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Virtual Schools in the U.S. 2017

Section I
Full-Time Virtual and Blended Schools: Enrollment, Student Characteristics, and Performance

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Executive Summary

This report provides a detailed overview and inventory of full-time virtual schools and blended learning, or hybrid, schools. Full-time virtual schools deliver all curriculum and instruction via the Internet and electronic communication, usually asynchronously with students at home and teachers at a remote location. Blended schools combine traditional face-to-face instruction in classrooms and virtual instruction.

Although increasing numbers of parents and students are choosing virtual or blended schools, little is known about their inner workings. Evidence related to inputs and outcomes indicates

that students in these schools differ from students in traditional public schools. And, school performance measures for both virtual and blended schools indicate that they are not as successful as traditional public schools.

Nevertheless, the evidence suggests that enrollment growth has continued. Large virtual schools operated by for-profit education management organizations (EMOs) have continued to dominate this sector and are increasing their market share. While more districts are opening their own virtual schools, district-run schools have typically been small, with limited enrollment.

This report provides a census of full-time virtual and blended schools. It also includes student demographics, state-specific school performance ratings, and—where possible—a comparison of virtual school performance with established norms.

Current scope of full-time virtual schools and blended learning schools:

- In 2015-16, 528 full-time virtual schools enrolled 278,511 students, and 140 blended schools enrolled 36,605 students.
- Thirty-four states had full-time virtual schools and 21 states had blended schools. Four states had blended but no full-time virtual schools (Connecticut, Hawaii, New Jersey and Rhode Island).
- Although private education management organizations (EMOs) operated only 29.4% of the full-time virtual schools, those schools accounted for 69.5% of all students enrolled in virtual schools.
- Virtual schools operated by for-profit EMOs enrolled an average 1,309 students. In contrast, those operated by nonprofit EMOs enrolled an average 248 students, and independent virtual schools (no EMO involved) enrolled an average 256 students.
- Private EMOs played less of a role in the blended sector. Of blended schools, 72.9% were independent, while 17.1% were operated by nonprofit EMOs and 10% were operated by for-profit EMOs. Blended schools operated by nonprofit EMOs, primarily Rocketship Education, were most numerous and substantially larger than others in the sector. Of those blended schools operated by EMOs, Rocketship Education remained the largest operator of blended schools, with 12 schools that enrolled close to 6,000 students.
- Blended schools enrolled an average of 271 students, reasonably near the averages in virtual schools that are either independent (256) or managed by nonprofit EMOs (248), but far fewer than the average of 1,309 in schools managed by for-profit EMOs.
- Only half of all virtual schools in the inventory were charter schools, but together they accounted for 82.2% of enrollment. While districts have been increasingly creating their own virtual schools, those tended to enroll far fewer students.
- There were more charter blended schools (53.6%) than district blended schools (46.4%), and they had substantially larger enrollments (an average of 339 students) than district blended schools (an average of 193 students).

- Relative to national public school enrollment, virtual schools had substantially fewer minority students and fewer low-income students. Blended schools overall had only a slightly lower proportion of low-income students, and a substantially higher average of Hispanic students. However, in the pool of blended schools, those operated by nonprofit EMOs enrolled a substantially higher proportion of low-income students than their counterparts; it may be that the nonprofits are attempting to provide better learning opportunities to economically disadvantaged students.
- The proportion of special education students in virtual and blended schools was close to the national average. While virtual schools enrolled English Language Learners (ELLs) at a much lower rate than the national average, blended schools enrolled a percentage close to the national average.
- While the population in the nation's public schools was nearly evenly split between girls and boys, virtual and blended schools enrolled more girls—53.4% of virtual school enrollment and 51.8% of blended school enrollment.
- While the average student-teacher ratio in the nation's public schools was 16 students per teacher[1], virtual schools reported more than twice as many students per teacher: 34. The average in blended schools was only very slightly lower: 33. The highest student-teacher ratio was in virtual schools operated by for-profit EMOs (44), while the lowest was in those operated by virtual nonprofit EMOs (19.5).

School Performance Data:

- Many states have frozen their accountability systems as they make adjustments to new requirements under the Every Student Succeeds Act (ESSA) and take advantage of flexibility waivers and extensions granted under the Elementary and Secondary Education Act (ESEA). Therefore, overall school performance ratings were available for only 18 of the 38 states with virtual and/or blended schools.
- Virtual schools continued to underperform academically, including in comparison to blended schools. Overall, 37.4 percent of full-time virtual schools received acceptable performance ratings, compared with 72.7% acceptable ratings for blended schools. A much higher percentage of blended schools received acceptable ratings in the 2015-16 school year as compared to the prior year, thus reversing their underwhelming academic results: last year's inventory found that blended schools were not doing much better than virtual schools.
- Among virtual schools, nonprofits (33.3% acceptable) and independents (43.6% acceptable) outperformed for-profit EMOs (25.7% acceptable). District-operated virtual schools (55.9% acceptable) significantly outperformed their charter school counterparts (23.8% acceptable). Without clear explanation, 40 virtual schools were not rated or had no rating reported by their State Education Agency.
- Blended schools outperformed virtual schools across all categories: for-profit, independent, nonprofit, charter, and district. Nonprofit blended schools (100% acceptable) emerged as the top performer among blended schools.
- On-time graduation rate data were available for 129 full-time virtual schools and 34 blended schools. The graduation rates of 43.4% in virtual schools and 43.1% in

blended schools fell far short of the national average of 82.3%.

As detailed below, the findings outlined in this report align with reports from state auditors and new national studies by other organizations.

Recommendations

Given the rapid growth of virtual schools and blended schools, the populations they serve, and the relatively poor performance of virtual schools on widely used accountability measures, it is recommended that:

- Policymakers slow or stop the growth in the number of virtual schools and the size of their enrollments until the reasons for their relatively poor performance have been identified and addressed. They should prioritize understanding why virtual schools perform poorly under a college- and career-ready accountability system and how their performance can be improved prior to expansion.
- Policymakers should carefully and continuously monitor the performance of full-time blended schools since the data offer some potentially positive signs that they can maintain performance levels even with very large student-to-teacher ratios. This is not surprising despite their earlier poor performance because it seems plausible that small school sizes and in-person contact with adults might be a good fit for typical public school populations.
- Authorities charged with oversight should specify and enforce sanctions for virtual and blended schools that fail to perform adequately.
- Policymakers should specify a maximum student-teacher ratio for virtual and blended schools to ensure all students receive adequate support and attention from teachers.
- Policymakers should regulate school and class sizes. As the evidence indicates, the virtual schools and blended learning schools have large numbers of students for each teacher. Given the overwhelmingly poor performance evidence, it is surprising that these schools are not investing more on instruction. The likely explanation for this is two-fold: (1) profit motives of the EMOs, and (2) the operators of these schools have learned that they can get away with it year after year, with only the National Collegiate Athletic Association (NCAA)[2] reacting strongly to the negative performance outcomes.
- State agencies ensure that virtual schools and blended schools fully report data related to the population of students they serve and the teachers they employ. Similarly, state agencies should make every effort to assign all virtual schools an overall school performance rating and clearly explain why a rating has not been assigned to a specific school when that is the case. In 2015-16, a total of 15.6% of virtual schools and 10.8% of blended schools were not rated by states that compiled overall school performance ratings. This lack of data for virtual and blended schools furthers their ability to operate without accountability.
- State agencies should continue the work they've started in revising accountability systems and commit to publicly reporting results starting in 2017-18 as mandated

earlier, regardless of changes within the Department of Education.

- State and federal policymakers should promote efforts to design new outcome measures appropriate to the unique characteristics of full-time virtual schools and blended schools. Passage of the Every Student Succeeds Act (ESSA) represents an opportunity for those states with a growing virtual and blended school sector to improve upon their accountability systems for reporting data on school performance measures.

- Policymakers and other stakeholders should support more research to identify which policy options—especially those impacting funding and accountability mechanisms—are most likely to promote successful virtual schools and blended schools. More research is also needed to increase understanding of the inner workings of virtual and blended schools, including such factors as the curriculum and the nature of student-teacher interactions. Such research should help identify and remedy features that are negatively affecting student learning. (Since this report recommended in 2013 that federal and state education agencies begin coding virtual schools in their datasets, NCES has initiated such coding. This will help facilitate further research on this relatively new and rapidly growing model.)

- Policymakers and other stakeholders should also support more research on exactly how special education is being provided in virtual and blended schools. There are many key questions that warrant attention such as: What types of students with disabilities are being enrolled? Are these students receiving any additional services? How are they being served and how are the additional designated funds being used to support them? Indicators that raise concern include the rapid increase of students with IEPs in virtual schools and the extremely large student-to-teacher ratios. For example, a 2012 study of K12 Inc. found a higher proportion of students with disabilities relative to brick-and-mortar charter schools, while that organization was spending a third less per pupil for special education teacher salaries—raising questions about the amount and type of services being provided.

Section I
Full-Time Virtual and Blended Schools: Enrollment, Student Characteristics, and Performance

For the past five years, NEPC has been active in documenting and researching virtual schooling at the primary and secondary levels.[3] Reports have examined who is enrolling in virtual charter and district schools and how those schools are performing; in addition, they have focused on a wide range of policy issues specific to virtual schools. While the earliest NEPC reports included only full-time virtual schools, last year's report began including full-time blended learning schools as well.

The last two years have shown strong enrollment growth in both full-time virtual schools and full-time blended learning schools—despite the fact that evidence relative to their outcomes is universally negative. As researchers and as educators, we remain optimistic that these new models can work, and we believe they may already be working as school or district programs rather than as stand-alone schools. We also recognize that there are many teachers across various school types who are innovating and implementing blended-learning models likely to have far better outcomes than the results from their stand-alone counterparts.

The last year has seen large changes in this sector, with some full-time virtual schools closing and a larger number opening. Although the evidence base is becoming stronger and more convincingly negative for virtual schools, and although evidence is mixed for blended learning schools, an increasing number of parents and students are opting for full or part-time online options. And, philanthropic groups have provided support to the key operator of blended schools, implying that evidence exists to support expansion. However, evidence detailed in this report suggests that while blended schools earn better state ratings than virtual schools, their graduation rates are similar to the dismal graduation rates in virtual schools.

This report contains detailed descriptions of full-time virtual and full-time blended schools operating during the 2015-16 school year. The annual inventory serves as a key research-based effort to track developments nationwide—which to date have included steady expansion. It helps identify which students these schools are serving, how well the schools are performing, and how quickly their numbers are expanding or contracting. Research questions this report seeks to answer include:

- How many full-time virtual and blended schools operate in the U.S.? How many students do they enroll?
- What are the key characteristics of these schools and who operates them?
- What are the demographic characteristics of students enrolled? How do demographic data for students enrolled in virtual and blended schools differ from those enrolled in brick-and-mortar schools?
- How do virtual and blended schools perform in terms of such school performance measures as state performance ratings and graduation rates?

