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K-12 Online Learning and School Choice: Growth and Expansion in the Absence of Evidence

Michael K. Barbour
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Abstract: The use of online learning at the K-12 level has seen exponential growth for much of the past two decades. Based on the limited research to date some students can experience success in the supplemental K-12 online learning environment, but other types of K-12 online learning are largely failing to adequately serve students. While proponents will argue that all types of K-12 online learning are forms of school choice, it is primarily cyber charter schools and course choice policies that are reflective of the policies and regulations proponents of school choice promote – as cyber charter schools and course choice policies are designed to open up markets to K-12 online learning providers. Yet, proponents continue to advocate for decreasing the amount of oversight for K-12 online providers. The combination of dramatic, unchecked growth and an almost complete inability to assure any measure of quality has resulted in abysmal student performance in many K-12 online learning environments.

Keywords: course choice policies, cyber charter school, cyber school, K-12 online learning, student performance, virtual school

Biography: Michael K. Barbour is the Director of Doctoral Studies at Sacred Heart University. He has been involved with K-12 online learning in a variety of countries for almost two decades as a researcher and practitioner. Dr. Barbour's research focuses on the effective design, delivery and support of K-12 online learning. Recently, his work has concentrated on policies designed to create effective online learning environments. He is currently a Fellow for the National Education Policy Center.

K-12 online learning is a growing, diverse field of study. There are K-12 students that are enrolled in a brick-and-mortar or face-to-face setting, who take one or more online courses from a supplemental virtual school (Barbour, 2013; Barbour & Reeves, 2009; Clark, 2013). Some of these supplemental virtual schools are operated by a statewide entity, in other instances they are operated by an individual school district. There are also K-12 students that are not enrolled in a brick-and-mortar school at all, but take all of their courses from a full-time cyber school. In some cases these full-time cyber schools are also operated by individual school districts, however, in most instances they are operated as charter schools (generally controlled by an educational management organization [EMO]). Finally, there are a growing number of blended and/or hybrid programs where students attend a brick-and-mortar school, and also receive much of their instruction through online learning (in some instances while they are physically at the school, other times from their own homes).

During the 2014-15 school year, there were approximately 2.7 millions students enrolled in supplemental K-12 online learning programs (Gemin, Pape, Vashaw, & Watson, 2015). These K-12 students accounted for more than 4.6 million individual online course enrollments. Similarly, during the 2013-14 school year there were approximately 315,000 full-time cyber school students, which represented a growth of 6.2% from the previous school year (Watson, Pape, Murin, Gemin, & Vashaw, 2014). While Gemin et al. (2015) did not indicate the number of full-time cyber school students during the 2014-15 school year, the authors did report that there were 275,000 of these students were enrolled in cyber charter schools (representing 3.3 million individual course enrollments). Approximately 175,000 of those cyber charter school students were enrolled in programs operated by one of the two main EMOs (i.e., K12, Inc. or Connections Education). Finally, Gemin et al. (2015) indicated that there were an “unknown number of students are attending hybrid schools that combine a significant amount of online instruction with a significant amount of face-to-face instruction with a teacher or mentor” (p. 14). This could explain the fact that Ambient Insights (2014) estimated that there were up to six million students engaged in K-12 online and blended learning in the United States.

Outside of the United States K-12 online and blended learning is also growing – often at a pace consistent to what we see in the United States (Bacsich, Bristow, Camilleri, de Beeck, Pepler, & Phillips, 2012; Bacsich, Pepler, Phillips, Öström, & Reynolds, 2012; Barbour, Brown, Hasler Waters, Hoey, Hunt, Kennedy, Ounsworth, Powell, & Trimm, 2011). For example, within the Canadian context there were 6.2% students engaged in K-12 online and blended learning, which is actually a similar proportion to the level of participation found in the United States (Barbour & LaBonte, 2014). Nations like Mexico, Australia, New Zealand, Singapore, South Korea, and Turkey all have robust systems of K-12 distance, online and blended learning

In this chapter, I begin by underscoring the differences between supplemental and full-time K-12 online learning, and to situate the school choice within the larger field of K-12 online learning. I then examine the use of cyber charter schools as a mechanism for school choice in K-12 online learning, the effectiveness of that form of school choice, and what is driving the growth in that type of K-12 online learning. Next, I transition to a more recent form of school choice within K-12 online learning – course choice policies (and follow the same pattern as the previous discussion). Finally, I outline how most of the discussion in this chapter – and the overview and case in favor chapters – are based primarily on the US experience, and that K-12 online learning in international jurisdictions has developed and is being driven in very different ways.

In this chapter, I begin by underscoring the differences between supplemental and full-time K-12 online learning, and to situate the school choice within the larger field of K-12 online learning. I then examine the use of cyber charter schools as a mechanism for school choice in K-12 online learning, the effectiveness of that form of school choice, and what is driving the growth in that type of K-12 online learning. Next, I transition to a more recent form of school choice within K-12 online learning – course choice policies (and follow the same pattern as the previous discussion). Finally, I outline how most of the discussion in this chapter – and the overview and case in favor chapters – are based primarily on the US experience, and that K-12 online learning in international jurisdictions has developed and is being driven in very different ways.

Understanding Literature in the Field of K-12 Online Learning

As Archambault and Kennedy (2016) correctly recognized in their introduction to this section, “one of the greatest on-going... issues has to do with the field not understanding the difference between full-time and supplemental offerings” (p. ###). This is often as true for

scholars in the field as it is for practitioners... It is also true of much of the research that has been presented in this volume when introducing and making the case for K-12 online learning as a viable method of school choice. For example, in their introduction Archambault and Kennedy described the results of four meta-analyses that indicated K-12 students in online learning environments performed at comparable levels to their counterparts in the face-to-face environment (e.g., Bernard, Abrami, Lou, Borokhovski, Wade, Wozney, Walseth, Fiset, & Huang, 2004; [Cavanaugh, 2001](#); Means, Toyama, Murphy, Bakia, & Jones, 2013; Ungerleider & Burns, 2003). While this conclusion is true based on these meta-analyses, my colleagues neglected to inform the reader that these studies were all focused on K-12 students in the supplemental online learning environments – where all of the supports outlined by Borup (2016), in his chapter in this volume, are potentially available to students (although there is no guarantee that students will have access to or take advantage of these supports [[Barbour & Hill, 2011](#)]).

Further, as Barbour (2013) described, the sample of K-12 supplemental online students – at least those students represented in the literature – have tended to be a group of students who were largely self-motivated, self-directed, academically-able, and technologically-literate. Barbour also described the methodological issue of a lower level of participation in the online samples, indicating an even more selective group of these self-motivated, self-directed, academically-able, and technologically-literate student participating in these comparative studies. [Rice \(2006\)](#) summarized the situation in these comparative studies as “issues of small sample size, dissimilar comparison groups, and differences in instructor experience and training” (p. 431).

