

# SECTION I

## FULL-TIME VIRTUAL AND BLENDED SCHOOLS: ENROLLMENT, STUDENT CHARACTERISTICS, AND PERFORMANCE

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### Executive Summary

This is NEPC's eighth national report on virtual and blended learning schools over the past decade. 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. Full-time blended schools combine virtual instruction with traditional face-to-face instruction in classrooms. Evidence indicates that student and school characteristics differ considerably from characteristics of traditional public schools. School performance outcomes are also very different from outcomes in traditional public schools.

A detailed overview and inventory<sup>1</sup> of full-time virtual and blended learning (hybrid) schools are included in this section. Also included are key findings related to student demographics, school characteristics, and state-specific school performance measures. Data for both virtual and blended schools indicate that they are performing poorly, a finding that has not changed in these reports or other national studies. Even while outcomes are often abysmal, enrollment growth has continued. Dominating this sector are for-profit education management organizations (EMOs) that operate exceedingly large virtual schools. School districts are becoming more active in opening virtual schools, but district-run schools have typically been small, with limited enrollment.

<sup>i</sup> Jessica R. Polling and Qi Jing, both graduate students in the Evaluation, Measurement, and Research program at Western Michigan University, contributed to the data collection phase of this project.

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

- In 2019-20, 40 states had virtual or blended learning schools. There were 477 full-time virtual schools that enrolled 332,379 students, and 306 blended schools that enrolled 152,530. Enrollments in virtual schools increased by nearly 30,000 students between 2017-18 and 2019-20 and enrollments in blended learning schools increased by just under 20,000 during this same time period.
- Virtual schools operated by for-profit EMOs were close to 3.5 times as large as other virtual schools. They enrolled an average of 1,384 students. In contrast, those operated by nonprofit EMOs enrolled an average of 395 students, and independent virtual schools enrolled an average of 407 students.
- Although profit and nonprofit EMOs operated only 38.4% of full-time virtual schools, those schools enrolled 64% of all virtual school students.
- About half of all virtual schools (49.9%) were charter schools, but together they accounted for 75.8% of enrollment. While districts have been increasingly creating their own virtual schools, those tended to enroll far fewer students.
- In the blended sector, nonprofit EMOs operated 30.1% of schools, and for-profit EMOs operated 14.4%. Over half (55.6%) of blended schools were independent. Blended schools operated by for-profit EMOs had largest average enrollments (876 students per school). There were more charter schools (58.8%) than district schools (41.2%), and the charters had substantially larger average enrollments (623) than districts (321).

## Student Demographics

- Virtual schools enrolled fewer minority students and substantially fewer low-income students compared to national public school enrollment.
- The overall proportion of low-income students in blended schools was slightly higher than the national average; however, those operated by nonprofit EMOs enrolled a substantially higher proportion of low-income students than their for-profit counterparts. Blended schools had a higher proportion of Hispanic students relative to national enrollments.
- Although special education data was available for relatively few virtual and blended schools, the proportion of special education students in virtual schools with data was half the national average, while blended schools with data enrolled only a slightly lower proportion than the national average.
- Virtual schools enrolled relatively few English language learners (ELLs) compared to the national average. Blended schools enrolled slightly higher proportion of ELL students.

- While the population in the nation's public schools as well as in blended schools split nearly evenly between females and males, virtual schools enrolled more females (53.4%).

### **Student-Teacher Ratio**

- The average student-teacher ratio in the nation's public schools was 16 students per teacher. Virtual schools reported having 1.7 times as many students per teacher (27), and blended schools reported some 1.5 times as many (24).
- Higher numbers of students per teacher at virtual and blended schools was associated with lower graduation rates and school performance ratings.