Student demographics reported here include grade level, ethnicity, gender, socioeconomic status, special education status, and English language learner status. Data on school performance includes a comparison of aggregate performance ratings and national norms. We also include data on staffing, specifically on student-teacher ratios.

This report builds on earlier reports; we have updated earlier inventories with available data for the 2015-16 academic year. In addition, we have provided details on specific schools and states in Appendices A, B, C, and D which can be downloaded from the NEPC website: http://nepc.colorado.edu/publication/virtual-schools-annual-2017

Data Sources, Selection Criteria and Aggregate Calculations

The findings presented in this report are based on publicly available data, collected, audited, and warehoused by public authorities. Data from the National Center for Education Statistics (NCES) was particularly helpful relative to key data on enrollment, student demographics and staffing. Data from state education agencies and from individual school websites provided supplemental data not available from NCES.

The scope of this inventory is limited to full-time, public elementary and secondary virtual and blended schools in the U.S. These include virtual and blended schools operated by for-profit and nonprofit Education Management Organizations (EMOs) as well as virtual schools operated by states or districts. Private virtual or blended schools (funded in whole or in part by charging tuition and fees, rather than relying on a public funding program using tax dollars) are excluded. Also excluded are schools offering a combination of programs including traditional face-to-face programs as well as virtual or blended options, unless it was possible to separate data for the full-time virtual or blended school components.

Schools were identified by the unique school ID code assigned by the NCES or, for relatively new schools, by unique building or school ID codes assigned by state agencies. These criteria helped identify and exclude smaller district programs and schools not intended to be full-time, but simply to offer some virtual learning experience for a subset of students.[4] All schools included had evidence of enrollment in one of the past two years, although schools enrolling fewer than 10 students were excluded.[5] Such restrictions allow for more confidence in attributing various outcomes to specific types of schools.

Our criteria excluded scores of some virtual and blended schools or programs. For 2015-16, close to 150 schools were excluded because no enrollment data were available during the past three years, either because the enrollment was less than 25 students in 2015-16, or because they were “programs” based in traditional schools and data could not be disaggregated. A total of 67 new full-time virtual schools were added to the inventory, while 13 schools that had been closed were removed from our lists. A total of 528 virtual schools and 140 blended learning schools met criteria and are included in this inventory.

The primary sources for total enrollment and school performance data were the Common Core of Data from NCES, state-level datasets, and school report cards for the 2015-16 school year. Data for grade level enrollment, race-ethnicity and gender were obtained from NCES and represent the 2014-15 school year, the most recent data available.

Aggregated data reflect weighted averages based on enrollment. That is, averages have been calculated so that the influence of any given school on the aggregated average is proportional to its enrollment. Comparisons were made to norms for all public schools in the United States.

Limitations

There are several general limitations that readers should keep in mind. Note that most of these limitations are experienced by other researchers in this area, although they are not always highlighted in reports.

Incomplete demographic, class size, and performance data. The tables in the appendices have several gaps that reflect missing data. Some states combine virtual school data with local district data in ways that make disaggregation impossible. For example, while data on student ethnic background and on free and reduced-price lunch status is relatively complete, data reported at the district level (including, for example, special education enrollment) is much less available. This was particularly problematic in states where charter schools are not considered Local Education Authorities or districts.[6]

Comparison groups. National aggregate results for all public schools provided the base for several comparisons in this report, which profiles 38 states having virtual and/or blended options. While comparisons of two inherently different forms of schooling, each representing different geographic datasets, have some obvious weaknesses, national aggregate data is what state and federal agencies typically use in their reports and comparisons. Following the agencies' lead is intended to allow reasonable comparison of this report with others. An additional consideration is that, because the 38 states represented are among the largest and most densely populated, the national comparison is informative, if not perfect. It is perhaps also worth noting that the national data include data for full-time virtual and blended schools, although it constitutes a relatively small subset.

Instability in virtual and blended schools. Full-time virtual and blended schools are rapidly evolving; currently, the number of such schools, their demographic composition, and their performance data could vary from the 2014-15 demographic data and the 2015-16 performance data presented here (the most recent available for each category). When the fluidity of the terrain is layered onto the scope of this attempt to compose a national portrait, some errors of inclusion and exclusion seem likely. Documented corrections to the data in the appendices are welcome and can be submitted to the authors through the National Education Policy Center.

Growth and Current Scope of Full-Time Virtual and Blended Schools

An array of education services is delivered online. On one end of the continuum, individual courses are delivered to students who are otherwise enrolled in brick-and-mortar schools. The middle terrain includes a wide array of blended programs and schools serving students with a combination of face-to-face and online activities. On the other end of the continuum, full-time virtual schools provide all instruction online.

For the purposes of this report, blended schools are defined as schools in which all students experience the same blended instruction, although there are variations in how blended schools combine virtual and face-to-face activities. It is important to note that this report tracks only full-time virtual and blended schools, not any of the multiple other online offerings. Full-time virtual and blended schools are especially important to track because they receive full funding for delivering what is supposed to be a full educational experience.

Although these schools still account for a relatively small portion of the overall school choice options in the U.S., they constitute some of the fastest-growing options, overlapping with

both homeschooling and charter schools. Appendix A contains charts that depict the number of virtual and blended schools and students by state. During the 2015-16 school year, there were 34 states with full-time virtual schools and 21 states with full-time blended learning schools. While legislation for full-time virtual schools usually precedes legislation for full-time blended learning schools, there were four states that allow blended schools to operate but still have not allowed the opening of full-time virtual schools: Connecticut, Hawaii, New Jersey, and Rhode Island. A total of 17 states have full-time virtual schools although they still do not have full-time blended learning schools.[7]

Beyond the 38 states with either virtual or blended schools, we recognize that other states also offer virtual education options, but in several other formats including, for example, the offering of individual online classes for some students or supplemental coursework facilitated online.

A total of 528 full-time virtual schools met selection criteria for the 2015-16 school year. Change from the 2014-15 school year reflects the net addition of 129 virtual schools. There were more than a dozen schools that either closed or were excluded because they had no evidence of enrollment. See Appendix B1 for a list of identified schools included in this inventory.[8] These schools enrolled 278,511 students, indicating a net growth of 16,643 students (approximately 6.4% growth since 2014-15).

A total of 140 blended schools met selection criteria in 2015-16. These schools enrolled 36,605 students. The net increase in enrollments in blended schools was 10,490, a very large increase of 40% since the previous school year. See Appendix B2 for a list of identified schools.

Figure 1 illustrates the estimated enrollment growth in full-time virtual schools over the last 15 years.[9] The International Association for K-12 Online Learning (iNACOL) typically reports a much higher estimate than NEPC reports each year; however, those reports offer insufficient detail on their selection criteria and do not list specific schools on which they base enrollment calculations. It is not clear whether programs (rather than full-time schools) are included. Figure 1 also illustrates the proportion of students in full-time virtual schools operated by the two largest for-profit EMOs, K12 Inc. and Connections Academy LLC. K12 Inc. schools accounted for 36.3% of all virtual school enrollments, a small increase from the 34.4% of the prior year. Connections Academy schools accounted for 22.9% of all enrollments. While enrollments in these providers' schools seem to have grown modestly, their combined market share increased—from 57.4% in 2014-15 to 59.5% in 2015-16.

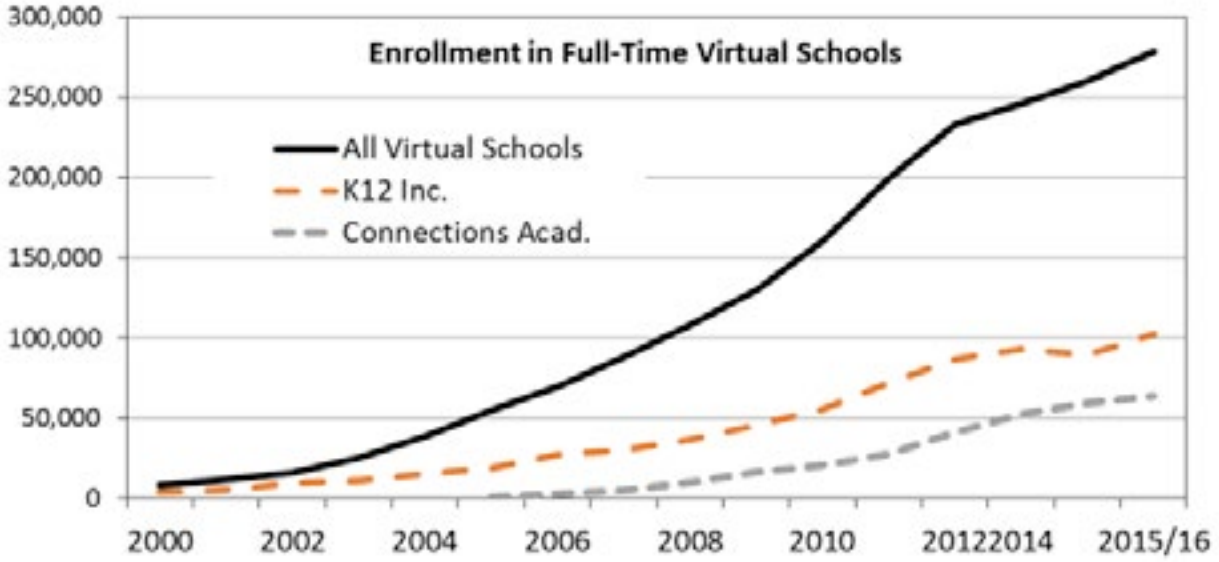


Figure 1. Enrollment Trends in Full-Time Virtual Schools

New district-operated schools continued to add significantly to the pool of full-time virtual schools, although they still tend to be very small (see Table 1). Virtual charters are much larger, accounting for half of all full-time virtual schools and for 82.2% of enrollments. Relative to 2014-15, the charter virtual schools increased their proportion of all virtual schools by 1.5 %, although their enrollments dropped by 0.4%. This indicates that even though the charter virtual schools have average enrollments four times the size of those in district-run schools, the district-run virtual schools are becoming larger: average enrollment per school increased from 194 in 2014-15 to 215 in 2015-16.

Within the virtual school sector, for-profit EMOs play a prominent role. They operate 29.4% of all virtual schools, which together enroll 69.5% of the student population (see Table 2). In 2015-16, for-profit EMOs managed 155 charter and district schools, down from 186 in 2014-15. As noted earlier, K12 Inc. is by far the largest EMO in this sector; in 2015-16, it operated 96 full-time virtual schools enrolling just under 102,000 students. Interestingly, even though K12 Inc. had a net loss of 21 schools since the previous year, it still managed to increase net enrollments by increasing average school size.