It is interesting to note that in her meta-analysis that included 16 studies focused solely on K-12 distance education, Cavanaugh (2001) found a positive effect of 0.147 in favor of the K-

12 distance education students. However, three years later Cavanaugh, Gillan, Kromrey, Hess, and Blomeyer (2004) conducted another meta-analysis, this time with 14 studies and found a negative effect of 0.028 towards the K-12 distance education students. [Barbour \(2011\)](#) speculated whether the changing trend in student performance was due to an increase in the range of students being served in the supplemental K-12 online learning environment. Suffice to say that the research does not support the belief that “no significant difference exists when comparing outcomes between face-to-face and online learning environments,” or even supplemental K-12 online learning. The research into supplemental K-12 online learning does support the reality that there are numerous methodological limitations with this body of literature, and the literature is also likely not representative of a full range of learners.

School Choice Within K-12 Online Learning

One of the other problems with a misunderstanding full-time and supplemental K-12 online learning is how school choice has been operationalized and evolved within the K-12 online learning context. [Lamdin and Mintrom \(1997\)](#) contend that, “the school-choice issue comes down to this: should students be assigned to schools based upon politically established criteria, or should they (or their parents) be able to choose the schools they will attend?” (p. 218). There are two basic premises that underlie the school choice movement. First, “the logic of parental choice is.... schools compete with one another for a clientele” (Peterson, 2010, p. 157). Second, is the belief that less regulated, more autonomous sectors will naturally engender more effective organizations ([Lubienski & Lubienski, 2013](#)). Essentially, choice schools – which have greater levels of freedom – compete with traditional public schools to provide parents and students with better options for their education (or their education dollars as the market theory of school choice postulates).

Following that market theory approach, in much the same way that it occurs within the private sector, schools that are successful will thrive and those schools that fail to achieve success will either be forced to innovate or simply cease to operate ([Apple, 2001](#)). The problem with the application of this market theory to education is that within the private sector business can, and do, cease to operate (Christensen, Horn, & Johnson, 2008; 2011). Within a public system where everyone MUST participate (i.e., due to mandatory schooling legislation), what gets created is one set of schools that are successful (which is often due more to their clientele, as opposed to their approach to education – see Frankenberg, [Siegel-Hawley, & Wang, 2011](#); [Lacireno-Paquet, Holyoke, Moser, & Henig, 2002](#); [Lubienski, 2005; 2011](#); [Lubienski, Gulosino, & Weitzel, 2009](#)), and a second set of schools that everyone else must attend (i.e., there is no option to simply cease to operate). In fact, Lubienski and Lubienski (2013) concluded that:

while market theory focuses on how markets should work in education, there is a paucity of evidence supporting the marketist belief... despite not only the dearth of data supporting these policies but the emerging evidence challenging them, offers a classic example of policy makers elevating means over the ends, an ideological strategy over the actual evidence, and a policy goal over the actual purpose of the institution. (p. 130)

Essentially, there is a dearth of evidence to support the belief that the competition created by parental choice will improve student outcomes.

Within the K-12 online learning literature, school choice has been defined in similar ways. For example, [Moe and Chubb \(2009\)](#) described that “choice would simply allow families to choose their own schools, and thus, most important, to leave failing schools for better ones...” (p. 46). The authors continue that “the idea is that charters [i.e., school choice] will give families more options to choose from... and that competition will stimulate the regular public schools to

change their ways and improve, so as not to lose kids and money” ([Moe & Chubb, 2009](#), p. 50).

Similarly, in describing school choice, Packard (2013) indicated that, “the role of competition and private enterprise in education is a cornerstone” (p. 15). One of the common themes in both the school choice literature and the K-12 online learning school choice literature is the focus that school choice creates competition between traditional public schools and the various school choice options that are available to students and parents. Another common theme that will become apparent in the following pages is that there is also a dearth of evidence to support the belief that the competition created by choice will improve student outcomes in K-12 online learning environments.

However, before turning our attention to this dearth of evidence, it is important to fully situate school choice within the K-12 online learning context. One of the key features of understanding where competition occurs in the K-12 online learning environment, and hence what aspects of K-12 online learning are considered school choice, is distinguishing between supplemental virtual schooling and full-time cyber schooling. Within the K-12 online learning environments, supplemental virtual schooling has historically not competed with traditional public schools. In most instances, the traditional public school receives the complete funding for a student enrolled in a supplemental online course and simply pays a small fee to the supplemental virtual school ([Barbour & Reeves, 2009](#)). In fact, most supplemental virtual schools are not even credit granting institutions, but instead provide the traditional public school with an assessment of how the student performed in the online course and it is up to the traditional public school to assign a grade and grant credit. Even Christensen et al. (2008, 2011) underscored the non-competitive roots of K-12 online learning in its ability to address:

Advanced Placement (AP) and other specialized or advanced courses; small, rural, and urban schools that are unable to offer breadth; “credit recovery” for students who must retake courses in order to graduate; home-schooled students and those who can’t keep up with the schedule of regular school; high-school dropouts; students needing special tutoring; and pre-kindergartners. (p. 91)

Simply put, supplemental K-12 online learning has historically operated in co-operation with traditional public schools ([Peterson, 2010](#)).

However, full-time cyber schools have had a different orientation. The vast majority of full-time cyber school students attend a cyber charter school. In describing the role of K12, Inc. (i.e., the largest for-profit corporate operator of cyber charter schools) in bringing change to the educational landscape, Packard (2013) wrote that “charter schools have the potential to create this competition” (p. 18). Further, Peterson (2010) described charter schools as “neither quite a public institution nor entirely a private one, charters are a middle way, a pragmatic compromise between ideal competition and none at all” (p. 209). Unlike supplemental K-12 online learning, cyber charter schools were designed to specifically compete with the traditional public school system – often based on the logic that “by competing with traditional public schools for students, charter schools improve, and traditional noncharter public schools improve as well” (Packard, 2013, p. 43). While we will return to the topic of whether competition leads to improved educational outcomes within the K-12 online learning school choice options, it is clear that full-time cyber schools – primarily through cyber charter schools – represent the competitive nature in the K-12 online learning environment that school choice is founded upon.

