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The Nature of Online Charter Schools: Evolution and Emerging Concerns

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ABSTRACT

Online charter schools are unique among K-12 online learning options for students. They are full-time, public schools that combine online learning with traditional and home schooling practices. They are often chartered by a state agency, supported in full or in part with state funds and most often managed by a private educational management company. Some extol the virtues of these schools as being able to reach unique student populations at a fraction of the cost borne by traditional public school education. Others are concerned over the lack of evidence supporting the effectiveness of these schools and the problems encountered by young learners who are separated from their teachers due to the online nature of learning in this environment. The goal of this literature review is to: (a) provide a definition of online charter schools; (b) describe their evolution and current status; (c) describe their operations; and, (d) to reveal emerging concerns, including governance, funding and effectiveness. Finally, the authors conclude that there are three significant gaps found in the literature concerning online charter schools and provide recommendations for further research.

Introduction

Online charter schools are a cross between home schooling and charter schooling, in which technology plays a central role in the delivery and management of teaching and learning. Online charter schools offer an alternative to traditional brick-and-mortar schooling for elementary and secondary students and are unique among K-12 online learning options because they offer full-time online learning at no charge.

Historically, supplemental virtual schooling was the predominant form of online schooling in which K-12 students engaged. However, in recent years this has been shifting to favor more full-time online and blended learning options (Watson, Murin, Vashaw, Gemin, & Rapp, 2012). This virtual schooling might include credit recovery where students may need to make up for a failed course or opportunities for students to have access to advanced courses not available in the student's regular brick-and-mortar school (Glass & Welner, 2011). Often, these types of virtual schooling options are offered to students through their own schools or school districts. However, full-time online charter schools differ because most can enroll students across district boundaries, and many are managed by private, for-profit companies that are contracted by a chartering agency, which might include state agencies, regional education services or a university.

Definitions

Importantly, not all K-12 online schooling is alike. The term *K-12 online learning* is generally used to refer to the practice of online learning for elementary and secondary students. *Virtual school* generally refers to supplemental programs that are offered online, and are taken by students who attend brick-and-mortar schools and who want to or need to supplement their course options. The term *cyber school* generally refers to a publicly funded, full-time school. Cyber schools are defined as schools that, "…work with students who are enrolled primarily (often only) in the online school" (Watson et al., 2012, p. 7). There are a number of terms that have been used to describe these specific cyber schools, including virtual charters, cyber charters, and hybrid charters (Glass & Welner, 2011; Huerta, Gonzáles, & d'Entremont, 2006; Klein, 2006; Rice, 2006; Vergari, 2009). Like brick-and-mortar charter schools, cyber charter schools are accountable to their granting agency, which in most cases is the state (Huerta et al., 2006).

Often, these schools are managed by a private entity or educational management organization (EMO) (Glass & Welner, 2011).

Some have also connected these cyber charter schools with the term blended learning, which has recently been defined as an education program in which a student learns "…in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace" (Horn & Staker, 2011, p. 3). Finally, Huerta et al. (2006) provided a definition of online charter schools that presents a more visual depiction—as *non-classroom* based charter schools because they deliver instruction beyond walls found in brick-and-mortar schools. For the purposes of this review, the authors use the term *online charter school*, which we define as a K-12 online learning program with the following characteristics:

- Publicly funded, usually by the state in which it operates or less often through public grants;
- Governed by the charter policies of the state in which it resides; and
- Relying on online learning and teaching for a significant portion of its delivery model, although it may combine other home and traditional schooling practices.

Evolution and current status of K-12 online learning

In the U.S., K-12 online learning in general has evolved from the long history of distance education. This history has paralleled many of the technologies used over the last two centuries—from print to media and communications technologies to the Internet revolution. Distance education is a "generic, all-inclusive term used to refer to the physical separation of teachers and learners" (Schlosser & Simonson, 2005, p. 84).

In the U.S., some of the first Internet courses began in 1986 as part of a program called the Quantum Link Community College project, which was located in New Hampshire (Darrow, 2010). The spread of personal computers also facilitated school use of computer-based and computer-aided instructional methods for supplemental practice and individualized instruction. According to Clark (2003) these tools, along with multimedia tools and creative interactive learning opportunities helped "set the stage for the virtual school movement" (p. 677).