Connections Academy, the second largest for-profit operator, operated 31 such schools with just under 64,000 students, an increase of close to 4,000 students between 2014-15 and 2015-16. It is important to note that this report's data on these private operators likely under-represents the role of for-profit EMOs. While this report profiles only virtual schools that EMOs are entirely responsible for, many district-operated virtual schools subcontract to K12, Inc. and Connections Academy to provide online curriculum, learning platforms, and other support services. In contrast, nonprofit counterparts operated only 21 schools, enrolling 4,953 students, a net increase of about 400 students relative to the previous year. Generally, charter virtual schools are much more likely to be operated by an EMO.

Table 1. Distribution of Virtual Schools and Students Across District and Charter Sectors, 2015-16

	Total Number of Schools in 2015-16	Percent of All Schools	Schools with Enrollment Data	Students	Percent of All Enrollment	Average Enrollment Per School
District	264	50.0%	230	49,501	17.8%	215
Charter	264	50.0%	250	229,010	82.2%	916
Total for All Virtual Schools	528	100.0%	480	278,511	100.0%	580

There were an equal number of full-time charter and district virtual schools operating in 2015-16: 264. Although the number of district-operated schools increased more than the number of charters, charters continued to have much larger enrollments. The average enrollment in charters was 916 students per school compared with an average of 215 students in district schools. A possible explanation for this is that district schools are created to serve smaller targeted populations. Another possible explanation is that district virtual schools are seldom operated by for-profit companies motivated to create larger schools to ensure larger profit margins.

EMOs operated 33.4% of all full-time virtual schools, accounting for 71.3% of enrollment. The overall number of EMO-managed schools grew, if modestly. In a few high-profile cases in recent years, EMOs were fired or had their status changed from "school operator" to "vendor." As an operator, the EMO has executive control of the entire school operation, including curriculum and programs as well as hiring of administrators and teachers. When an EMO shifts to a vendor role, typically the school board has essentially fired the EMO but continues to lease its learning platform and curriculum.

Overall, independent virtual schools showed the greatest growth over the last two years. Even so, they are still relatively small and enroll only 28.7% of all virtual school students. On average, an independent virtual school serves 256 students, while for-profit EMO-operated schools average 1,309 students per school. Between 2014-15 and 2015-16, for-profit virtual schools increased enrollment by an average just over 45 students per school. Variance in this sector's enrollments is great, with some for-profit EMOs operating schools with more than 10,000 students and one that enrolls more than 14,000 students in a single school unit.

Table 2. Distribution of Virtual Schools and Students by Operator Status 2015-16

	Total Number of Schools in 2015-16	Percent of All Schools	Schools with Enrollment Data	Students	Percent of All Enrollment	Average Enrollment Per School
Independent	352	66.7%	312	79,900	28.7%	256
Nonprofit EMO	21	4.0%	20	4,953	1.8%	248
For-profit EMO	155	29.4%	148	193,658	69.5%	1,309
K12 Inc.	*96*	*19.2%*	*92*	*101,915*	*36.6%*	*1,108*
Connections Academy	*31*	*6.5%*	*31*	*63,661*	*22.9%*	*2,054*
Total for All Virtual Schools	528	100.0%	480	278,511	100%	580

A number of other for-profit EMOs have begun operating full-time virtual schools, including Mosaica Education Inc. (eight schools), Edison Learning (three schools), Calvert Education Services (five schools), and Cyber Education Center (three schools). Noteworthy expansion has come from some for-profit EMOs that formerly operated only brick-and-mortar schools: Edison Learning Inc., Mosaica Inc., and White Hat Management. Given the relatively lucrative circumstances[10] under which full-time virtual schools can operate, it is likely that still more for-profit EMOs will be expanding their business models to include full-time virtual schools. Among nonprofit EMOs, the largest nonprofit are Learning Matters Educational Group (seven schools), Advanced Academics (two schools), and Roads Education Organization (four schools).

As Figure 2 shows, enrollments in blended schools have also been growing steadily. Three prominent education management organizations continued to dominate this sector. Rocketship Education accounted for 16.4% of enrollment, K12 Inc. for 7.1%, and Nexus Academy for 3.1%. Compared to the previous year, all three of these companies experienced decreased market share due to growth and expansion of independent blended learning schools.

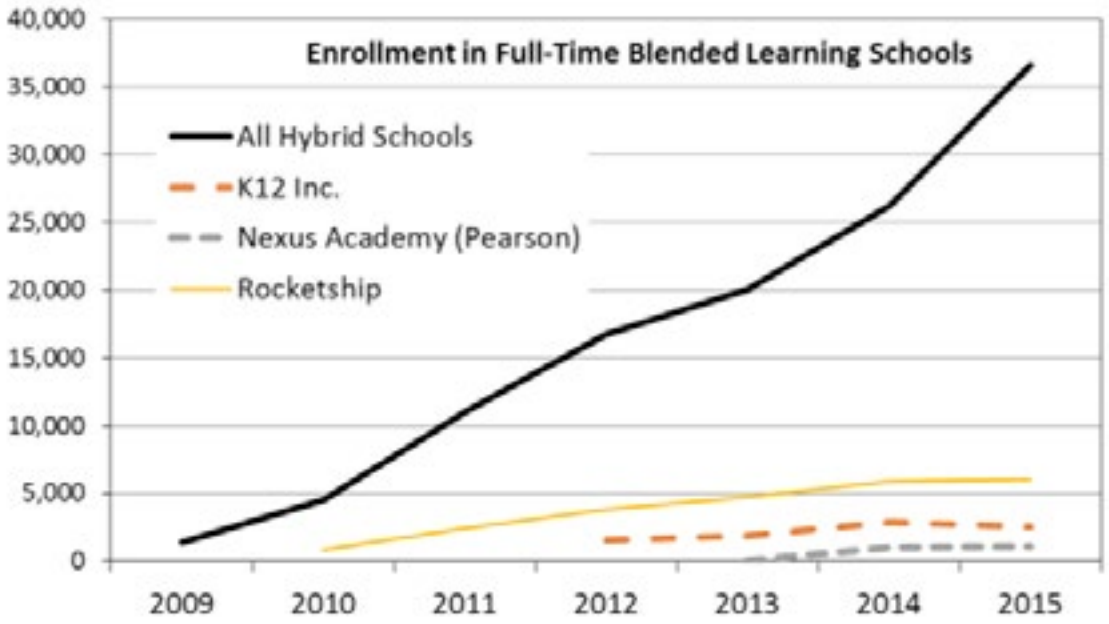


Figure 2. Enrollment Trends in Full-Time Blended Schools

Differing from virtual schools, most growth in the past year in blended learning schools came from new schools not affiliated with an EMO. In 2015-16, 102 blended schools were independent, while 14 were operated by for-profit EMOs and 24 were operated by nonprofit EMOs.

The average size of blended schools decreased from 263 students per school in 2014-15 to 233 students per school in 2015-16. As indicated above, most are independent district-operated schools, and they have smaller enrollments than those managed by private EMOs (see Table 4). For example, while K12 Inc. only had four full-time blended schools in 2015-16, those schools enrolled 2,583 students. K12 Inc. blended schools clearly have much higher enrollment than those run by other operators, such as Nexus Academy (a Pearson company similar to Connections Academy). However, the largest operator of full-time blended schools is Rocketship Education, a private nonprofit EMO based in California that recently expanded to Tennessee and Wisconsin. In 2015-16 Rocketship operated 12 schools enrolling 8,890 students.

The number of both district-operated and charter-operated blended learning schools also increased between 2014-15 and 2015-16, with districts increasing a bit more than charters. Enrollments in the charter blended schools are substantially larger (339 students per school) as compared to the district schools (193 students per school) (see Table 3).

Table 3. Distribution of Blended Schools and Students Across District and Charter Sectors, 2015-16

	Total Number of Schools 2015-16	Percent of All Schools with Enrollment Data	Schools With Enrollment Data	Students	Percent of All Enrollment	Average Enrollment Per School
District	65	46.4%	63	12,170	33.2%	193
Charter	75	53.6%	72	24,435	66.8%	339
Total for All Blended Schools	140	100.0%	135	36,605	100.0%	271

Table 4. Distribution of Blended Schools and Students by Operator Status 2015-16

	Total Number of Schools 2015-16	Percent of All Schools with Enrollment Data	Schools with Enrollment Data	Students	Percent of All Enrollment	Average Enrollment per School
Independent	102	72.9%	100	23,276	63.6%	233
Nonprofit EMO	24	17.1%	22	8,890	24.3%	404
For-profit EMO	14	10.0%	13	4,439	12.1%	341
Total for All Blended Schools	140	100.0%	135	36,605	100%	271

Student Characteristics

The following analysis of student demographics provides context for school performance data comparisons discussed later.

Race-Ethnicity

The proportion of minority students in virtual schools has slowly increased a few percentage points over the past few years. Nevertheless, aggregate data from full-time virtual schools still differs substantively from national averages in terms of student ethnicity. Just over 65% of the students in virtual schools were White-Non-Hispanic, compared with the national mean of 49.8% (see Figure 3). Not surprisingly, then, the proportion of Black and Hispanic students in virtual schools was noticeably lower than the national average. Only 15% of students in virtual schools were Black while the national average was 25.5%; only 12% of students in virtual schools were Hispanic while the national average was 15.5%.[11] The fact that minority and low-income families may have less access to technology may help to explain

underrepresentation of these groups, even though most virtual schools loan their students computers and often pay for internet access. There are other possible explanations for the over representation of White students in these schools, including White flight by urban families or the fact that virtual schools often present the only viable form of school choice in rural areas where minorities are less prevalent.

