

# Chapter 20

## Impact of Online Learning in K–12: Effectiveness, Challenges, and Limitations for Online Instruction

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### ABSTRACT

*Online learning capabilities in K-12 education have changed tremendously in the past years and are continually evolving in the traditional classrooms. The overall growth in the total number of high school students currently taking online distance learning courses as well as the importance of distance learning as a solution to educational challenges has increased the need to study more closely the factors that contribute to distance learning outcomes and success rates in K-12. Therefore, the challenge that emerges for educators, researchers, scholars, and advocates for students is to carefully and effectively join the growth and power of K-12 online learning for the benefit of the students involved. This chapter provides an overview of factors that contribute to learning outcomes and success rates for K-12 distance education. Some of the challenges, issues, and considerations affecting implementation of K-12 online education are discussed.*

### INTRODUCTION

Distance learning is no longer a unique component that can be used to educate students; instead, it is becoming more of the mainstream for educating students throughout the world. Students are enrolling in online distance learning courses in record numbers (Allen & Seaman, 2013). The constant emergence of improved online learning technologies, the use of online means of a way for students to communicate with their instructors and overall ability to obtain an education online, has allowed online learning to take the current education system to new and higher heights.

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Online education has also been seen as the fastest growing alternative to traditional public schools in K-12 education (Glass & Welner, 2011; LaPlante, 2012). Several virtual schools have appeared within our country in numerous states and have contributed to a tremendous amount of educational success in schools where there had once been very little success. There has been a constant increase in the total number of high school students enrolled in online courses and pursuing online education. Through online learning, numerous students can graduate from high school, where students may not have had the opportunity to graduate or excel due to certain restrictions on education. The future of educational pedagogy is projected to increasingly include classroom courses that are either web-enhanced or delivered solely online.

Online education for grades K-12 has been additionally noted as a solution to a variety of educational concerns, including over populated classrooms, lack of highly qualified and certified teachers in local schools, shortage of needed courses, and the challenge of accommodating students who need to learn at a specific pace and in a different environment (Cavanaugh, Barbour, & Clark, 2009). School districts and numerous states have increasingly included this instructional model as a means of educating students, and the conventional face-to-face format of lecture is no longer the only method of providing education to students. The expansion of using technology and distance learning has thus contributed to the creation and endorsement of K-12 distance learning.

Online learning demonstrates the potential to revolutionize K-12 education by allowing avenues to high-quality educational opportunities and providing instruction that is tailored to meet specific student needs. Various educational innovations, along with the desire to serve increasing numbers of students and meet their needs, providing students with opportunities that may have once not been available, have caused many K-12 schools to rethink and expand their learning and delivery methods. As the number of students using online education has increased, questions and concerns about high school online education as a method of learning and delivery have emerged also. The overall growth in the total number of high school students currently taking online distance learning courses, as well as the importance of distance learning as a solution to educational challenges has increased the need to study more closely the factors that contribute to distance learning outcomes and success rates in K-12. Therefore, the purpose of this chapter is to provide the readers with an overview of factors that contribute to learning outcomes and success rates for K-12 distance education. In addition to the benefits and impact of K-12 online education, the chapter discusses some of challenges, issues and considerations affecting implementation of K-12 online education. The content of chapter will provide insight for determining high school student success in online courses and using online learning as a mean of educating in grades K-12.

## **OVERVIEW OF DISTANCE EDUCATION IN K-12**

K-12 online learning has become a particularly North American trend (Cavanugh Ferdig, Johnson, Lowes, Smith, & Blomeyer, 2006). Distance learning in grades K-12 has taken on many forms and is known by numerous titles such as online learning, virtual learning, e-learning, distance education, and virtual charter schools. Within the North American context, K-12 online learning programs are often described as supplemental or full-time (Watson, Gemin, Ryan & Wicks, 2009). Supplemental programs are those where a student is enrolled in a brick-and-mortar or physical school, and the school allows the student to enroll in one or more online courses as a way to supplement their curricular offerings; full-time programs are those where the student completes all of their education online (Barbour, 2011). In

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