

Chapter 3

The Potential for Personalized Learning in the K–12 Online Classroom

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ABSTRACT

K-12 online education has come to be one of the most transformational trends in education, with K-12 full-time online schools serving 313,000 students in 33 states with enrollment in those programs increasing at a rate of about 6% per year. The growth of the K-12 online education setting has outpaced the ability for researchers to study and generate data supporting its best practices. Researchers recognized that there must be a change in epistemic beliefs, of how knowledge is created and developed, and how learner agency is facilitated in virtual learning environments. While most research on online teaching is geared towards higher education, there has been some research addressing K-12 online teaching. This chapter covers asynchronous instruction and synchronous instruction in virtual classrooms, frameworks that support these practices, and differentiation and its implementation in K-12 virtual classrooms.

INTRODUCTION

K-12 online education has come to be one of the most transformational trends in education (Toppin & Toppin, 2016), with K-12 full-time online schools serving 313,000 students in 33 states with enrollment in those programs increasing at a rate of about 6% per year (Snapshot 2019, 2019). Typically, online schools include asynchronous activities, course content and instructional services delivered via a learning management system, and synchronous activities, live instruction by certified teachers in a virtual classroom (Beasley & Beck, 2017). The growth of the K-12 online education setting has outpaced the ability for researchers to study and generate data supporting its best practices (Toppin & Toppin, 2016; Borup & Stevens, 2017). This is especially true with the recent educational shifts that were forced due to the COVID-19 pandemic in early 2020 (Middleton, 2020). For the purpose of this chapter, the focus will be the K-12 virtual classrooms that have been in existence well before the COVID-19 pandemic

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by way of full-time virtual school providers and will focus on the components that could contribute to effective, personalized instruction in the synchronous classroom setting. This chapter covers asynchronous instruction and synchronous instruction in those virtual classrooms, frameworks that support these practices, and differentiation and its implementation in K-12 virtual classrooms.

K-12 ONLINE LEARNING

K-12 online learning (also referred to as distance learning, virtual learning, or cyber learning) can be fully online, blended, or supplemental in nature (Barbour, 2011). Students enrolled in fully or full-time online schools complete all of their course work online. Supplemental programs are for students who are enrolled in traditional brick and mortar campuses where schools allow students to enroll in one or more courses in an online program in order to supplement offerings. Blended programs are schools where students attend a physical school, but the curriculum is offered fully online with face-to-face teachers facilitating the curriculum (Barbour, 2011). The curriculum and courses in K-12 online learning are provided by virtual schools (also referred to as online schools or cyber charter schools) in which students use personal computers to proceed through the coursework (Hornbeck et al., 2019).

According to Molnar et. al. (2019), in 2017-18, there were 501 full-time virtual schools with over 297,700 students with private education management organizations (EMOs) operating 34% of all full-time virtual schools yet accounting for 64.4% of the enrollment. The student demographics of virtual schools is reported to be nearly 65% White Non-Hispanic students as compared to the national average of 49.8% (Molnar et al., 2019). The proportion of special education students (15.5%) enrolled in virtual schools with available data was higher than the national average (13.1) while only 0.09% of students were classified as English language learners (ELLs) as compared to the national average of 9.2% (Molnar et. al, 2019).

As stated previously, K-12 online instruction occurs synchronously and asynchronously. The activities associated with synchronous and asynchronous teaching provide the social interactions through collaboration and interaction with other students that supports the construction of knowledge (Mbat, 2012). While most research has been surrounding asynchronous instruction in the K-12 setting, there has been limited research on synchronous practices. Researchers have found that a combination of both types of instruction can be beneficial to students in the online setting (Giesbers et al., 2014). Giesbers et al. (2014) found that there is merit in the argument that both modes of instruction may offer the best in enhancing online learning in that asynchronous instruction allows time for reflection and the development of higher order thinking skills and synchronous instruction provides direct feedback and supports the social processes of learning. Edelbring et al. (2020), in their study of asynchronous online education in higher education, found synchronously supported groups performed better than only asynchronously supported groups. They found no difference in the results between face to face support and synchronous support. Instead they determined that if students receive some type of live support, they do just as well.

Virtual Charter Schools

A charter school is defined by Hornbeck et al. (2019) as an “independent school created with public funds established by teachers, parents, community, and/or for profit EMOs under the terms of a charter with a local or national authorizer” (p. 5). A virtual school offers all of their instruction online and can be under two categories: home schools and charter schools (Molnar et al., 2019). Seventy-nine percent

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