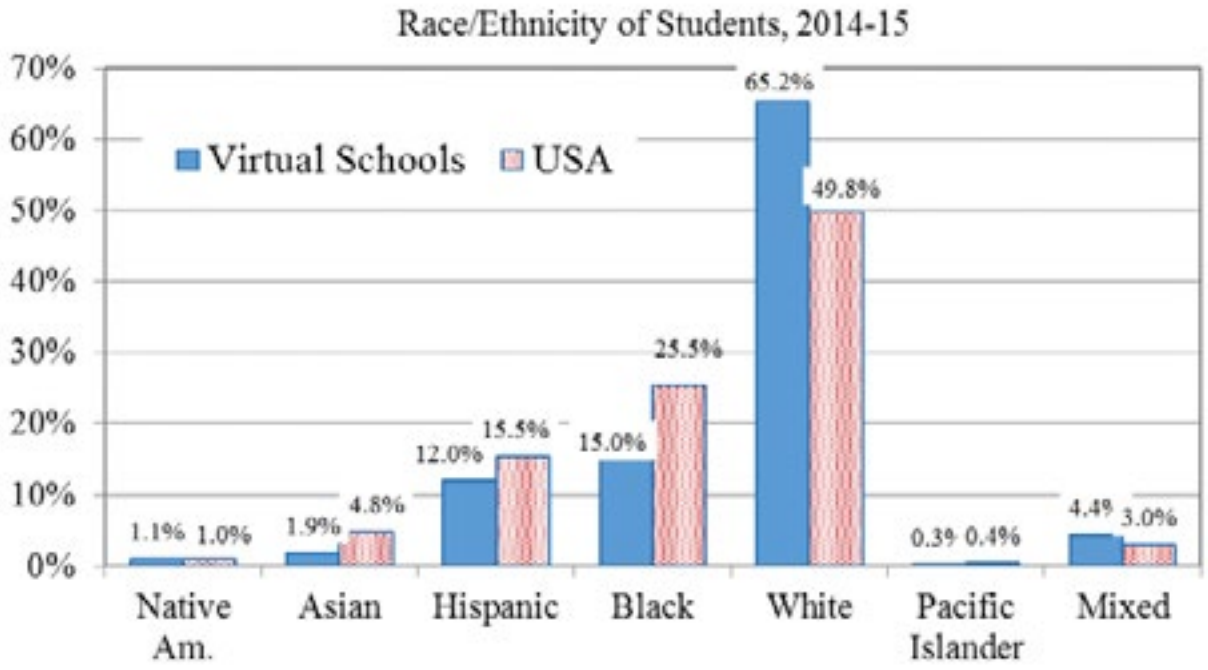


Figure 3. Race/Ethnicity of Students in Virtual Schools Compared with National Averages, 2014-15

Figure 4 displays the demographic composition of students enrolled in blended schools. The population of students in blended schools more closely matches enrollments in public schools. One noteworthy difference is that the enrollments of Hispanic students in blended schools are substantially higher than in public schools. This finding may be explained by the fact that blended learning schools are concentrated in California and Colorado—states with large concentrations of Hispanic students. As blended schools expand in other states, it is likely that their enrollments will become more like those of full-time virtual schools.

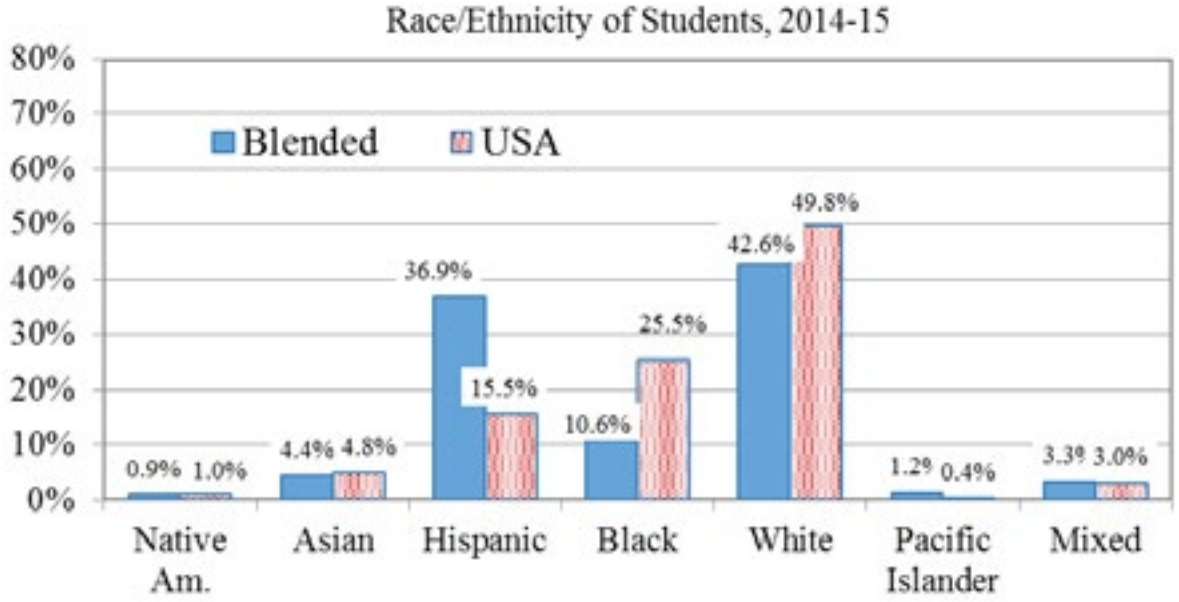


Figure 4. Race/Ethnicity of Students in Blended Schools Compared with National Averages, 2013-14

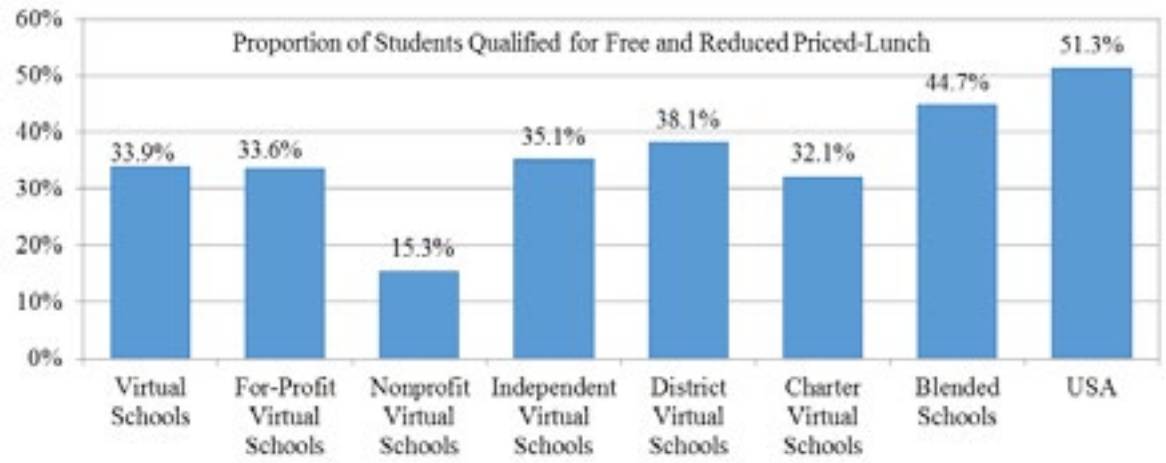
Data available from state sources for 2015-16 was less complete than the 2014-15 data collected from NCES[12]; still, the pattern of distribution of students by race/ethnicity was largely unchanged except for a very small increase in minority students. Nonprofit EMO virtual schools had some distinct differences, although their very small share of enrollment makes drawing inferences difficult. Similarly, the differences in student ethnicity between district and charter schools and those between for-profit or independent virtual schools are also very small.

Free and Reduced-Price Lunch

As illustrated in Figure 5, in 2014-15 the proportion of students in full-time virtual schools with available data (371 schools) who qualified for free or reduced-price lunch (FRL) was 32.4%—18.9 percentage points lower than the all public school average of 51.3%. Within the full-time virtual school sector, district schools had a greater percentage of low-income students (38.1%) than charters (32.1%), while for-profits had a greater percentage of low-income students (33.6%) than those operated by nonprofit EMOs (15.3%). Of the two largest for-profit EMOs, K12 Inc. schools had 33.9% and Connections Academy enrolled a slightly higher percentage, 42.2%.

Blended schools with available data (91 schools) enrolled a much higher proportion of FRL students than virtual schools. In 2014-15, 44.7% of the students enrolled in blended schools qualified for free or reduced-priced lunch (6.6 percentage points lower than the average in all public schools). For-profit blended schools enrolled 15.3% low-income students, independents enrolled 25.3%, and nonprofits enrolled a substantially larger 85.4%. The difference in this area is stark, and it may point to a genuine desire on the part of nonprofit schools to provide better learning opportunities to economically disadvantaged students.

Figure 5. Students Qualifying for Free and Reduced-Priced Lunch, 2014-15



Special Education and English Language Learner Status

As illustrated in Figure 6, the proportion of special education students attending virtual and blended schools was just shy of the national average of 13.1%. Students in this population have an identified disability and an Individualized Education Plan (IEP) on record. The proportion of students with disabilities has grown rapidly—from 6.8% in 2010-11 to 12.9% in 2014-15. Unfortunately, many schools reported no data regarding special education. The proportion of students with disabilities in the 98 blended learning schools with available data was 12.5%.

Although virtual and blended schools appear to be enrolling a high proportion of students with disabilities, it is not possible to determine the relative proportions of students with mild, moderate and severe disabilities, making a comparison with traditional public schools impossible. However, there is reason to believe that the populations likely differ substantially: past research has established that traditional public schools typically have a higher proportion of students with moderate or severe disabilities while charter schools are more likely to have students with mild disabilities that are less costly to remediate or accommodate.[13]

The large overall proportion of students with IEPs in virtual and blended learning schools indicates that these schools have become more attractive for children with disabilities relative to brick-and-mortar charter schools. It is also likely that the companies operating these schools are marketing to this population. For example, one Ohio school with an exceptionally high rate of special education student enrollment (22.1%) actively promotes the appropriateness of their school environment for students seeking a least restrictive environment in a blog post on its website. The post explains that a team of educators meets with each family of a child with disabilities to create an IEP outlining services to be provided by the school.[14] It is possible that such marketing and the large virtual enrollment increases are related to the additional student funding available from federal and state sources for the population of students with disabilities.