With the Internet reaching beyond the walls of universities during the 1990s and expanding to the public, K-12 schools began to take advantage of this new medium for delivering education to younger learners (Clark, 2003). In these early years, much of the funding for K-12 online learning was supported by federal and state subsidies. One of the earliest examples of a school to provide supplemental virtual schooling was the Utah Electronic High School. According to Clark, this was followed by the Hawai'i E-School, which was the first state-operated virtual school using only online instruction in the U.S. By 1997, the state-funded Florida Virtual School and the federally funded Virtual High School (later VHS Inc. and now VHS Collaborative) were both established. This latter initiative involved a consortium of high schools that crossed state, and eventual national, boundaries (Kozma et al., 2000).

Growth in K-12 online learning generally kept up a steady pace throughout the first decade of the 21st century. A group of researchers began tracking the steady growth in K-12 online learning across all 50 states and the District of Columbia, and learned that between 2004 to 2011 the number of states offering full-time and supplemental online learning programs for some students grew from just 11 states to all 50 plus the District of Columbia (Watson, et al., 2012; Watson, Winograd, & Kalmon, 2004).

Actual K-12 online learning enrollment numbers are somewhat difficult to come by because there currently is no single entity that tracks students, and because of the wide variety of ways in which students can engage in this form of schooling (Glass & Welner, 2011; Watson, et al., 2012). One report found that in 2010 there were over 1.8 million students enrolled in virtual schools (Queen & Lewis, 2011). This staggering number was dwarfed in comparison to reports emerging from the for-profit research firm, Ambient Insight (2011), which speculated that in 2010-11 over four million K-12 students in the U.S. participated in some form of online learning. Almost 300,000 of those students were enrolled in full-time online schools (Ambient Insight, 2011). Additionally, it was predicted that by 2016 there would be an estimated 4,750,000 full-time online K-12 students, and that 29% of all U.S. children would be enrolled in some type of online instruction.

Conversely, in its most recent report on the status of online schooling for the K-12 sector in the U.S., Evergreen Consulting predicted that growth in online charter schooling was slowing (Watson, et al., 2012). Evergreen

Consulting suggested that this could be attributed to the fact that full-time K-12 online learning required a time commitment that many parents might not be able to make. Horn and Staker (2011) asserted that this obstacle alone might prevent this type of schooling from growing beyond 10% of the total K-12 student population.

Chronicling growth of online charter schools

While online charter schools are a form of K-12 online learning, their operations are different enough to warrant a separate chronicling of their growth. From their slow birth in the mid-1990s, online charter schools grew significantly during the 2000s. This was perhaps due in part to the emergence of the for-profit companies, which develop online content for—and, in many instances, directly manage—many of the online charter schools today.

The growth of online charter schools has proved challenging to track. Figure 1 depicts the evolution of online charters from 1994 to a forecasted 2016. The figure is a compilation of a number of reports concerning online charter schools and illustrates the steady growth of this emerging form of K-12 distance education.
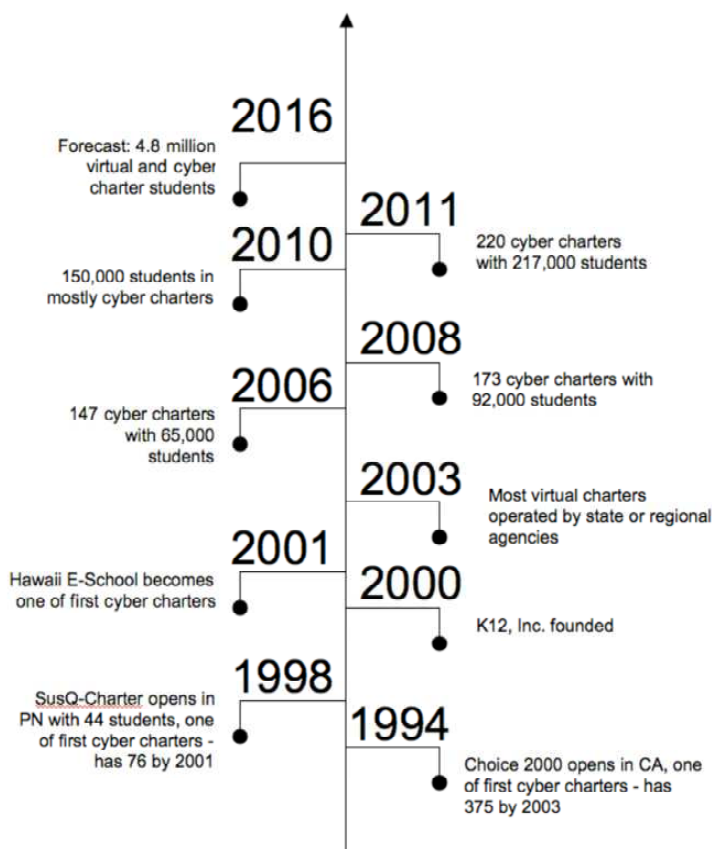