While course choice policies have been present in the K-12 online learning policy landscape for over a decade (Watson, Murin, Vashaw, Gemin, & Rapp, 2013), the number of

states providing this option has almost tripled in the past five years (Gemin et al., 2015). The rationale for the course choice option as a mechanism of school choice was succinctly summarized by Moe and Chubb (2009):

Aside from homeschoolers, the students who attend or take classes from virtual schools come from the regular public schools, and even if these students are seeking course work that isn't offered at all by the districts, the availability of virtual school options allows children (*or "parts" of children, depending on how many credits they take virtually*) to leave the regular public schools, *followed by money and jobs*. (p. 111 – emphasis added)

Essentially in a course choice state, because the funding follows the student, if the student chooses one or more course offered by a K-12 online learning program that program receives a portion of that student's funding directly from the funding agency.

Within the K-12 online learning environment, school choice was first operationalized in the form of online or cyber charter schools (i.e., full-time K-12 online learning opportunity). More recently, school choice within the K-12 online learning environment has also been operationalized in the form of course choice policies. The efficacy and rationale of both of these K-12 online learning school choice options are examined in the following sections.

Cyber Charter Schooling

The roots of full-time K-12 online learning can be traced to the introduction of Choice 2000 in California around 1994 and SusQ Charter in Pennsylvania around 1998 (Hasler-Waters, Barbour, & Menchaca, 2014). The largest cyber charter EMO, K12, Inc., was founded around 2000 (Darrow, 2010). According to Watson (2007), by 2005-06 there were 147 cyber charter schools that enrolled 65,354 students in 18 states. This was a significant increase from the previous two years, where there had been 86 cyber charter schools that enrolled approximately

31,000 students in 13 states in 2004-05 and only 60 cyber charter schools in 13 states in 2002-03.

At present, there are approximately 275,000 students enrolled in online charter schools (Gemin et al., 2015). Although the authors did note that, “charter schools make up less than 6% of total enrollments in the U.S., but full-time virtual charter schools accounted for the large majority of full-time online students” (p. 20). It is this level of activity, and the scope that cyber charter schools encompass, that makes it important to understand what we really know about this growing form of school choice.

Contrary to the perspective provided by Archambault and Kennedy (2016) in their introduction to this section, there is not “reasonable evidence to suggest that no significant difference exists when comparing outcomes between face-to-face and online learning environments” (p. ###) – at least when it comes to the full-time K-12 online learning environments provided by cyber charter schools (Molnar, Huerta, Barbour, Miron, Shafer, Gulosino, 2015; Molnar, Rice, Huerta, Shafer, Barbour, Miron, Gulosino, Horvitz, 2014). In fact, the research into student performance in the full-time K-12 online learning environment has found that students perform at levels that are lower – in many instances – much lower than their face-to-face counterparts.

Student Performance in Full-Time K-12 Online Learning Environments

To date, there has been little peer-reviewed research that has focused on student performance in the full-time K-12 online learning environment. In fact, much of the literature available has not been produced by researchers at all. The first, and to date the majority, of literature on full-time K-12 online learning student performance has been produced by the audit divisions of various departments of education and legislative branches. This is followed by research conducted by investigative journalists, often through the use of freedom of information

requests. Finally, there is a growing body of research that is being produced by various policy centers (often with an ideological focus or funded by organizations with ideological goals).

One of the advantages of the fact that much of the literature on full-time K-12 online learning student performance has come from audit divisions is the fact, as a branch of the legislative process, these audit groups have access to a more complete data set than can be released publicly to external individuals. The first of these audits was conducted by the Colorado Department of Education (2006), which concluded that K-12 students in the full-time online schools performed poorly on statewide standardized exams and had high repeater, attrition, and drop out rates. More specifically, the report stated:

For example, in school years 2003-2004 through 2005-2006, between 23 and 35 percent of online students scored at or above grade level on the math CSAP [i.e., statewide standardized] exams compared with 43 to 53 percent of students in the State as a whole. Over the same period, between 55 and 64 percent of online students we analyzed scored at or above grade level on the reading CSAP exams compared with 68 percent of students statewide in all three years. In addition, we found that the online students in our sample were about four to six times more likely to repeat a grade than students statewide the attrition rate for the students we analyzed was almost three to four times higher than the attrition rate for students statewide; and the aggregate dropout rate was between three and six times higher than the statewide rate. (p. 2)

These findings – poor online student performance, high online student repeater levels, and high online student drop-out rates – are a consistent theme in the literature related to full-time K-12 online learning student performance.

The following year, the Legislative Division of Post Audit (2007) found that full-time K-12 online students in Kansas scored lower on state assessments than traditional students, particularly in mathematics. Similarly, the Joint Legislative Audit Committee (2010) reported, “that virtual charter school pupils [in Wisconsin] had higher median reading scores than other public school pupils, but their mathematics scores were generally lower” (p. 6). Further, the Office of the Legislative Auditor (2011) in Minnesota found that:

- Since the 2006-07 school year, full-time online students have become less likely to finish the courses they start; when compared with students statewide, full-time online students were more likely to completely drop out of school.
- Full-time online students made less progress on the MCA-II standardized math tests than students in traditional schools.
- On the MCA-II reading tests, full-time online students generally kept pace with their counterparts in traditional schools in one of the two years we analyzed, but not in the other. (p. ix)

Finally, in a follow-up to their 2007 report, the Legislative Division of Post Audit (2015) in Kansas reported that online students (which included a combination of full-time and supplemental students) performed at similar levels in reading before and after controlling for student demographics, but that online students performed at lower levels in mathematics compared to their face-to-face counterparts. The authors did note that the online sample in this comparison had a lower rate of special education students (i.e., 3% vs. 14%), English language learners (i.e., 0% vs. 10%), and students receiving free and reduced lunch (i.e., 16% vs. 41%) – making the online sample a much more selective group of students compared to the traditional student sample.

Investigative journalists who have examined student performance in full-time K-12 online learning programs, such as those offered by cyber charter schools, have found similar troubling results. For example, in 2011 reporters with I-News Network and Education News Colorado reported on a 10-month investigation into what they described as “the burgeoning business on online K-12 schools in Colorado” (Hubbard & Mitchell, 2011, ¶ 1). The investigation found that:

- Online students are losing ground. Students who transfer to online programs from brick-and-mortar schools posted lower scores on annual state reading exams after entering their virtual classrooms.
- Academic performance declined after students enrolled in online programs. Students who stayed in online programs long enough to take two years’ worth of state reading exams actually saw their test results decline over time.
- Wide gaps persist. Double-digit gaps in achievement on state exams between online students and their peers in traditional schools persist in nearly every grade and subject – and they’re widest among more affluent students. (Hubbard, 2013, ¶ 2)
- Half the online students wind up leaving within a year. When they do, they’re often further behind academically than when they started.
- Online schools produce three times as many dropouts as they do graduates. One of every eight online students drops out of school permanently – a rate four times the state average. (Hubbard & Mitchell, 2011, ¶ 9)

A similar investigation that same year by journalists in Arizona yielded similar results. Ryman and Kossan (2011) reported that, “among the state's largest online schools, which in 2009-10 had

nearly nine of every 10 students enrolled in at least one statewide online course, all had graduation rates and AIMS math passing rates below the state average” (¶ 1). Even more problematic was that the investigative series in both states also reported that there was little oversight of student performance by the state (Hubbard & Mitchell, 2011; Ryman & Kossan, 2011); a finding also reported by several of the legislative audits (Colorado Department of Education, 2006; Joint Legislative Audit Committee, 2010; Legislative Division of Post Audit, 2015).