The two largest for-profit EMOs, K12 Inc. (80 schools) and Connections Academy (28 schools) enrolled 12.8% and 10.1% special education students in 2014. Little is known about how virtual schools deliver special education services online. A study from 2012[15] did in-

dicate that while K12 Inc. had a higher proportion of children with disabilities relative to brick-and-mortar charter schools at that time, they were spending a fraction of what charter schools spend for special education teachers' salaries and benefits. This suggests that additional revenues were not translating into increased spending on special education.[16]

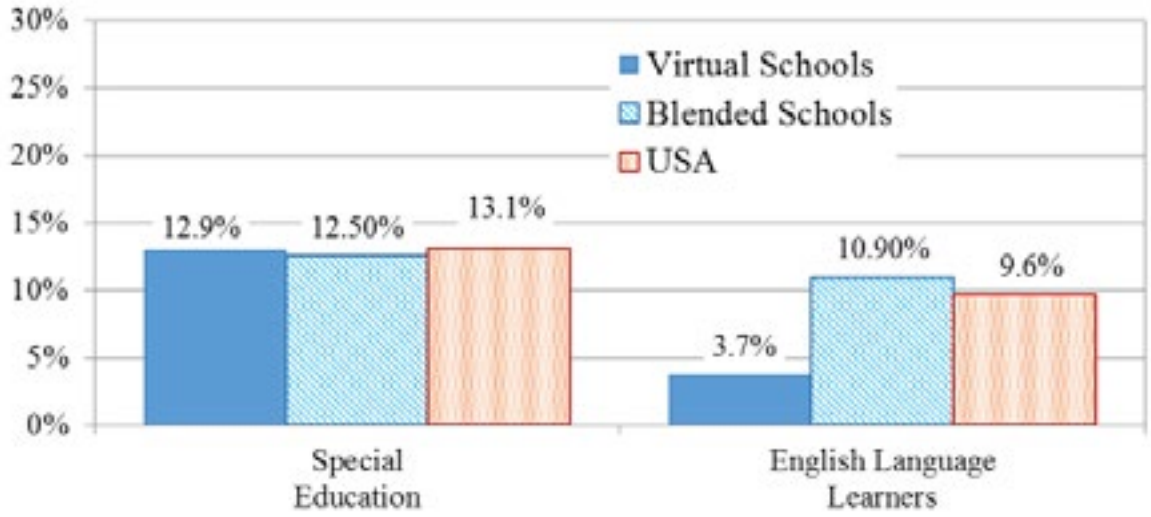


Figure 6. Proportion of Students Classified as Special Education, or Classified as English Language Learners, 2014-15

English language learners (ELLs) represent a growing proportion of students in the nation's schools, especially in the states served by virtual and blended schools. Of the 464 full-time virtual schools with available data, only 3.7% of students were classified as ELL. This is a striking difference from the 9.2% national average[17] (see Figure 6). Specific demographic data for each of the full-time virtual schools can be found in Appendix A. In this appendix, it is also possible to see the number of schools considered when weighted means were calculated.

Available data from 113 schools indicated that English language learners accounted for 10.9% of the blended school population, again, most likely due to the concentration of blended schools in Arizona, California and Colorado—states with large concentrations of Hispanic students. In the 14 for-profit blended schools, 3.2% were ELLs; in the 77 independent blended schools, 5.3% were ELLs; and, in the 22 nonprofit blended schools, 25.2% were ELLs, another suggestion that nonprofit schools may have a genuine interest in providing educational opportunities to students who often struggle in traditional schools.

Sex

While the population in the nation's public schools is nearly evenly split between girls and boys, the population of students enrolled in both virtual schools (528 schools total) and blended schools (140 schools total) during the 2015-16 school year was skewed in favor of girls (53.4% girls in virtual schools, and 51.8% girls in blended schools). These ratios remained when schools were subdivided into charter and district schools and independent and for-profit schools. Only nonprofit virtual and blended schools mirrored the nation's public schools with a nearly even split between girls and boys. Interestingly, these numbers have

flipped since 2010-11 when boys were more prevalent in virtual schools (see Figure 7).

When sex relative to a school's grade levels was considered, some interesting patterns emerged. Virtual schools serving only grades K-5 (16) and schools serving only grades 6-8 (12) tended to have a more balanced mix of girls and boys with a near 50/50 split at each level, whereas schools that served only grades 9-12 (122) tended to have far more female students enrolled (55% girls and 45% boys). Several conjectures as to why this is the case can be made: there may be an emphasis on addressing the needs of teen mothers at the high school level, or struggling males may be more likely to drop out of school entirely whereas females may be more likely to persist in an alternative format like a virtual school. More research on this area is needed. For blended schools, the ratio remained relatively balanced in the K-5 schools (16) and began to diverge in favor of female enrollment in middle schools (4), with girls constituting 52% of enrollment. Similar ratios held in high schools (52), where girls accounted for 53% of enrollment. Schools that served multiple levels (K-12, for example) were not included in these calculations; their numbers might have altered results.

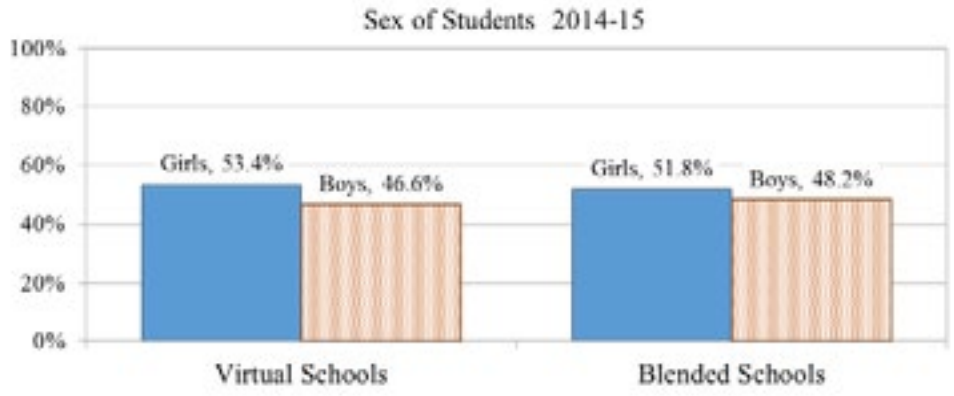


Figure 7. Sex of Students in Virtual and Blended Schools, 2014-15

Enrollment by Grade Level

The National Center for Education Statistics (NCES) uses four school-level classifications: elementary, middle school, high school, or other. "Other" refers to grade configurations that cut across the other three levels. Fifty-nine percent of virtual schools fell into the "Other" category because they were designed or intended to enroll students across two or more levels; in fact, many served students from kindergarten to grade 12. A total of 10.2% were designated as primary schools, 2.3% as middle schools, and 28.6% as high schools. The figures for blended learning schools indicated that 35.7% were classified as Other, while 15.7% were elementary schools, 4.3% were middle schools, and 44.3% were high schools. While these classifications are generally useful for describing traditional public schools, they are less useful for describing student distribution in charter schools, which comprise a large segment of virtual and blended schools. Charters often have permission to serve all grades but may actually enroll students in a more limited grade range. To illustrate the distribution of students in virtual schools as accurately as possible, Figure 8 details NCES data on actual student enrollment by grade; comparisons were based on national averages. A disproportionate number of students in virtual schools were in high school or upper secondary level, in contrast to the national picture where a relatively stable cohort of students was generally

distributed evenly across grades, with a gradual drop from grades 9 to 12. This finding is interesting since brick-and-mortar charter schools were more likely to concentrate on the primary and lower secondary levels, which have lower per pupil costs than the upper secondary level.

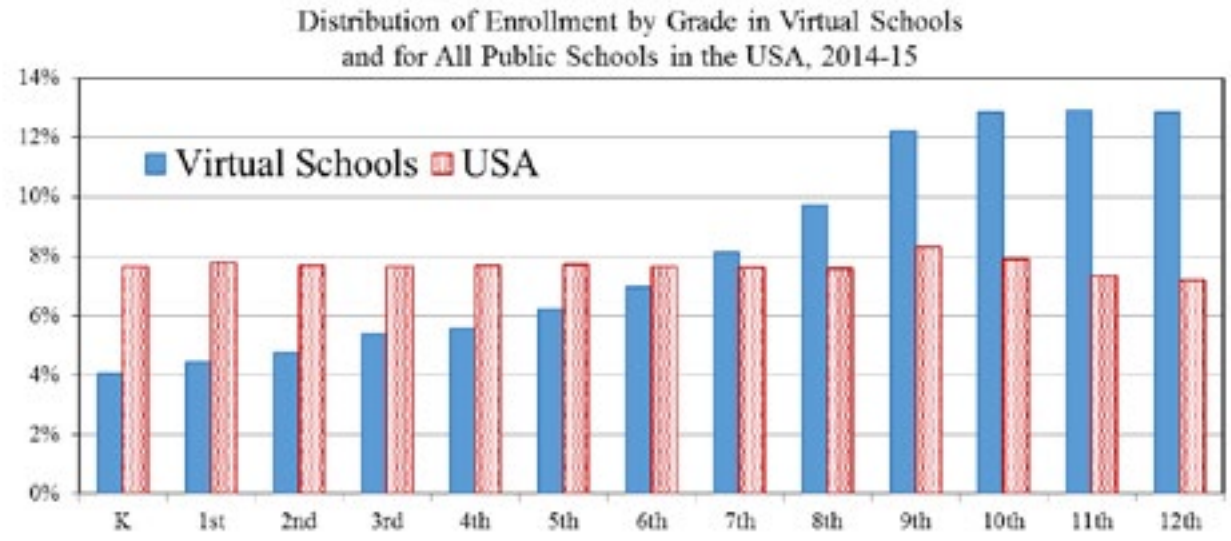


Figure 8. Enrollment by Grade Level for Virtual Schools and U.S., 2014-15

District-operated virtual schools served slightly more students at the upper secondary level than charter schools did. More pronounced differences were evident when for-profit schools were compared with nonprofit EMO-operated schools and independent schools, which both served many upper upper secondary level students. Virtual schools operated by for-profit EMOs, predominately by K12 Inc. and Connections Academy, served substantially fewer students at the upper upper secondary level and showed enrollment drop-offs after grade 9.

Figure 9 illustrates the actual number of students served by virtual schools at each grade level. Enrollment increased steadily through grade 9 and then leveled off from grades 10-12. This summary masks some changes by subgroups of schools. For example, the virtual schools operated by for-profit EMOs saw steep declines after grade 9, while many district-operated virtual schools served only students in the final few grades of high school, offsetting the decline in for-profit EMOs. This surprising decline in the grade cohorts in the for-profit EMO schools may be related to the low graduation rates of virtual schools: if dropout rates are high, then a portion of students do not persist into the upper grades.