Figure 1. Growth and evolution of U.S. online charter schools

Operations

Online charter schools "come in many different flavors" (Ahn, 2011, p. 11). Some employ a hybrid model, in which students take their coursework online and are required to come to a resource or learning center at various times during the week. Others may enroll students across the entire state, so learning is conducted entirely online. These schools may rely extensively on parents or guardians (often referred to as learning coaches) to deliver instruction with the help of and assessment conducted by trained teachers.

Online charter schools also have unique attributes not typically found in traditional schools, such as flexible scheduling and the opportunity for students to learn at their own pace. These attributes are often what draw parents to enroll their students in online charters (Klein, 2006). Parents also enroll their students in these alternative schools because they offer increased learning opportunities, serve rural and otherwise isolated areas, offer flexible schedules to accommodate students who may be young professional actors or athletes, and they are convenient for students whose health may prevent them from traveling to and from a campus (Ahn, 2011; Erb, 2004). Other online charter students may come from at-risk backgrounds, while some may have special needs (Darrow, 2010; Hubbard & Mitchell, 2011a). Online charter schools also claim to facilitate learning at a pace suitable for the student, and offer the opportunity to catch up or get ahead academically because learning can be tailored to suit each child's individual needs. Additionally, some parents choose online charter schools because they provide access to customizable education for free and because they align to parental values (Carr-Chellman, 2009; Erb, 2004).

Online charter schools share many commonalities with home schoolers. For instance, Bauman's (2001) extensive study of 29,000 U.S. home schooled children found that many home schoolers were linked to online learning and online charter schools, thus supporting Carr-Chellman's (2009) claim that there is an "inextricable link between home schooling and cyber charters" (p. 4). This could be in part because technology had facilitated learning at home (Andrade, 2008). It could also be perhaps because many home schooling students enroll in online charter schools to take advantage of the benefits provided by these public schools, such as the flexible schedules, quality of curriculum and freedom to learn in various locations (Huerta et al., 2006). However, unlike some home schooling, online charter schools are governed by state laws. Depending on the requirements of the state in which they operate, online charter schools may employ certified teachers and use standards-driven curriculum, and typically, students must take standardized tests (Revenaugh, 2005). Additionally, the parent is not in complete control of the curriculum as in a purely home school environment. For the parent or guardian whose child is enrolled in an online charter school, there is an added layer of accountability to the chartering agency that may not necessarily exist in purely home school environments.

There is rarely a typical day at an online charter school (Revenaugh, 2005). Flexibility is one of the unique features of these charters—where one student may prefer getting all his work done first thing in the morning, another may prefer working late into the night. Still, others may choose to work on math on Mondays and English on Tuesdays. The daily schedule is usually shaped by the parent and student, with input and guidance from the student's assigned teacher. In Klein's (2006) study on online charter schools she discovered that parents often had a difficult time describing a typical day. These parents reported that each day was shaped by the needs of the child and the tasks at hand.

While these schools are typically governed through some form of state regulation, many of them are directly managed by private organizations. Glass and Welner (2011) reported that over 75% of K-12 students enrolled in online charter schools that were managed by EMOs. These EMOs come in two forms: for-profit and not-for profit. There were 33 states that allowed for-profit EMOs to operate schools in 2010-11 (Miron, Urschel, Yat-Auguilar, & Dailey, 2012). For example, the Open High School of Utah is an example of an online charter school that is not managed by an EMO (Barbour, Tonks, Weston, & Wiley, 2013). This school is chartered by the state of Utah and was established as part of a statewide policy initiative to allow broader access to educational options. It is unique in that it is relies on the use of open educational resources (OERs).

