-successful programs in the United States started a few years later: The Virtual High School (VHS), which was established by the Concord Consortium, and the Florida Virtual School, which was created by the Florida state legislature. These “out of school” models offered the opportunity for students to work from a computer at home and interact with teachers remotely (Friend & Johnson, 2005; Pape, Adams, & Ribeiro, 2005; Zucker & Kozma, 2003). Both programs are still in existence today and have grown both in terms of scope and student enrollment (Florida Virtual School, 2012; VHS Collaborative, 2012).

Today, K-12 online education programs in the United States are offered in a variety of formats. Completely online educational institutions are often referred to as “virtual schools” or “cyber schools” and may be operated by states, school districts, or as charter or private schools. Increasingly, individual school districts are creating online courses and programs to supplement their existing face-to-face curricula. These courses are designed to provide flexibility for students who wish to take classes outside of the traditional school day or to offer curricula in a cost-effective manner (Cavanaugh, Barbour, & Clark, 2009; Rice, 2006).

Although online education is not close to becoming the primary mode of K-12 schooling in the United States, increased Internet accessibility, combined with evolving Internet-related technologies and the need to provide alternative means for education to diverse populations, have caused K-12 online education in the United States to grow substantially (Barbour, Archambault, & DiPietro, 2013). Interestingly, K-12 online learning has yet to

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