The trend of full-time K-12 online learning students performing poorly, relative to their face-to-face counterparts, has also been the dominant findings from reports released by policy centers and think tanks. For example, Zimmer, Gill, Booker, Lavertu, Sass, and [Witte \(2009\)](#) reported that while student performance in eight states was quite similar for those who attended traditional charter schools as compared to non-charter traditional public schools, the authors found that student performance in cyber charter schools in Ohio (i.e., the only one of the eight states where online charter schools existed) was quite negative compared to their face-to-face counterparts. Two years later, Innovation Ohio (2011) reported that 90% of student attended cyber charter schools that were rated as ineffective. Further, five of these seven cyber charter schools had graduation rates that were lower than the worse traditional public school district.

Similarly, the Center for Research on Education Outcomes (2011) conducted a study of charter schools in Pennsylvania and found that students in brick-and-mortar charter schools performed at similar levels as their traditional public school peers. However, the authors also reported that, “cyber charter students have significantly smaller gains in reading and math than those of their traditional public school peers” (p. 8). The National Education Policy Center (NEPC) sponsored an investigation into K12, Inc., as the largest cyber charter school EMO.

Miron and Urschel (2012) reported that only 27.7% of cyber charter schools managed by K12, Inc. met Adequate Yearly Progress (AYP). Further, the students attending K12, Inc. cyber charter schools consistently lagged behind on statewide standardized assessments in both math and reading. Additionally, the authors reported that cyber charter schools managed by K12, Inc. were “more likely to be white and less likely to be Hispanic relative to comparison states. They are also less likely to be low-income and much less likely to be classified as English language learners” (p. ii). Consistent with the legislative audits and investigative journalist reports, Miron and Urschel found that cyber charter school students performed poorly compared to their face-to-face counterparts, even though cyber charter school students were a more selective group of students.

More recently, the Center for Research on Education Outcomes examined performance data for cyber charter school students in 17 states, which was compared to a virtual control group of traditional public school students matched based on prior performance and other demographic factors. Woodworth, Raymond, Chirbas, Gonzales, Negassi, Snow, and Van Dongle (2015) found that “across all tested students in online charters, the typical academic gains for math are -0.25 standard deviations (equivalent to 180 fewer days of learning) and -0.10 (equivalent to 72 fewer days) for reading” (p. 23). This result was particularly interesting, as the Center for Research on Education Outcomes has been responsible for producing numerous reports favorable to charter schools, and school choice in general. Although it is worth noting that the NEPC (n.d.-a), which conducts “third party reviews of selected think tank publications using academic peer review standards to consider the quality and defensibility of a report's assumptions, methods, findings, and recommendations” (§ 1) through their *Think Twice Think*

Tank Review Project, has routinely questioned the methodology and inferences of these studies (see Maul, 2013, 2015; Maul & McClelland, 2013; Miron & Applegate, 2009).

Beyond the findings that cyber charter students performed at a about the same level in reading in Wisconsin (Joint Legislative Audit Committee, 2010), and that online students – both supplemental and full-time – performed at similar levels in Kansas (Legislative Division of Post Audit, 2015); the only independent literature that has found cyber charter school students are successful has been from researchers funded by organizations supportive of charter schooling and school choice. For example, the Ohio Alliance for Public Charter Schools (2009) released a report that focused on a value-added progress model because it claimed that annual test scores were an inadequate measure of student performance gains. The authors of the report indicated that cyber charter schools ranked higher on value-added progress over one year compared to students from schools in the main eight urban districts. It is worth noting that the stated mission of the Ohio Alliance for Public Charter Schools (2015) is “to provide children with greater educational opportunities by improving the quality and fostering the growth of Ohio’s public charter schools” (§ 1). It is also worth noting that Wang and Decker (2014) examined cyber charter school performance in Ohio from 2007 to 2011, which included the period that the data from the Ohio Alliance for Public Charter Schools’ report. Wang and Decker found that cyber charter “schools experienced lower student performance than their traditional counterparts” (p. 59).

The other organization funded by supporters of charter schooling and school choice that has regularly found positive cyber charter school student performance is the Department of Education Reform at the University of Arkansas. For example, Maranto and Jacob (2011) reported that students from one cyber charter school “scored very well last year on the

Pennsylvania Department of Education's Value Added Assessment System measures” (§ 8). It should be noted that statement was made at the same time that the Center for Research on Education Outcomes (2011) reported cyber charter school students in Pennsylvania had significantly smaller gains in both reading and math. Additionally, Lueken and Ritter (2012) used a nearest neighbor matching methodology in their examination of the Arkansas Virtual Academy (a cyber charter school) on behalf of the Department of Education Reform at the University of Arkansas. The authors determined that cyber charter school students outperformed their comparison face-to-face peers in both math and literacy over a two-year period. It is worth noting that the cyber charter school sample had several of its weakest students removed because they repeated a grade, and was also a more affluent group with significant fewer minority students.

It is also worth noting that the Department of Education Reform (n.d.) at the University of Arkansas “was made possible through a \$10,000,000 private gift” (§ 1), a gift provide by the Walton Family Foundation “conduct research on charter schools, voucher programs and other policies the foundation supports” (Rich, 2014, § 14). For those who are unfamiliar, the Walton Family Foundation (2015) – In its own words – “envision[s] a future where every child has access to... educational choices” (§ 2). Other observers have not been as diplomatic about the educational mission of the Walton Family Foundation. For example, In The Public Interest and the American Federation of Teachers (2015) released a report that "explored the radical agenda of the Walton family and the foundation it controls, and how that agenda has taken the U.S. charter school movement away from education quality in favor of a strategy focused only on growth" (§ 7). It is unsurprising that the NEPC’s *Think Twice Think Tank Review Project* has regularly found methodological problems and an overstatement of potential findings in research

conducted by the Department of Education Reform (Baker, 2014; Glass, 2014; Powers, 2014), and was even awarded a *Bunkum Awards for Shoddy Research* in 2014 (NEPC, n.d.-b). The Bunkum awards are a tongue in cheek publicity stunt by the NEPC (n.d.-c) designed to “highlight nonsensical, confusing, and disingenuous education reports produced by think tanks” (§ 7).