EMOs often employ administrative staff to manage the day-to-day operations of the schools they have been contracted to serve. They may also directly hire teachers to serve students. However, there are some cases where the school district contracting with the EMO will hire and manage certified public school teachers to serve students. Often, these EMOs receive between 5% to 40% less per student to manage the day-to-day operations compared to what their traditional counterparts receive from state funding agencies (Glass & Welner, 2011; Schaffhauser, 2012).

Online charter schools are unique, not only in form and function, but also in the elements that comprise the whole school. The technology, curriculum, students, teachers, and parents/guardians are each distinctive elements that function together in ways that are uncommon to their traditional school counterparts. In these schools, teachers use technology synchronously and asynchronously to deliver instruction to students and to communicate with them. For example, they may use an online presentation application, such as *BlackBoard Collaborate*[TM], to conduct class or to engage in a collaborative project (Cavanaugh, 2008). They may work with a student individually using a chatroom,

or some other online interaction tool. Often, a third-party vendor online learning system (OLS) is used to monitor their students and to access content and instructional materials.

Some online charter schools offer a variety of curriculum choices, while others ascribe to just a single package (McCluskey, 2002). In the latter situation, a third-party commercial vendor typically provides curriculum and management (Huerta & Gonzáles, 2004), and usually outfits each student with curriculum-related materials (e.g., textbooks and manipulatives), a computer, and various hardware (e.g., a printer, headset, and microphone). Some schools may even reimburse families for a portion of their Internet subscriptions.

In most online charter schools, the student is assigned to a teacher, who may be certified, and who is often responsible for reporting student academic achievement, providing supplemental instruction, conducting assessments, and evaluating the student's work and progress. Parents and/or guardians generally act as the learning coaches of their online charter students. As needed, they provide their students with instructional support, and the encourage them to make progress and help students to manage their learning time (Hasler-Waters, 2012). Some online charter schools provide a physical location where students can receive classroom-based instruction and engage in traditional school-like social activities, such as working in groups, doing community service projects, attending field trips and engaging in social events like holiday celebrations (Bogden, 2003; McCluskey, 2002). Others require that students attend at least one course or a full day at the school's physical campus, while some may require more or less face-to-face time (Van Dusen, 2009). Further, some states allow online charter school students to participate in extra curricular activities at a regular brick-and-mortar school.

Emerging concerns

In the early 2000s, a handful of reports outlined concerns with the way these online charter schools were being managed and the lack of accountability required of these fledging schools. There was relatively little evidence that proved that these schools could achieve academic ratings similar to their traditional counterparts. This same apprehension still exists more than ten years after the emergence of these online charter schools. Results from empirical studies, state audits, investigative reports, and dissertations have presented concerning evidence that these schools are still troubled by (a) lack of oversight/accountability, (b) improper use of public funds, (c) failing grades, and (d) drop out rates that are higher than their traditional school counterparts.

Accountability

One of the key differences between online charter schools and brick-and-mortar charters is that online charter schools can serve students from across school district borders. This freedom from the "shackles of geographic boundaries" (Bogden, 2003, p. 33) challenges the governance of these schools because it makes accountability and funding problematic (Ahn, 2011; Barth, Hull, & St. Andrie, 2012; Carr-Chellman & Marsh, 2009; Schaffhauser, 2012; Vergari, 2009). There is concern over who is ultimately in charge of managing these schools, and whether or not public agencies have the ability to monitor the teaching and learning that takes place in a private residence (Barth et al., 2012; Huerta et al., 2006). Furthermore, there are very few agencies to help evaluate or provide reliable accreditation services for these relatively new forms of schooling (Glass & Welner, 2011).