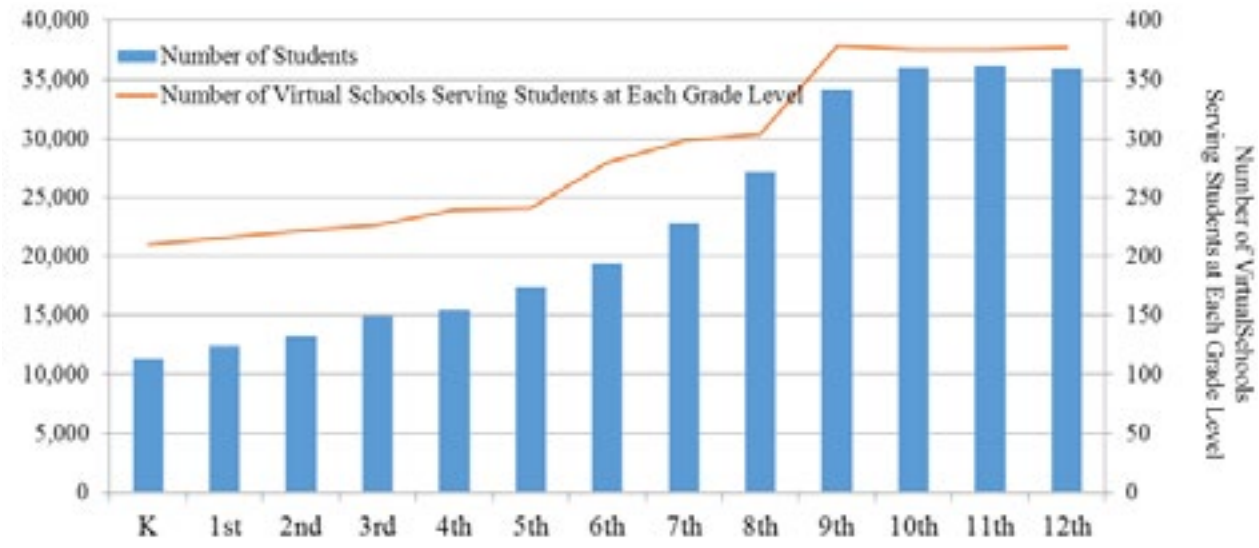


Figure 9. Number of Virtual School Students per Grade Level and Number of Schools that Offer Instruction at Each of the Grade Levels, 2014-15

Figures 10 and 11 illustrate grade level student distribution in blended schools. Interestingly, blended schools had high concentrations of students at the elementary and high school levels and fewer at the middle school level. Higher numbers in the lower grades may have been due to blended schools opening at lower elementary levels and then adding a new grade level each year, a pattern typical of many EMO-operated charters. The large concentration at grade 12 may have been due to students using blended schools for credit recovery or as an alternative for late graduation.

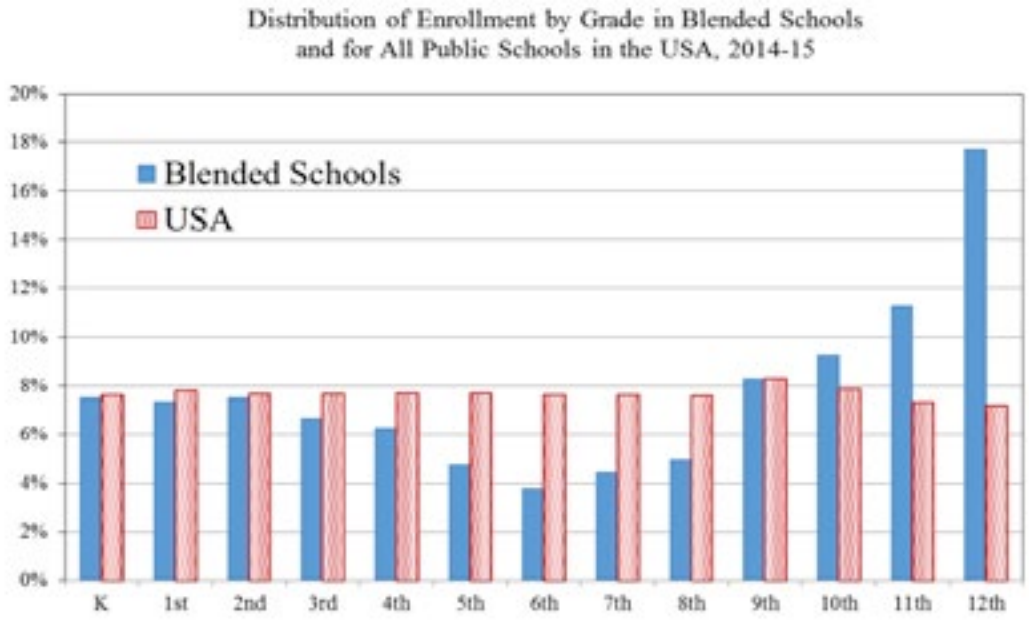


Figure 10. Enrollment by Grade Level for Blended Schools and U.S., 2014-15

Figure 11 indicates that most blended schools catered to high school students. Given that

students at the upper secondary level are more technologically savvy and usually are better able to self-regulate and work independently, it makes sense to see concentrations of students and blended schools in those grades. High schools may also have greater expertise and interest in blending learning.

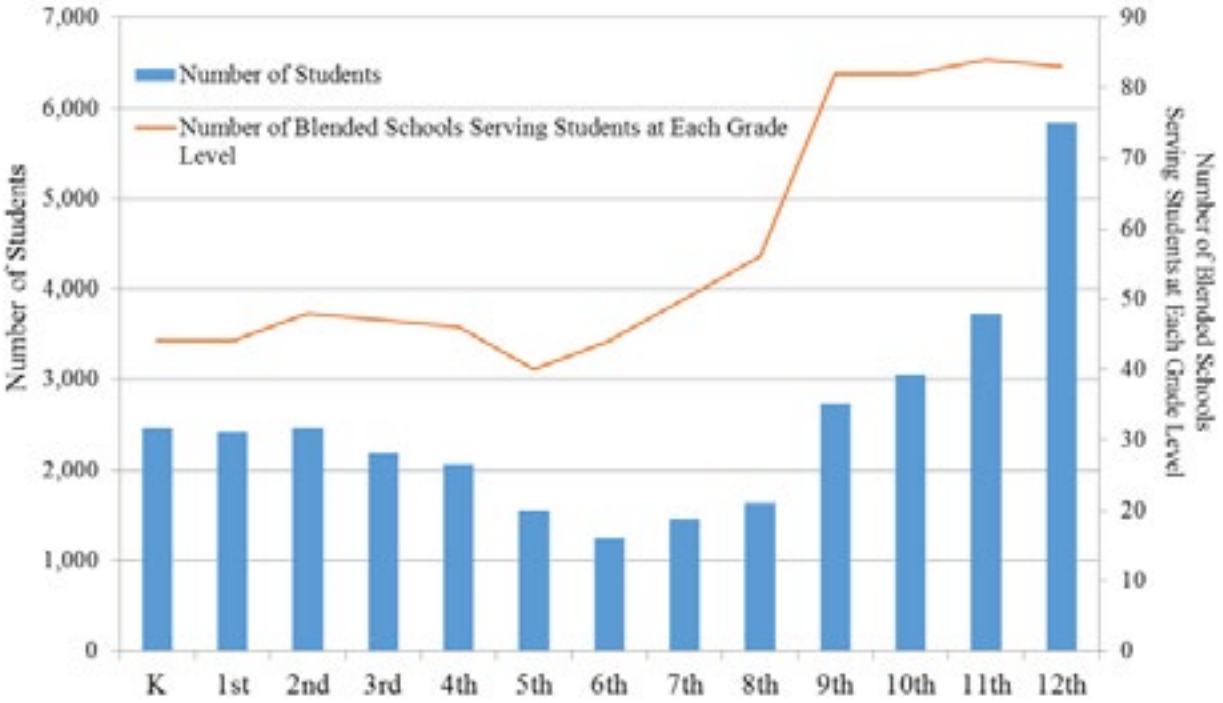


Figure 11. Number of Blended School Students per Grade Level and Number of Schools that Offer Instruction at Each of the Grade Levels, 2014-15

Student-Teacher Ratios

Far more schools reported demographic data than reported student-teacher ratios. Due to a relative dearth of information on student-teacher ratio from state education agencies and from school report cards, the most recent and complete data available was NCES Common Core data for school year 2014-15.

While the average ratio was approximately 16 students per teacher in the nation's public schools, virtual schools reported more than twice as many students per teacher (34:1). Among virtual schools, those operated by for-profit EMOs had the highest ratio (44:1), while those operated by nonprofit EMOs had the lowest (19.5:1). The raw data showed considerable outliers, with some virtual schools reporting fewer than 2 students per teacher[18] and others reporting more than 300. Table 5 includes data from full-time virtual schools broken out by EMO status and also by district or charter status.

Table 5 also includes data from blended schools, which indicate that they had—on average—relatively similar student-teacher ratios compared with the full-time virtual schools (33:1). One concern about the figure for the blended schools is that only 19 had data available. The overall high student-teacher ratios in virtual and blended schools are especially surprising

given that the virtual and blended learning schools are now reporting proportions of students with disabilities similar to the national average for all public schools.

Table 5. Teacher-Student Ratios, 2014-15

	Number of Schools with Data	Median	Weighted Mean	SD	Max	Min
All Virtual Schools	199	25.6	33.97	36.22	356	1.3
Independent Virtual	119	23.0	28.74	22.19	131.6	2.2
Nonprofit Virtual	7	17.0	19.54	12.89	42	4.9
For-Profit Virtual	73	33.1	43.87	51.20	356	1.3
K12 Inc.	46	30.1	39.18	39.33	265	1.3
Connections Academy	15	36.6	34.96	6.96	45.6	24
District Virtual	73	26.4	39.41	51.15	356	2.2
Charter Virtual	145	25.4	31.13	23.09	133	1.3
All Blended Schools	19	23.3	33.26	21.98	100.5	15
National Average[19]			16.0[20]			

School Performance Data

This section reviews overall school report card ratings and on-time graduation rates. General findings and trends are presented and discussed here; findings by school appear in Appendix C.

Background and Methodology

Last year's report calculated mean scale scores and achievement levels based on subject area results in PARCC (Partnership for Assessment of Readiness for College and Careers) and Smarter Balanced tests to determine whether virtual and blended schools were performing at acceptable or unacceptable levels. This year's school performance analysis, however, is based on individual school report cards for two reasons. First, report cards provide a more holistic picture of a school's performance. A second, and more compelling reason, is that in 2015-16, many states introduced new tests aligned with college- and career-ready standards, while others made changed their cut scores or expectations for "proficiency," or adopted a new scoring scale. When states took these actions, test results were no longer comparable and some states reported limited or no school performance data at all.

This year's performance data is, however, limited by the availability of report cards for schools and districts. As a result of the changing and currently limited database, variations in school performance between this year and last year should be interpreted cautiously.

Annual school report cards often include multiple measures that vary from state to state

but tend to include student performance data in Math and English/Language Arts, graduation rates, and achievement gaps. In some states, the following measures are also included: performance in Science and Social Studies; percentage of students taking advantage of advanced coursework like Advanced Placement (AP), International Baccalaureate (IB), and Dual Credit; performance growth; College and Career Readiness; attendance; staff retention; student and parent satisfaction; and/or ACT/SAT scores. Although the type, number, and weighting of such measures vary greatly from state to state, report card ratings do reflect the educational values of a state. Therefore, overall school report card ratings provide a reasonable representation of an individual school's performance relevant to state expectations.