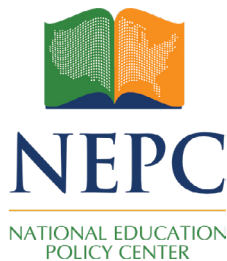
### **School Performance Findings**

- Because many states continue to have frozen accountability systems or to have implemented new systems excluding overall school ratings, only 28 of 40 states with virtual and/or blended schools had data on school performance available. Still, compared to prior reports, much more data was available overall. In states with ratings, only 17.8% (formerly 56%) of virtual schools and 8.9% (formerly 50%) of blended schools were unrated. In terms of total schools in this inventory, 29.9% of virtual schools and 48.7% of blended schools were in states not providing overall performance ratings.
- Overall, many virtual and blended schools continued to receive low performance ratings, with the proportion of acceptable ratings for virtual schools dropping this year to 42.8%. Blended schools did slightly better, with 44.1% rated acceptable.
- Among virtual schools, far more district-operated schools achieved acceptable performance ratings (50.7%) than charter-operated schools (35.2%). More schools operated by nonprofit EMOs performed acceptably (64.3%) compared to independent schools (44.1%) and to for-profit EMOs (37.2%). The pattern among blended learning schools was similar in regard to EMOs, but the charter school acceptable rate (50.7%) was higher than the district school rate (37.8%). For-profit EMO schools had the worst ratings, with only 19.4% found acceptable.
- Although the overall performance of virtual and blended schools was poor, the report highlights some exceptions as well as a few examples of especially poorly performing states.
- On-time graduation data were available for 310 full-time virtual schools and 176 blended schools. The graduation rates of 54.6% in virtual schools and 64.3% in blended schools fell far short of the overall average national graduation rate of 85%, but this is an improvement since 2017-18.
- District-operated schools reported higher graduation rates than charter schools for both virtual (+9.6 percentage points) and blended (+3.5 percentage points).

## Recommendations

In light of current evidence that full-time virtual and blended learning schools continue performing poorly, it is recommended that policymakers:

- Require federal and state education agencies to accurately identify and monitor full-time virtual and blended schools, remedying gaps in information on their performance.
- Ensure and enforce sanctions for virtual and blended schools performing inadequately.
- Use performance data to inform funding decisions.
- Establish requirements for reduced student-to-teacher ratios.
- Slow or stop the growth in these sectors until all reasons for their relatively poor performance have been identified and addressed.
- Sponsor research on virtual and blended learning programs and classroom innovations within traditional public schools and districts.
- Sponsor evaluations of promising models for virtual and blended learning schools, including district efforts born of the pandemic.
- Convene events with scholars, practitioners, representatives from state and federal education agencies, and other policymakers to more carefully design a model for full-time virtual schools. Such a model should include finance and oversight mechanisms ensuring that virtual schools focus on the interests of taxpayers and students, not of corporations.



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### Introduction

Over the past decade, the National Education Policy Center has issued research reports on full-time virtual schooling at the primary and secondary levels;<sup>2</sup> full-time blended learning schools were added to the reports in 2015. In addition to a wide range of related policy issues, topics have included who is enrolling in virtual schools and how those schools are performing. As an annual inventory, the reports are intended as a key research-based effort to track developments nationwide.

This edition contains detailed descriptions of full-time virtual and full-time blended schools operating during the 2019-20 school year. Findings suggest that the launching of new schools in those sectors has slowed, and fewer new schools are meeting criteria for inclusion in our reports. Although the number of schools has changed little, the average size of schools continues to increase, producing net enrollment increases. Growth continues despite predominantly negative evidence about virtual and blended school outcomes.

That said, as researchers and educators we note that we remain optimistic that virtual innovations can yet succeed and, despite limited research, may already be improving as school or district programs rather than as stand-alone schools. We recognize that many individual teachers across various school types are innovating and implementing blended learning models that may be having better outcomes than their stand-alone counterparts. Such innovations, however, are beyond the scope of this report and its focus on full-time virtual and blended schools.

This edition for the 2019-20 school year details student demographics, key school character-

istics, school performance, and sector growth. Research questions thus include:

- How many full-time virtual and blended schools operate in the U.S.? How many students do they enroll?
- What are the key organizational characteristics of these schools and who operates them?
- What are the demographic characteristics of students enrolled? How do 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 measures as school performance ratings and graduation rates?

Student demographics reported include grade level, race-ethnicity, sex, socioeconomic status, special education status, and English language learner status. Data on school performance includes a comparison of aggregate performance ratings and, when available, national norms. Also included are data on student-teacher ratios.

### **Data Sources, Selection Criteria, and Aggregate Calculations**

The findings presented here are based on publicly available data for the 2019-20 school year, collected, audited, and warehoused by public authorities. Data came primarily from state education agencies, sometimes supplemented by information from school and district websites. Data for missing student demographics and school characteristics came from the National Center for Education Statistics (NCES), although in some cases the most recent was for 2018-19.

The first research phase research involved verifying that previously identified schools continue operating and identifying new schools. To foster comprehensiveness and accuracy, many calls and emails requested information from schools and districts, and those schools with available and functioning email addresses received invitations to review and verify or correct our data.