Issues concerning the lack of oversight of and accountability for these schools have amplified as a result of some recent investigations and audits. In 2011, Colorado was cited as failing to provide proper oversight of, or sanctioning to, poor performing schools (Hubbard & Mitchell, 2011b); this was particularly noteworthy as the same criticisms were also found five year earlier (Office of the State Auditor, 2006). Arizona had yet to put into place independent oversight and measures requiring accurate reporting of student enrollment, completion rates and services for special needs students (Ryman & Kossan, 2011). Similarly, Minnesota was reported as not focusing adequate attention on student performance in these schools before re-approving certain poor performing online charter schools (Office of the Legislative Auditor, 2011). One investigative blogger was even able to uncover evidence that one online charter school had outsourced its grading to an overseas company in India, in clear violation of the state's laws regarding personally identifiable information of students and fingerprinting of those involved in K-12 education (Safier, 2008).

The problems associated with accountability were coalesced into a report produced by the Center for Public Education (CPE), an initiative of the National School Boards Association. CPE researchers found that the lack of financial accountability stems from the fact that many of these schools do not have to release their budgets for public review as their traditional school counterparts must. Researchers called for "greater oversight and accountability to ensure virtual charter schools receive funding for those students they are actually educating" (Barth et al., 2012, p. 14).

Some state governments have addressed these concerns. For example, Wisconsin has put into place a well-defined authorization for online charter school operation and the creation of accountability measures (Stuiber, Strom-Hiorns, Kleidon, LaTarte, & Martin, 2010). Among its details, the legislation requires that for open enrollment to occur, the online charter school must be located within the school district that it had contracted with and that any person who teaches in a public school must be licensed by the state. Some statutory frameworks have been proposed to address systemic integrity by tying funding to performance and calling for more transparency (Bathon, 2011).

Funding

There has been extensive debate concerning how to fund online charter schools. Some question whether funding should follow the student or be distributed based on proportion of a district's population. Others question whether start-up and maintenance costs are equal to the funding required for traditional schools (Barbour & Reeves, 2009; Carr-Chellman & Marsh, 2009). Some have campaigned against online charter schools claiming that their geographic freedom siphons funds from local schools and takes monies away from in-state departments of education by out-sourcing curriculum and management to out-of-state private vendors (Wisconsin Parents Association, 2002). At the center of the debate is the question whether these schools are more cost effective and should therefore receive less state funding to operate.

Some of the earliest cases concerning funding of online charter schools took place in Pennsylvania and California, and later in Arizona and Colorado. In Pennsylvania, funding for one online charter school, which served students from across the state and relied on school districts where its students resided to forward tuition payments, led to a fiscal crisis because schools refused to forward tuition to the online charter school. The issue was finally resolved when the state's legislature passed *Public School Act 88*, which explicitly defined online charter schools as public schools and which required that they be granted charters only by the Pennsylvania Department of Education (2006). It also codified funding, stating that it was the responsibility of the student's resident school district to make payments to an online charter school in which the student chose to enroll (Huerta & Gonzáles, 2004).

In California, outrage ensued by those who alleged that private companies, which received public funds to manage online charters, reaped the benefits of receiving full funding for operating public schools with little facilities and smaller staff. This ultimately resulted in a drastic reduction of state funds allocated to these schools compared to their traditional school counterparts (Huerta et al., 2006). In a similar turn of events, the State of Arizona had problems tracking costs and allocating proper funding to its online charter schools because of problems associated with its electronic data recording (Ryman & Kossan, 2011). Additionally, a recent investigative report concerning Colorado's online charter schools found that traditional schools were losing out on millions of dollars in student funding because they had to absorb those students who dropped out of the online schools, yet the funds to educate those students stayed with the online schools and the for-profit companies managing the students (Hubbard & Mitchell, 2011a).

Some have tried to determine whether these schools cost less to operate than traditional, brick-and-mortar schools and whether, as a result, they should be funded less than brick-and-mortar schools. The limited research that is available seems to suggest that these schools do operate more cost effectively, yet the answer is not quite as simple as the results imply. This uncertainty is primarily because data presented by these schools is selective (Barbour, 2013). Miron and Urschel (2012) asserted that in order to truly understand the actual cost associated with online charter schools, the corporations that operate them need to be "more transparent with their financial data than they have been heretofore" (p. 7).