The only other group that has found positive results in favor of students attending cyber charter schools has been the corporate EMOs that operate these online programs. For example, in an analysis of the performance of free and reduce lunch students from three of their cyber charter schools (i.e., Arizona, Georgia and Texas), the company found that “these schools have narrowed the gap between students who are economically disadvantaged and those that are not, while simultaneously raising the achievement levels of all FRL groups in both Reading and Mathematics” (Jorgensen, 2015, p. 9). Additionally, it is also important to note that K12, Inc. has consistently argued the flaws in using standardized testing as a measures for measuring student performance in their cyber charter schools. In response to a report from the NEPC, K12, Inc. (2012) wrote that the NEPC report “compares static, end-of-the-year test data among all schools in a state, without regard to comparisons of similar students or student populations. The report also neglects to provide any data or analysis on measures of student academic growth” (§ 1). Over the past three years, K12, Inc. has conducted their own analysis of student performance based on a model that measures student academic growth. In its most recent report, the company indicated that, “K12-managed public schools exceeded the Scantron national norm group mean gain in both Reading and Mathematics” (K12, Inc., 2015a, p. 8). This finding was consistent with reported student progress and growth in their previous annual reports (K12, Inc., 2012b; 2013; 2014).

Interestingly, Colorado is a jurisdiction that incorporates growth data as a part of its annual accountability model, as well as having a significant number of full-time cyber schools. This data can be compared across schools – allowing researchers to compare both the actual student achievement, as well as the level of growth in student test scores. Colorado operationalizes growth not

in test score point gains or losses, but in *student growth percentiles*.... The student growth percentile tells us how a student's current test score compares with that of other similar students (students across the state whose previous test scores are similar). This process can be understood as a comparison to members of a student's academic peer group. (State of Colorado, n.d., ¶ 4)

Figures 1 through 3 below, indicate student performance data for Colorado schools in 2014 in mathematics (i.e., Figure 1), reading (i.e., Figure 2), and writing (i.e., Figure 3). Each chart is divided into quadrants:

- the top left represents schools that have high student achievement, but low student growth;
- the top right represents schools that have high student achievement and high student growth;
- the bottom right represents schools that have low student achievement, but high student growth; and
- the bottom left represents schools that have low student achievement and low student growth.

The size of the dots are representative of the student population. Blue dots are the full-time cyber schools, while the grey dots are brick-and-mortar schools.

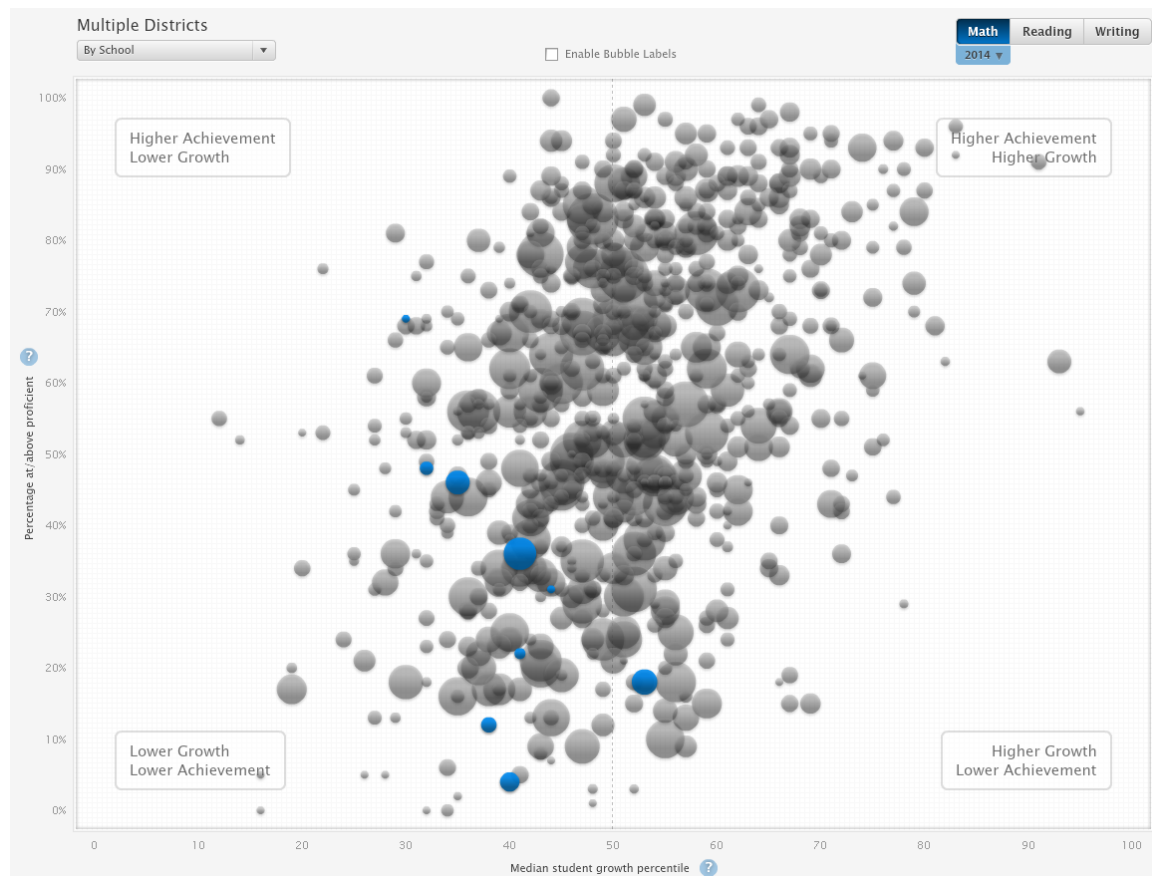


Figure 1. Colorado Student Performance and Growth Data from 2014 in Mathematics for Online vs. Traditional Schools¹

¹ All three figures have been generated using the Public Growth Model Data at <http://www.cde.state.co.us/schoolview/coloradogrowthmodel>

