The Shift to Distance Learning: Tracing the Roots of 100+ Years of Practice and Opportunity

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In March 2020, K-12 schools around the world began using online learning as a means to continue teaching during the extended school closures caused by a global pandemic. Scholars were quick to point out that this type of instruction was not online learning or online teaching, but emergency remote teaching – which Hodges et al. (2020) described as:

a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances. It involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that will return to that format once the crisis or emergency has abated. The primary objective in these circumstances is not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis. (para. 13)

This was contrasted with the purposeful instructional planning that used a systematic model of administrative procedures and course development, along with the careful consideration of various pedagogical strategies and the selection of tools based on the strengths and limitations of each one that is *online learning*. The necessary distinction between online learning and remote learning underscores the problem that the K-12 education system was ill prepared to adapt to the transition that was necessary. However, as time passes it becomes necessary to examine the state of the school system and the role that K-12 distance learning should have played during the pandemic if educators had been adequately prepared for online learning.

The reality is that various forms of distance learning have been used in the K-12 environment for the past century. Clark

(2013) indicated that the first use of distance learning in the K-12 context may have been the use of educational film in public schools in New York around 1910. Other early examples include the use of correspondence education (i.e., paper packets mailed through the post) in Nebraska and the use of educational radio through schools of the air in Ohio and Wisconsin in the early 1920s (Bianchi, 2002; Broady et al., 1931; Saettler, 2004). While the mediums changed over the years, distance learning continued to be used throughout the K-12 school system. In the 1930s, the University of Iowa began providing supplemental afterschool learning opportunities to students throughout the state (Clark, 2013). By the 1960s the use of instructional television had expanded to formal programs throughout the Midwest and southeast (Howley & Harmon, 2000; Kirby, 1998). The 1970s saw the increase in the use of the telephone as a medium to K-12 distance learning in places like Alaska (Bramble, 1986). The following decade saw the deployment of audiographics or telematics technology to network schools together to provide distance learning in states like Iowa, Maine, and Utah (Hezel Associates, 1998).

In fact, as a part of his chapter on the evolution of K-12 distance learning in the *Handbook of Distance Education*, Clark (2013) provided a timeline for distance education (see Table 1).

While Clark indicated that web-based instruction was first used in 1993, Barbour (2011) indicated that the first K-12 online learning program was developed by the private school Laurel Springs School around 1991. Throughout the 1990s, there were several supplemental (i.e., part-time) K-12 online learning programs that developed at the district and state level (Berge & Collins, 1998; Clark, 2000; Friend & Johnston, 2005; Pape et al., 2005). The first full-time K-12 online learning schools began in California around 1994 (Darrow, 2010). At the turn of the millennium, there was K-12 online learning at the state level in at least fourteen states with approximately 40,000 and 50,000 students enrolled in one or more courses (Clark, 2001). By the 2010–11 school year,

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Table 1 Timeline of K-12 distance education and instructional strategies (p. 556)

Date	First Documented Use in K-12 Education
1910	Instructional film
1923	Supervised correspondence study
1930	Educational radio
1933	Educational television
1956	Telecourse study
1961	Airborne instruction
1965	Computer based learning
1967	Audio conferencing
1973	Educational satellite instruction
1984	Computer mediated communication
1985	Satellite network instruction
1989	Microwave/IFTS network instruction
1993	Web based instruction

there was K-12 online learning activity in almost all 50 states (Watson et al., 2011).

Prior to the pandemic, the best estimates were that there may have been anywhere from 5% to 8% of all K-12 students that were engaged in online learning. This reality was one of the reasons why students and teachers had to pivot

to emergency remote teaching in March 2020, as the vast majority had little or no experience with or preparation for online learning. This problem has been well documented. For example, fifteen years ago it was reported that only 15% of K-12 teachers had been trained to teach online (Smith et al., 2005). More recently, a survey of 522 universities found that only 1.3% indicated they provided preparation related to K-12 online teaching (Kennedy & Archambault, 2012). In a replication of that study, Archambault et al. (2016) surveyed 1017 institutions and 11% of the 363 responding programs reported to having any focus on K-12 online teaching. In fact, Rice and Dawley (2007) even reported that the majority of teachers hired to teach in supplemental and full-time online learning programs received no training or professional development on how to teach online.

Interestingly, the current pandemic is not the first time that distance learning has been used to address issues of instructional continuity at the K-12 level during a pandemic. The telephone was used to provide access to instruction during the Spanish flu pandemic for high school students in Long Beach (McCracken, 2020). During the 1948 polio epidemic in New Zealand, correspondence education and educational radio was used to provide learning opportunities to students while schools were closed (German, 2020).

Multiple Phases of Education Response to COVID-19

Fig. 1 Four phases of educational response to COVID-19 in terms of remote and online learning adoption

Online learning was used when schools were closed in Bolivia, Canada, China, Hong Kong, Japan, and Singapore during the SARS and H1N1 outbreaks in the 2000s (Alpert, 2011; Barbour et al., 2011; Borja, 2003; Latchem & Jung, 2009). In fact, at the time K-12 online learning was becoming so prevalent that Barbour (2010) illustrated that some jurisdictions included online teaching as a required part of their teacher education and would close schools for periods of time to prepare their systems for pandemic or natural disaster forced online learning due to school closures.

The past 18 months have presented many challenges for the K-12 education system. Some of these challenges could have been predicted. Some of these challenges were well documented. Barbour et al. (2020) suggested that K-12 schools would respond to the pandemic in four phases (see Fig. 1).

Phase 1 was represented by the emergency remote learning that immediately occurred in March 2020, but as Spring 2020 progressed some individual teachers and schools moved to Phase 2. Most jurisdictions attempted to plan for Phase 3 during the 2020–21 school year; however, many were stuck in Phase 2. As we enter a third school year that is being disrupted by the pandemic, the lack of understanding and preparation for the full range of distance learning modalities will continue to plague the continuity of K-12 learning in response to emergency situations. A response that should ultimately lead to a new normal for distance learning – a new normal that builds on over a decade of distance learning practices and opportunities.

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