Effectiveness

An ongoing question concerning online charter schooling is whether students in these environments achieve academically as well as their traditional school counterparts. A U.S. Department of Education report is often cited by proponents of online charter schools because it found students enrolled in courses that blended face-to-face instruction with online learning fared as well as their traditional school counterparts (Means, Toyama, Murphy, Bakia, & Jones, 2009). However, the authors of the study warned that the findings were focused solely on supplement virtual schooling and reflected results mainly analyzed from environments involving higher education rather than elementary or secondary schooling and thus did not fully represent outcomes related to full time online schooling for younger students.

Glass and Welner, (2011) produced a policy brief in part to analyze the political and economic forces shaping the growth and use of online learning in the U.S. and also to address concerns over the lack of empirical evidence demonstrating the academic effectiveness of these schools. Their report found that there was a severe lack of evidence demonstrating the effectiveness of student learning and achievement in full-time online schools. They warned that without such key information states should not look to expand full-time online charter schooling. A more recent report conducted by the Center for Public Education corroborated Glass and Welner's (2011) concerns by recommending that since there was such a substantial lack of evidence supporting student achievement in supplemental and full-time online schools that legislatures needed to consider this before they expand online learning opportunities to K-12 students (Barth et al., 2012).

In a study comparing the achievement of students in non-classroom-based charter schools with their traditional school counterparts, Buddin and Zimmer (2005) discovered that non-classroom based charter schools in California had much lower test scores in reading and math than did their traditional school counterparts. In a subsequent study, Zimmer et al. (2009) expanded the previous study of charter schools to include seven additional states. While the study was on charter schools in general, one important finding concerned online charter schools was reported. When the authors considered achievement gains for students enrolling in Ohio's charter schools, which entered students at Kindergarten, there was a significant and substantial negative gain. They attributed this to online charter schools because they constituted a large part of the enrollment of Kindergarten-entry charter schools in Ohio.

A more recent study conducted by Stanford University's Center for Research on Educational Outcomes (CREDO) examined charter schools in Pennsylvania and discovered that all eight of the online charter schools included in the study performed significantly worse than their traditional school counterparts (CREDO, 2011). Further, four recent audits concerning online charter student achievement scores on state exams in Colorado, Wisconsin, Minnesota, and Arizona also showed less than favorable results. For example, a Colorado report that investigated reading scores of 2,729 full-time online charter students discovered that their scores dropped 6% over a one-year period (Hubbard & Mitchell, 2011b). Even more concerning, the report also found that students who switched from traditional schools to online charter schools saw their reading proficiency drop from 58% when they last attended the traditional school to 51% when they attended the online charter school.

Results from a State of Minnesota audit concerning K-12 online charter school students found that they scored comparable to their traditional school counterparts in reading, but lower in math (Office of the Legislative Auditor, 2011). The audit also found that between 2008-09 and 2009-10 full-time online students in fourth to eighth grade made only about half as much progress on the state's standardized math tests as their traditional school counterparts. The students did, however, keep pace with them on reading tests. Similarly, auditors in Wisconsin discovered that the math scores of online school students were far lower than their traditional school counterparts but that their reading scores were comparable (Stuiber et al., 2010). A report by *Arizona Republic*, a daily newspaper serving Arizona, found problems similar to those encountered in Colorado, Wisconsin and Minnesota. Its online charter students were failing to perform at the same levels as their traditional school counterparts (Ryman & Kossan, 2011). The authors lamented that some of the larger state online school providers did not require in-person proctoring of final exams and reported that an audit in 2007 by the State of Arizona's Auditor General's Office found that the state had no way to verify the number of hours students and parents reported doing course work and that it also could not determine whether the online courses improved student learning.

In the last quarter of 2011 a number of investigative articles in the popular press corroborated the findings of the state audits and questioned the quality of education in online charter schools. In particular, two investigative articles

produced by reputable, national newspapers showed that low student achievement scores were found in a number of online charter schools. A *New York Times* article contained findings concerning one online charter school, which enrolled students from across the state of Pennsylvania. The reporters found that 60% of its students were behind a grade in math and 50% in reading (Saul, 2011). Similarly, *The Washington Post* also conducted an investigation into the academic achievement of students who attended online charter schools in Ohio and Colorado. The reporters found that students in some of the schools had low on-time graduation rates compared to statewide statistics (Layton & Brown, 2011). One Colorado online charter school with enrollment of over 5,000 in 2010, faced an on-time graduation rate of just 12 percent versus the state's traditional school students who achieved an on-time graduation rate of 72%. Likewise, several online charter schools in Ohio, with enrollments of over 9,000 students during the same period had a 30% on-time graduation rate compared to the statewide average of 78%.