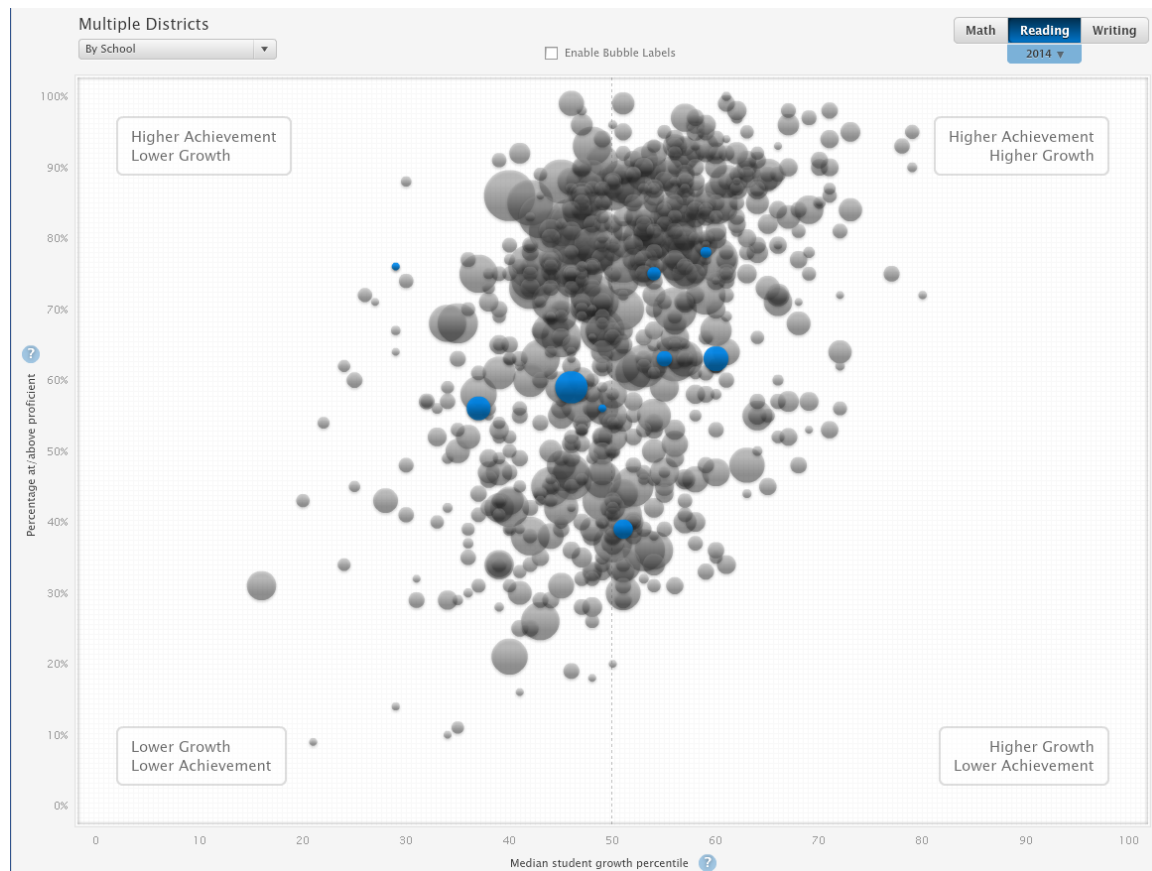


Figure 2. Colorado Student Performance and Growth Data from 2014 in Reading for Online vs. Traditional Schools

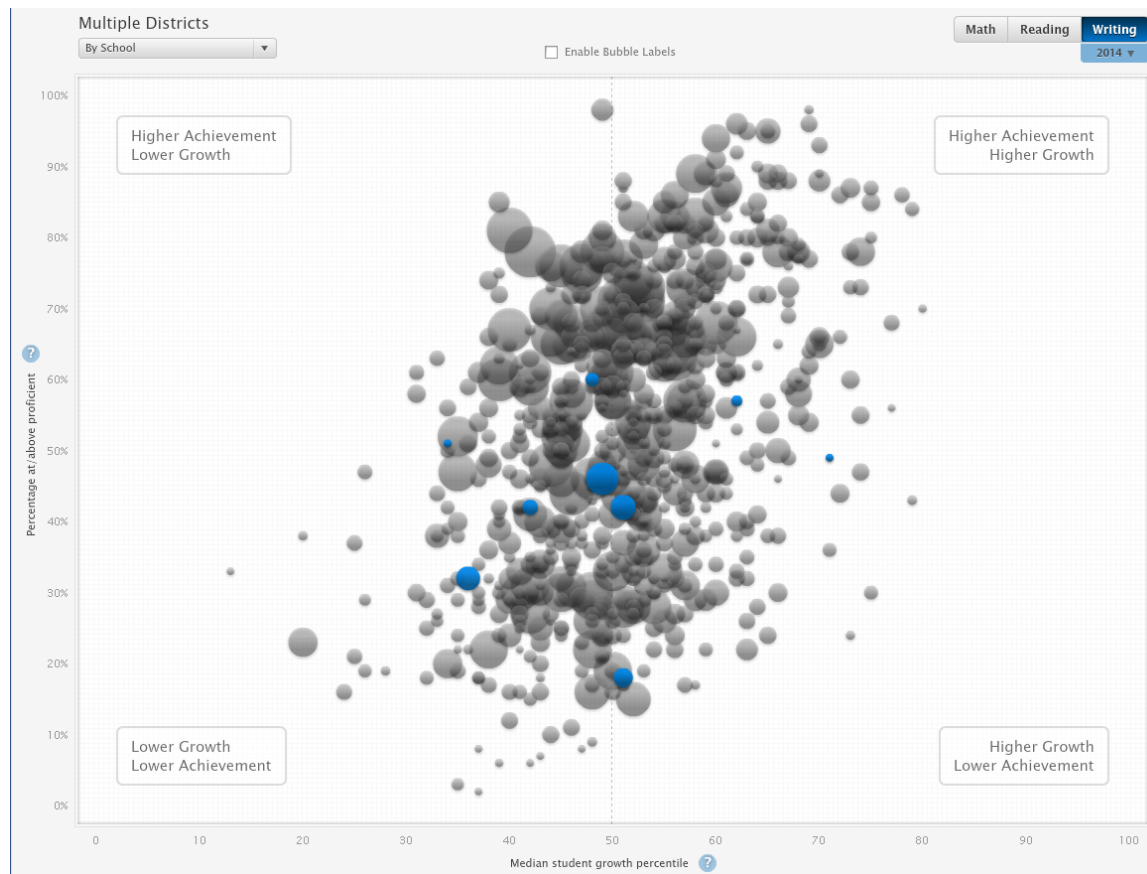


Figure 3. Colorado Student Performance and Growth Data from 2014 in Writing for Online vs. Traditional Schools

As each of these figures illustrate, the majority of full-time cyber schools fall in the low achievement and low growth quadrant. In fact, the vast majority of full-time cyber schools fall on the low growth side of each figure. The one exception is student performance in reading, where four of the nine full-time cyber schools fall into the high achievement and high growth quadrant. Beyond this anomaly, contrary to claims by the ideological organizations and the companies themselves, the majority of full-time cyber school students not only perform poorly, but there is little growth in their performance from year to year.