For several reasons, however, there are many gaps in report card ratings. Due to current flux in accountability systems resulting from new requirements under the Every Student Succeeds Act (ESSA) and flexibility waivers and extensions granted under the Elementary and Secondary Education Act (ESEA), many states have put their accountability systems on hold as they finalize new formats and transition to new standards and state tests. States with accountability systems currently on hold are: Alaska, Arkansas, California, Colorado, Hawaii, Idaho, Illinois, Nevada, Ohio, Oregon, South Carolina and Washington. Some states (like Nevada and Hawaii) clearly communicate on their websites that the accountability systems are on hold and explain why, while other states have buried such information in a flexibility waiver posting (Colorado). Several additional states do offer some school report card data but are not currently assigning an overall performance rating, and several more states do not have any current school report card data available and offer no explanation as to why. Finally, Wyoming does not count virtual schools as separate entities and assigns the students who attend these schools to the brick-and-mortar building that they would attend if they weren't attending a virtual school. The state produces a report on virtual schooling in aggregate, but does not separate the achievement data of students attending virtual schools full time from those taking one or two classes online. As a result, overall school ratings for virtual and blended schools were available for only 18 of the 38 states included in this report.

This points to a larger story about school accountability as virtual and blended schools in the United States continue to expand. It is understandable that states are being cautious about holding schools accountable under new provisions; however, gaps in data make it difficult to assess the extent to which virtual and blended schools are successfully meeting student needs. Some states have reported data on individual measures to help parents make decisions about where to send their children to school, but others have not reported any data at all during current transitions. Original ESSA mandates required that school report cards be finalized and reported for school year 2017-18, and if states continue on this trajectory a full picture may materialize then. Given current conditions, the school performance results captured here should be interpreted cautiously, since they are inescapably based on limited data.

State School Performance Ratings

Eighteen states provided overall school performance ratings on 2015-16 report cards. These states include: Arizona, District of Columbia, Florida, Georgia Iowa, Indiana, Louisiana, Massachusetts, Michigan, Minnesota, New Mexico, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, and Wisconsin. For the purpose of this report, AYP data for California schools was substituted for overall performance rating to avoid excluding a large number of schools from the dataset. Therefore, this year's performance calculations are drawn from 19 of the 38 states included in this report; performance ratings were poten-

tially available for 257 (53.6%) of the 479 full-time virtual schools and 74 of the 135 (54.8%) blended learning schools with enrollment during 2015-16.

To determine academic performance, a coding system was used to aggregate results across states. One of three possible ratings was assigned to each school within the 18 states with available overall school performance ratings: "academically acceptable," "academically unacceptable," or "not rated" (meaning that the state assigned overall school performance ratings for 2015-16 but did not do so for that particular school). Information from state education agencies provided guidance about how to interpret the overall performance ratings by state. In cases where state agencies did not make clear what constituted an acceptable or unacceptable rating, we determined a cutoff score based on two factors: an interpretation of the scale being used and the number of schools receiving each rating. After applying this common coding system for individual schools, it was possible to aggregate findings within and across states.

It was found that virtual schools continued to underperform academically and not as well as their blended school counterparts. Overall, 37.4% percent of full-time virtual schools received acceptable performance ratings, compared with 72.7% acceptable ratings for blended schools. A much higher percentage of blended schools received acceptable ratings in the 2015-16 school year as compared to the prior year, thus reversing their underwhelming academic results. Our inventory last year found that blended schools were not doing much better than virtual schools.

Table 7. Percentage of Virtual Schools with Acceptable School Performance Ratings, 2015-16

	Acceptable		Unacceptable		Not Rated (or No Rating Reported)
	N	Percent of Schools with Ratings	N	Percent of Schools with Ratings	N
Full-time Virtual Schools	82	37.4%	137	62.6%	40
For-profit	18	25.7%	52	74.3%	13
Independent	61	43.6%	79	56.4%	27
Nonprofit	3	33.3%	6	66.7%	0
Charter	30	23.8%	96	76.2%	17
District	52	55.9%	41	44.1%	23
K 12, Inc.	11	25.0%	33	75.0%	10
Connections Acad.	4	25.0%	12	75.0%	3

Of the 257 virtual schools with potentially available school performance ratings, 82 (37.4%) were rated acceptable (see Table 7). Of virtual schools operated by for-profit EMOs, 18 (25.7%) were rated acceptable. Of these, 11 were K12, Inc. schools (25% of the K12 cohort) and four were Connections schools (25% of the Connections cohort). Acceptable school performance ratings were higher for nonprofit (33.3%) and independently run (43.6%) virtual schools. District-operated virtual schools performed better than their charter school counterparts: 55.9% and 23.8%, respectively. It is worth noting that in addition to the 137 schools that received unacceptable ratings (62.6%), 40 schools were not rated by states without explanation.

This snapshot of poor performance aligns with other research. The Center for Research on Education Outcomes (CREDO) published a report in 2015[21] asking the question: How did enrollment in an online charter school affect the academic growth of students? CREDO used what they call the "virtual control record or (VCR)" method to create a virtual twin pairing between online charter school students and brick-and-mortar charter school students. They matched students on the characteristics of grade level, gender, race/ethnicity, free or reduced-price lunch eligibility, English language learner status, special education status, and prior test score on standard achievement tests. The difference in achievement between students in the control group (brick-and-mortar charter students) and the experimental group (online charter school students) were represented as z-scores. A positive z-score indicated that the online charter school students performed better than their brick-and-mortar peers while a negative z-score indicated worse performance than brick-and-mortar peers'. The study found the average online charter student scored -0.25 standard deviations in math and -0.10 in reading. The report claims that the negative score equated to a loss of 180 instructional days in math and 72 instructional days in reading. Equating these outcomes to instructional days is questionable, but still notable is the large difference between CREDO's tiny positive advantage for brick-and-mortar charter schools and the large, negative results for online schools.[22]

How did enrollment in an online charter school affect the academic growth of students?

Comparisons of acceptable school performance ratings in blended schools are weaker because blended schools typically operate in limited urban areas; in contrast, virtual schools generally can enroll students statewide and so have a student population more similar to the state's aggregate enrollment. That said, based on last year's performance ratings for virtual schools (37.4% acceptable), blended schools outperformed their virtual school counterparts by nearly two-fold: 72.7% acceptable. For-profit blended schools also outperformed their virtual school counterparts in acceptable ratings — 72.7% versus 37.4%.[Ho] However, the largest for-profit EMO, Rocketship, had acceptable ratings for all 10 of their schools with available ratings. Similarly, all the blended schools operated by nonprofit EMOs received acceptable ratings. Independent blended schools (60% acceptable) outperformed independent virtual schools (37%), and district-operated blended schools (67.3% acceptable) outperformed their virtual school counterparts (50%). Charter-operated blended schools (50% acceptable) similarly outperformed virtual charters (23.8%). The top performers among blended schools, then, were those operated by nonprofits EMOs.

Table 8. Percentage of Blended Schools with Acceptable School Performance Ratings, 2015-16.

	Acceptable		Unacceptable		Not Rated or No Rating Reported
	N	Percent of schools with ratings	N	Percent of schools with ratings	N
Full-time Blended	48	72.7%	18	27.3%	8
For-profit	5	71.4%	2	28.6%	0
Independent	33	67.3%	16	32.7%	6
Nonprofit	10	100%	0	0.0%	2
Charter	30	50.0%	30	50.0%	17
District	18	50.0%	18	50.0%	23
Rocketship	10	100%	0	0.0%	1

Graduation Rates

In recent years, schools and states have been standardizing how they record and report graduation rates. The measure widely used today is "On-Time Graduation Rate," which refers to the percentage of all students who graduate from high school within four years after they started 9th grade. Information on graduation rates was available for 129 virtual schools (24.4% of the total 528) and for 34 blended schools (24% of the total 140). A large number of virtual and blended schools did not report a graduation rate because some do not offer high school grades; others are relatively new and have not had a student cohort complete grades 9-12.

As Table 9 illustrates, the on-time graduation rates for full-time virtual and blended schools (43.4% and 43.1% respectively) were less than the national average of 82.3%. The graduation rates for virtual schools have flattened or declined over the past few years, while the graduation rates for the nation have been improving about 1 percentage point each year. These findings align with other measures of school performance and contribute to the overall picture of virtual and blended school performance.

The graduation rates for 2015-16 are poor across all subgroups of virtual and blended schools. During the same year, independently managed virtual schools had the highest on-time graduation rate, 46.6%. Rates in nonprofit and for-profit operated virtual schools were 35.1% and 39.8%, respectively. Within the subgroup representing EMO-managed virtual schools, high-school students at K12, Inc. had an on-time graduation rate of 37.4%. By contrast, Connections Academy did better at 51.7%.

Charter virtual schools had a graduation rate similar to those of district-operated virtual schools at about 43.9% and 42.1%, respectively. Blended schools with graduation data had graduation rates similar to those of their virtual school counterparts. Overall, average on-time graduation rates remained substantially lower for virtual and blended schools than for traditional public schools in the US: only 43.4% of students at virtual high schools and

43.1% at blended schools graduated on time, whereas the national average for all public high schools was more than double that at 82.3%. Regardless of setting or school type, graduation rates in virtual and blended learning schools remain far below national averages.

Table 9. Graduation Rates, 2015-16

	Number of Schools with Data	4 Year On-Time Graduation Rate	
		Weighted Mean	Median
Independent	94	46.6%	45%
Nonprofit	16	35.1%	34%
For-Profit	53	39.8%	39.6%
K12 Inc.	24	37.4%	35.5%
Connections Acad.	15	51.7%	53.9%
District	58	42.1%	43.9%
Charter	105	43.9%	42.2%
All Virtual Schools	129	43.4%	43.0%
All Blended Schools	34	43.1%	43.5%
National Average (2013-14)		82.3%*	

*The national figure is for 2013-14. https://nces.ed.gov/ccd/tables/ACGR_RE_and_characteristics_2013-14.asp

Recommendations

Given the rapid growth of virtual schools and blended schools, the populations they serve, and the relatively poor performance of virtual schools on widely used accountability measures, it is recommended that:

- Policymakers slow or stop the growth in the number of virtual schools and the size of their enrollments until the reasons for their relatively poor performance have been identified and addressed. They should prioritize understanding why virtual schools perform poorly under a college- and career-ready accountability system and how their performance can be improved prior to expansion.
- Policymakers should carefully and continuously monitor the performance of full-time blended schools since the data offer some potentially positive signs that they can maintain performance levels even with very large student-to-teacher ratios. This is not surprising despite their earlier poor performance because it seems plausible that small school sizes and in-person contact with adults might be a god fit for typical public school populations.
- Authorities charged with oversight should specify and enforce sanctions for virtual and blended schools that fail to perform adequately.
- Policymakers should specify a maximum student-teacher ratio for virtual and blended schools to ensure all students receive adequate support and attention from

teachers.

- Policymakers should regulate school and class sizes. As the evidence indicates, the virtual schools and blended learning schools have large numbers of students for each teacher. Given the overwhelmingly poor performance evidence, it is surprising that these schools are not investing more on instruction. The likely explanation for this is two-fold: (1) profit motives of the EMOs, and (2) the operators of these schools have learned that they can get away with it year after year, with only the National Collegiate Athletic Association (NCAA)[23] reacting strongly to the negative performance outcomes.