Dropout rates

Compounding the issues concerning poor achievement are findings pointing to higher drop out rates among online charter high school students compared to traditional school. A Minnesota audit found that between 2006-07 and 2009-10 the drop out rates for its full-time online students increased (Office of the Legislative Auditor, 2011). While 18% of twelfth grade students dropped out during the 2006-07 school year, that percentage had grown to 25% of seniors during the 2009-10 school year. Moreover, the audit found that the traditional school seniors had only a 3% drop out rate at the end of the same period. Additionally, in Colorado, investigative reporters discovered that half of the state's online students left their online schools within a year. These reporters discovered that when these students returned to the traditional school they were further behind academically then when they started (Barth et al., 2012; Hubbard & Mitchell, 2011a).

Similarly, Darrow (2010) found that California's online charter students dropped out at higher rates compared to their traditional school counterparts. He discovered that over a two-year period, 2007-08 and 2008-09 the dropout percentage for students in online charter schools was between 22% and 59%, while the dropout percentage for students in the traditional schools ranged from 0.5% to 4%. Darrow posited, that while more data was needed to confirm his hypothesis, he believed that the high drop out rate could have been due in part because the online charter schools served a disproportionate number of at-risk students compared to the traditional schools. However, adding to the uncertainly concerning student characteristics and high drop out rates, Miron and Urshcel (2012) contended that online charter actually enroll a lower proportion of at-risk students that brick-and-mortar schools (Miron & Urschel, 2012). Clearly, more research must be conducted to better understand how to keep online charter students in school.

Conclusions

In order to better understand the role of online charter schools in a complex educational environment, this article reviewed the existing literature. In this section, the authors offer concluding statements summarizing the literature, describe three significant gaps found within the literature, and recommend future research. The authors provided a definition to clarify that these unique schools are publicly funded, governed by state laws, and rely on online learning for a significant portion of the delivery model. Their operations typically involve some mix of education management organizations, public school teachers and the parents/guardians of students. These schools expanded quickly in the early part of the decade. However, some believe their growth is slowing. The authors contend that emerging concerns (accountability, funding, effectiveness and dropout rates) suggest that there is great need to improve the quality of education and the effectiveness of operations in online charters.

The authors found three gaps within existing research. One of the more obvious problems is that most of the studies cover a relatively short period of time. The findings may in fact represent anomalies that may differ under longitudinal studies. Additionally, opposing views over the nature and composition of online charter school students suggest there are also deeper issues at play. Therefore, there is a need to learn why these students enroll in online charter schools in the first place. Beyond the student characteristics or demographic profiles, there could be environmental, social, and ecological factors that also need to be better understood.

Second, relatively few studies have covered familial issues and parental involvement in these schools. It has been suggested that some of these schools rely heavily on parents to support their children's educational activities (i.e., as

learning coaches) and that these parents may not be fully prepared to take on such an instructional role (Hasler-Waters, 2012; Litke, 1998; Russell, 2004; Ryman & Kossan, 2011). Moreover, most parents are likely not certified teachers and may not be qualified to provide the type of educational support these students need (Ahn, 2011; Huerta & Gonzáles, 2004; McCluskey, 2002; Stuiber et al., 2010). Additional research is needed on the type of instructional support online charter school students receive from their parents and guardians, as well as the teaching strategies employed in these schools as they relate to academic outcomes.

Third, much of the research conducted has only considered quantitative data on issues surrounding student performance and retention. Data of this nature are often not able to capture the complex implications associated with online charter schooling, such as the pedagogy, curriculum, or environmental and social factors that might influence students and their learning experiences. These more complex issues may be better understood through qualitative research techniques.

Future studies should also tend to the issue of fit, and whether or not certain students fare better in these alternative learning environments than others. Finally, relatively little research has captured the voices of students in these fully online charter schools. Having a greater understanding of student needs from their perspective may provide useful insight when building student support systems. In summary, more research involving the range of participants in these schools will lead to better implementation of online charter schools.

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