Motivation for the Growth of Full-Time K-12 Online Learning

Even with the consistent findings that full-time K-12 online learning and cyber charter schools fail to produce results that are comparable to their face-to-face counterparts, cyber charter schools continue to grow and states continue to introduce policies that are designed to allow these programs to proliferate. For example, in the first complete national review of K-12 online learning policy and practice, Watson and Kalmon (2005) indicated that there were 15 states that had policies that would allow for cyber charter schools. In the latest edition of the *Keeping Pace with K-12 Digital Learning: An Annual Review of Policy and Practice*, Gemin et al. (2015) reported that there were 42 states that had charter school legislation and that 25 of those states had cyber charter schools in operation. Given the numerous and consistent findings that K-12 students perform relatively poorly in these online school choice programs, it does beg the question of what is driving the growth of these favorable regulatory regimes that allow cyber charter schools to proliferate?

Some have suggested that it is due to the fact that many of these EMO are private, for profit corporations (Molnar, Huerta et al., 2015; Molnar, Rice et al., 2014; Ravitch, 2010, 2013). While cyber charter schools are often funded at a lower rate than traditional brick-and-mortar schools (International Association for K-12 Online Learning, 2013), it is also well documented in the literature that full-time K-12 online learning is costs less to provide than face-to-face instruction (Barbour, 2012). For example, the Ohio Legislative Committee on Education Oversight (2005) reported that the actual cost of the five existing full-time cyber charter schools was approximately 64% of the cost of students enrolled in brick-and-mortar schools. Similarly, both Dodd (2010) and Gillis (2010) reported that cyber charter schools in Georgia and Wisconsin operated at a cost of 65% of the funding provided to brick-and-mortar schools. Even the Thomas B. Fordham Institute, a strong proponent of K-12 online learning, reported in its *The Costs of*

Online Learning that full-time cyber schools were between 51% and 77% of the cost of brick-and-mortar schools (Butler Battaglini, Haldeman, & Laurans, 2012). Essentially, there is general agreement that full-time cyber schooling costs approximately 65% less, which means that corporate EMOs are able to use the remaining 35% of the public funding provided to educate the student for profit.

Interestingly, the International Association for K-12 Online Learning – the main lobbying organization for K-12 online and blended learning providers – continues to hold the position that “online schools should be funded within the range of brick-and-mortar school operating costs” (Watson & Gemin, 2009, p. 10). An increase in student funding would result in increased profits for these corporations. For example, Vander Ark (2012) reported that K12, Inc. was “a \$500 million public traded company worth \$1 billion” (p. 93). According to K12, Inc.’s (2015b) own filing with the Securities and Exchange Commission, 80% of the company’s revenue and 79% of its student enrollment came from its managed schools (i.e., cyber charter schools that it operates as an EMO). Any regulation that would hinder their ability to manage cyber charter schools or any significant decrease in student enrollment at these managed schools would dramatic affect the company’s bottom line. As Horn (2013) indicated while “these companies also offer individual courses, their core businesses have been in running full-time online schools” (p. 145). For example, in 2014 the board of the Agora Cyber Charter School in Pennsylvania voted to end their management contract with K12 Inc.. At the time, Radan (2014) described the decision as, “Agora... accounted for 14 percent of the company’s annual revenues of \$848.2 million. So when news of the August 5 decision came to light... it sent K12’s high-performing stock into a nearly 13-point tailspin” (Radan, 2014, ¶3). Further, not only does increased enrollments directly equate with increased revenue, but due to the economies of scale that these companies

operate under, increased enrollment also equates with a higher profit margin. As Horn (2013) outlined, operating expenses for K12, Inc. were approximately \$7,500/student when they had an overall enrollment of 11,000 students, but that figure decreased to less than \$5,000/student with an overall enrollment of over 100,000 students. Simply put, being able to manage cyber charter schools, enroll unlimited numbers of students in each of those schools, and to maximize the economy of scale at each of those schools is critical to the economic success of this publicly traded, for profit corporation.

Course Choice States

As Archambault and Kennedy (2015) outlined, “course choice policies allow students the right to take an online course from a variety of providers” (p. ###). Similarly, Gemin et al. (2015) described course choice as allowing “students to take one or more online courses from a provider other than the student’s district of enrollment and have their funding flow to the provider” (p. 108). School choice proponents of K-12 online learning often compare course choice to a consumer in a shopping center; where there are multiple service and product providers, and the consumer has the option on which establishments to exercise their purchasing power (Peterson, 2010). “Each student, each household, each family will pick and choose among the endless variety of options entrepreneurs can produce” (Peterson, 2010, pp. 254-255). A more accurate comparison might be the difference between frequenting a fast food restaurant or a food court. At the fast food restaurant the consumer has the ability to purchase a value meal (i.e., a single entity); whereas in the food court they are able to purchase their hamburger from one establishment, their fries from a different establishment, their beverage from a third establishment.

As Watson et al. (2014) correctly observed “supplemental online courses have filled this need, and in the early days of online learning more than two dozen states created state virtual schools to provide online courses to students in their states.” (p. 58). However, for school choice proponents of K-12 online learning there were a number of problems with this model – primary among them was that these supplemental online course providers were generally non-profit and/or state entities and the fact that in many jurisdictions the school had some control over the student’s access to these opportunities. Course choice allows any number of approved online course providers to operate in a jurisdiction that has adopted this policy, and the approval and evaluation process for online course providers is often quite minimal (Barbour, Clark, DeBruler, & Bruno, 2014).

Student Performance in Course Choice Environments

Since the adoption of course choice policies in these fourteen jurisdictions, Michigan has been the only state that has seen any research into student performance in the K-12 online learning environment on a statewide basis conducted. Michigan introduced course choice in January 2014 (or during the 2013-14 school year), using a system where the Michigan Virtual School (MVS) (i.e., a longstanding, statewide, supplemental program) manages a statewide catalogue of all of the K-12 online learning courses offered by all of the providers in the state. The Michigan Virtual Learning Research Institute, a research division of the Michigan Virtual University (i.e., the parent organization of MVS) that was created by the legislature in 2012 for the purpose of conducting research into the practice and regulation of K-12 online learning in the state, has published two annual reports into the effectiveness of K-12 online learning in Michigan. The second of these reports included data from the second semester of the 2013-14 school year (i.e., after course choice had been introduced).