- State agencies ensure that virtual schools and blended schools fully report data related to the population of students they serve and the teachers they employ. Similarly, state agencies should make every effort to assign all virtual schools an overall school performance rating and clearly explain why a rating has not been assigned to a specific school when that is the case. In 2015-16, a total of 15.6% of virtual schools and 10.8% of blended schools were not rated by states that compiled overall school performance ratings. This lack of data for virtual and blended schools furthers their ability to operate without accountability.

- State agencies should continue the work they've started in revising accountability systems and commit to publicly reporting results starting in 2017-18 as mandated earlier, regardless of changes within the Department of Education.

- State and federal policymakers should promote efforts to design new outcome measures appropriate to the unique characteristics of full-time virtual schools and blended schools. Passage of the Every Student Succeeds Act (ESSA) represents an opportunity for those states with a growing virtual and blended school sector to improve upon their accountability systems for reporting data on school performance measures.

- Policymakers and other stakeholders should support more research to identify which policy options—especially those impacting funding and accountability mechanisms—are most likely to promote successful virtual schools and blended schools. More research is also needed to increase understanding of the inner workings of virtual and blended schools, including such factors as the curriculum and the nature of student-teacher interactions. Such research should help identify and remedy features that are negatively affecting student learning. (Since this report recommended in 2013 that federal and state education agencies begin coding virtual schools in their datasets, NCES has initiated such coding. This will help facilitate further research on this relatively new and rapidly growing model.)

- Policymakers and other stakeholders should also support more research on exactly how special education is being provided in virtual and blended schools. There are many key questions that warrant attention such as: What types of students with disabilities are being enrolled? Are these students receiving any additional services? How are they being served and how are the additional designated funds being used to support them? Indicators that raise concern include the rapid increase of students with IEPs in virtual schools and the extremely large student-to-teacher ratios. For example, a 2012 study of K12 Inc. found a higher proportion of students with disabilities relative to brick-and-mortar charter schools, while that organization was spending a third less per pupil for special education teacher salaries—raising questions about the amount and type of services being provided.

Appendices

Appendix A1. Numbers of Virtual Schools and Students by State

Appendix A2. Numbers of Blended Learning Schools and Students by State

Appendix B1. Numbers of Full-Time Virtual Schools and the Students They Serve

Appendix B2. Numbers of Blended Learning Schools and the Students They Serve

Appendix C1. Measures of School Performance: State Performance Ratings, Adequate Yearly Progress Status, and Graduation Rates—Full-Time Virtual Schools

Appendix C2. Measures of School Performance: State Performance Ratings, Adequate Yearly Progress Status, and Graduation Rates—Blended Learning Schools

Appendix D. States' Assessment System, School Performance Ratings Summarized by States for their Full-Time Virtual and Blended Learning Schools

The Appendices as well as links to data sources are available for download as PDF files at http://nepc.colorado.edu/publication/virtual-schools-annual-2017

Notes and References - Section 1

1 This finding is based on NCES data from the Conditions of Education 2015. Retrieved December 2, 2015, from http://nces.ed.gov/pubs2015/2015144_highlights.pdf and http://nces.ed.gov/programs/coe/indicator_clr.asp

2 In 2014, the National Collegiate Athletic Association (NCAA) indicated that it would not consider or accept coursework completed by student athletes at 24 virtual schools operated by K12 Inc.

3 Miron, G., & Urschel, J.L. (2012). *Understanding and improving full-time virtual schools: A study of student characteristics, school finance, and school performance in schools operated by K12 Inc.* Retrieved December 11, 2014, from http://nepc.colorado.edu/files/nepc-rb-k12-miron.pdf

Molnar, A. (Ed.); Huerta, L., Shafer, S.R., Barbour, M.K., Miron, G., Gulosino, C. (2015). *Virtual Schools in the U.S. 2015: Politics, Performance, Policy, and Research Evidence*. Boulder, CO: National Education Policy Center. Retrieved December 18, 2015, from http://nepc.colorado.edu/publication/virtual-schools-annual-2015

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Miron, G. & Gulosino, C. (2016). *Virtual Schools Report 2016: Directory and Performance Review*. Boulder, CO: National Education Policy Center. Retrieved December 4, 2016, from http://nepc.colorado.edu/publication/virtual-schools-annual-2016

4 For example, school districts or schools offer online courses to cut costs or attract students from other schools/districts/states. These are not actually schools in the sense that they offer the complete state-mandated curriculum; they are just basically individual courses that students can take if they want to. Such a program would never receive an NCES ID no matter how many students enroll in these online courses because it's not a school.

5 See notes in the appendices for more details regarding inclusion criteria.

6 Special education is an obligation of school districts (i.e., Local Education Authorities) and not necessarily individual schools. In most states, charter schools are considered LEAs and therefore their data on special education is included in the NCES district-level datasets. States in which charter schools are not classified as LEAs, such as Florida, do not have special education data attributable to individual charter schools.

7 Alabama, Arkansas, District of Columbia, Florida, Georgia, Idaho, Iowa, Louisiana, Massachusetts, Missouri, New Hampshire, Oklahoma, Pennsylvania, South Carolina, South Dakota, Texas, Utah, and Wyoming.

8 To be included in this inventory and considered in our analyses, a virtual school or blended learning school has to meet our selection criteria. First of all, it must be classified as a school and not a program. For example, it must be classified as a functioning school and not just a collection of individual optional courses. Online courses offered by school districts or schools to cut costs or attract students from other schools/districts/states, as referred to in Note 3, are therefore not included.

Additionally, when separating programs from schools, we look for the existence of unique NCES or State Education Agency ID codes that are designated for school units. We exclude blended schools, and we avoid schools that have both face-to-face instruction and virtual instruction. Further, in order to be included in our inventory, these virtual schools should have evidence of at least 25 students enrolled during one of the last few years. An important part of our analyses examines school performance; by including only full-time virtual schools, we are better able to attribute school performance outcomes to full-time virtual schools.

9 Estimates for 2000 to 2010 are based on two sources, the annual Profiles of For-Profit and Nonprofit Education Management Organizations from NEPC, and the annual Keeping Pace reports from Evergreen Education, a consulting group that prepares reviews of policy and practice for online learning.

10 Marsh, R.M., Carr-Chellman, A.A., & Stockman, B.R. (2009). Why parents choose cyber charter schools. *TechTrends 53*(4).

Miron, G., & Urschel, J.L. (2012). *Understanding and improving full-time virtual schools: A study of student characteristics, school finance, and school performance in schools operated by K12 Inc.* Retrieved December 11, 2014, from http://nepc.colorado.edu/files/nepc-rb-k12-miron.pdf

Woodard, C. (2013, July 3). *Special Report: The profit motive behind virtual schools in Maine*. Portland Press Herald. Retrieved February 28, 2014, from http://www.pressherald.com/news/virtual-schools-in-maine_2012-09-02.html

11 Comparisons with demographic composition of charter schools in the nation is also relevant since the virtual schools that enroll most students are charter virtual schools. Thirty-six percent of all charter school students are White, 29.2% are Black, 27.2% are Hispanic, 3.5 are Asian, and 3.2% are classified as "other."

12 Data on ethnicity are from 2014-15, the most recent year from which we could obtain NC6S data. The NCES provides the most comprehensive data, all from a single audited source. We also pulled together data on race/ethnicity, sex, free and reduced-price lunch status, English Language Learner status, and special education status for 2015-16 from state sources and from school report cards. The data from NCES for the 2014-15 was more complete which is why we report this data even though it is one year older than our general enrollment numbers.

13 Miron, G. (2014). Charters should be expected to serve all kinds of students. *Education Next 14*(4): 58-59.

14 https://www.ohdela.com/media-center/blog/ohdela-fits-all-student-needs.html

15 Miron, G., & Urschel, J.L. (2012). *Understanding and improving full-time virtual schools: A study of student characteristics, school finance, and school performance in schools operated by K12 Inc.* Retrieved December 11, 2014, from http://nepc.colorado.edu/files/nepc-rb-k12-miron.pdf

16 A recent study on this topic, apparently from smaller virtual schools, used a qualitative approach to explore the experiences of six online teachers teaching students with disabilities. This study found the teachers used a variety of strategies to accommodate students with disabilities, including modifying curriculum, adapting instructional practices, and drawing on outside resources for support. The study recommended that virtual schools should promote a teacher-focused approach to accommodating the needs of students with disabilities and their parents.

Crouse, T.M., Rice, M.F., & Mellard, D.F. (2016). *How did I survive? Online Teachers' Describe Learning to Teach Students with Disabilities*. Lawrence, KS: Center on Online Instruction and Students with Disabilities, University of Kansas.

17 This statistic is based on NCES data from U.S. Department of Education, National Center for Education Statistics. (2015). The Condition of Education 2015 (NCES 2015-144), English Language Learners. Retrieved December 2, 2015, from https://nces.ed.gov/fastfacts/display.asp?id=96

18 Such a low number of full-time equivalent teachers reported may be explained by the use of larger numbers of teachers who work part-time for the school.

21 CREDO. (2015). *Online Charter School Study 2015*. Palo Alto, CA: The Center for Research on Education Outcomes. Retrieved November 6, 2016, from https://credo.stanford.edu/pdfs/OnlineCharterStudyFinal2015.pdf

22 Miron, G. & Applegate, B. (2009). *Review of "Multiple Choice: Charter School Performance in 16 States."* Boulder, CO: National Education Policy Center. Retrieved April 22, 2015, from http://nepc.colorado.edu/thinktank/review-multiple-choice

Maul, A., & McClelland, A. (2013). *Review of "National Charter School Study 2013."* Boulder, CO: National Education Policy Center. Retrieved April 22, 2015, from http://nepc.colorado.edu/thinktank/review-credo-2013

Maul, A. (2015). *Review of "Urban Charter School Study 2015."* Boulder, CO: National Education Policy Center. Retrieved February 18, 2017, from http://nepc.colorado.edu/thinktank/review-urban-charter-school

Center for Research on Education Outcomes (CREDO) (2015, March). *Urban Charter School Study*. Palo Alto: CREDO, Stanford University. Retrieved April 22, 2015, from http://urbancharters.stanford.edu/index.php

Gabor, A. (2015). *New CREDO Study, New Credibility Problems: from New Orleans to Boston*. (Web-based review). Retrieved January 14, 2017, from https://andreagabor.com/2015/04/28/new-credo-study-new-credibility-problems-from-new-orleans-to-boston/

23 In 2014, the National Collegiate Athletic Association (NCAA) indicated that it would not consider or accept coursework completed by student athletes at 24 virtual schools operated by K12 Inc.

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