In *Michigan's K-12 Virtual Learning Effectiveness Report, 2013-14*, Freidhoff (2015)

reported that during the 2013-14 school year there were approximately 76,000 students enrolled in one or more K-12 online learning courses. This figure represented an increase of almost 21,000 students from the 2012-13 school year. Similarly, there were an estimated 319,630 individual online course enrollments during the 2013-14 school year (i.e., those approximately 76,000 students enrolled in 319,630 online courses), which was an increase of 134,577 enrollments from 2012-13. While the significant increase in the number of students engaged in K-12 online learning, as well as the number of online course enrollments, cannot be directly tied to the introduction of course choice during the 2013-14 school year; it is worth noting that this was one of the largest increases in K-12 online learning activity in the state's 15+ year history.

While there were significant increases in the level of participation, there were decreases in the level of student success in the K-12 online learning environment. Friedhoff (2015) reported that, "the percentage of virtual enrollments that ended in a 'Completed/Passed' completion status was 57% – down 3% from the previous year" (p. 2). Interestingly, those same students had a 71% 'Completed/Passed' completion status in their courses offered in a brick-and-mortar environment (i.e., students enrolled in online courses were more likely to pass their face-to-face courses than their online courses). Analyzing the data further, Friedhoff (2015) found those students that were enrolled in full-time online cyber schools has a 'Completed/Passed' rate of only 54%, whereas the MVS had a rate of 72% and other supplemental online programs had a rate of 57% (although Freidhoff did note that MVS students were almost 20% more likely to pass their face-to-face courses than students enrolled in other supplemental online programs – indicating that those other supplemental online programs were enrolling academically weaker students). Freidhoff concluded from this data that, "students had the highest

‘Completion/Passed’ rate in their virtual courses when they took one to two virtual courses in a year.... Students who took five or more virtual courses [i.e., full-time online] tended to have lower ‘Completed/Passed’ rates” (p. 2). Essentially, by creating a regulatory regime that allowed for significant increases in K-12 online learning with little restrictions, the result was that the level of student performance for Michigan students in K-12 online learning environments decreased overall – and decreased more when individual students could enroll in additional online courses.

Motivation for the Growth of Course Choice

Thematically consistent with the growth and expansion of cyber charter schooling as a mechanism of K-12 online learning school choice, there is also an absence of empirical data to support the expansion of course choice policies. Yet, according to Gemin et al. (2015) there were fourteen states that had some form of course choice policy. As course choice allows students to take online courses from any provider and have their funding flow to the provider, these policies provide a new and increased revenue stream for the EMOs that operate online programs in these jurisdictions.

K-12 online learning proponents of school choice also see the expansion of cyber charter schooling and, in particular, course choice policies as a way to decrease the impact that teachers’ unions can have on public education (Barbour & Adelstein, 2013; Ravitch, 2010). As Peterson (2010) described an increase in the number of students choosing to take online courses (i.e., the funding for that student flowing to the online providers), results in a decrease in the funding to the traditional public school – which should also result in a reduction in the number of unionized teachers employed by traditional public schools. Fewer unionized teachers means less members

and, more important in the eyes of K-12 online learning proponents of school choice, less dues that the union is able to use for advocacy purposes.

Further, both Peterson (2010) and Moe and Chubb (2009) argued that an increase in the number of online teachers would naturally lead to a geographic spread of teachers, which make it more difficult for those teachers to develop a collective identity and for unions to successfully organize those teachers. Moe and Chubb also noted that K-12 online learning providers were generally able to serve a greater number of students with fewer teachers, while Horn and Stalker described how K-12 online and blended model increased the number of paraprofessionals required to supervise K-12 students while they are engaged in their online learning (Horn & Stalker, 2015; Stalker & Horn, 2012). Both of which deprofessionalize the teaching profession. It is worth noting that these proponents also make the same arguments about the growth of cyber charter schools – the vast majority of which are non-unionized teachers.

Conclusions

K-12 online learning has been growing exponentially for much of the past two decades. Much of this growth has been driven by proponents of school choice that have promoted policies and regulations designed to open up markets to K-12 online learning providers (largely to the benefit of for-profit corporations), while at the same time decreasing the amount of oversight for K-12 online providers. The combination of dramatic, unchecked growth and an almost complete inability to assure any measure of quality has resulted in abysmal student performance in many K-12 online learning environments. As Ravitch (2013) summarized, cyber schools “are cash cows for their owners but poor substitutes for real teachers and real schools” (p. 180).

This is not to suggest that K-12 online learning is ineffective or should not be made available to students. It is to say, however, that the way that K-12 online learning has been

operationalized within the school choice movement has been largely ineffective. As Ravitch (2013) reminded us, “online technology surely holds immense potential to enliven the classroom. But the story of cyber-charters warns us that the profit motive operates in conflict with the imperative for high-quality education” (p. 197). When profit and the bottom line become the main motivation, a focus on the needs of the K-12 online student gets lost. When ideological goals to deprofessionalize teachers and marginalize their representative organizations become the main motivation, the potential for effective K-12 online learning takes a backseat.

This is not to say that K-12 online learning cannot be effective. As Ferdig and Kennedy (2014) have argued, there is a need to examine under what conditions online learning can be effective. Barbour (2013) put it another way when he asked, how can we design, deliver, and support K-12 online learning so that all students can be successful. There are numerous instances throughout the field of K-12 online learning where supplemental, full-time, and hybrid/blended programs are having great success and a meaningful impact on students. This needs to be the focus of the school choice movement when it comes to K-12 online learning, not profit or ideology. Until these motives can be removed from the school choice community, K-12 online learning will continue to be an ineffective means of education.

It is worth noting that outside of the United States the practice of K-12 online learning has largely developed in a manner that is void of the pressures of free market advocacy (Barbour, 2014). Jurisdictions like Canada, Australia, New Zealand, South Korea, Turkey, and many others have developed robust and varied K-12 online learning opportunities (Barbour et al., 2011; Barbour, Hasler Waters, & Hunt, 2011; Barbour & Kennedy, 2014). As Buckingham (2015) describes in her chapter on “Virtual Schooling in Australia,” K-12 distance education and K-12 online learning have developed in varied ways acting in concert with the traditional public

school system. It is this cooperative, as opposed to a competitive one, that has created an environment where all involved in the education process – both those in the traditional brick-and-mortar environment and those involved with K-12 online learning – to consider what provides the best educational opportunity for the individual student (as opposed to ideological goals or bottom line thinking).

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