As noted above, the scope of this inventory is limited to full-time, public elementary and secondary virtual and blended schools in the U.S. These include schools operated by for-profit and nonprofit Education Management Organizations (EMOs) as well as independent schools (those not privately managed). Among schools included are charters and state- or district-managed schools. Private schools—those funded in whole or part by tuition and fees, with no public funds—are excluded because no relevant data is available from state or federal agencies. 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 their unique NCES ID code or, for relatively new schools, by unique building or state-assigned school ID codes. These criteria helped identify and ex-

clude smaller district programs and schools not intended to be full-time, but to simply offer some virtual learning experience for a subset of students.<sup>3</sup> All schools included had evidence of enrollment during the 2019-20 school year, although schools enrolling fewer than 10 students were excluded. Such restrictions allow for more confidence in attributing various outcomes to specific types of schools.

The primary sources for data on total enrollment, student demographics, school characteristics and school performance were state-level datasets and school report cards for the 2019-20 school year. The most recent data available (2018-19) for grade level enrollment, race-ethnicity, and sex came from NCES (the Common Core of Data).

In many instances, aggregated data for virtual and blended schools reflect weighted means that have been calculated so that the influence of any given school is proportional to its enrollment. Where possible, comparisons were made to norms for all public schools in the United States.

## **Exclusions and Additions Between 2017-18 and 2019-20 School Years**

The current study includes 477 virtual schools and 306 blended learning schools. The process to identify potential schools, review them, and make decisions to include or exclude them was complex.

We initially identified nearly 400 additional schools since our report for 2017-18 school year, and we revisited close to 200 schools identified earlier but excluded from the prior inventory. After closely vetting these schools, we found 215 schools that had closed or been reconfigured. Eleven percent (64) had closed in either 2018 or 2019. We found that another 64 were programs or other entities not meeting our definition of a school. Close to 60 schools we considered make use of extensive technology, but they did not meet our definition as either full-time virtual or blended. A total of 57 schools under consideration simply had too little information available to determine whether to include them; many of these were approved in 2019-20 but were planned to open for the 2020-21 school year. Interestingly, a quarter of all schools we initially identified were eventually excluded because they either had no or fewer than 10 students in 2019-20, they had just closed, or they proved to be a program within a school or district. Most schools excluded for these reasons were district-operated virtual schools.

In general, after vetting hundreds of schools, we found the net number of virtual schools had decreased slightly and the number of blended learning schools increased slightly over the past two years. Although there were large fluctuations in the numbers of schools that were screened and eventually added or excluded from the inventory, the overall numbers of schools remained similar to the last few years. Interestingly, while the number of schools has not changed dramatically in recent years, overall enrollments in the virtual and blended schools continues to grow. This can be explained by increased enrollments in existing schools, and also the the fact that schools that closed or were excluded from the inventory tended to have very low enrollments so that the removal of scores of small schools had little impact on overall enrollment trends.

## Limitations

Readers should keep several general limitations in mind; such limitations are common to research in this area, although reports do not always acknowledge them.

*Incomplete demographic, class size, and performance data.* The tables and records in this inventory 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 free and reduced-price lunch status is relatively complete, data reported at the district level (including, for example, special education enrollment) is often unavailable. This was particularly problematic in states where charter schools are not considered Local Education Authorities or districts.<sup>4</sup>

*Comparison groups.* National aggregate results for all public schools provided the base for several comparisons in this report, which profiles 40 states having virtual and/or blended options.<sup>5</sup> 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 40 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 of the data used for this study.

*Instability in virtual and blended schools.* Full-time virtual and blended schools are rapidly evolving; the number of such schools, their demographic composition, and their current performance data may vary from year to year. 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 are welcome and can be submitted to the authors through the National Education Policy Center. The pandemic and the large enrollment increases in virtual schools during the 2020-21 school year may result in large changes in this sector that have not yet been studied.

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

### *Virtual 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 curriculum and blended instruction, although they vary in how they



combine virtual and face-to-face activities. 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 school experience.

Although these schools still account for a relatively small portion of the overall school choice options in the U.S., they constitute a fast-growing enrollment option. As initial evidence suggests, the pandemic that struck in spring, 2020 has resulted in very large growth in this sector. Unfortunately, it is still too early to study the nature and scope of expansion of virtual instruction during the pandemic, and it is still too early to determine to what extent schooling will revert to earlier practices post-pandemic.

Virtual schools overlap with two other choice options: homeschooling and charter schools. For some students, virtual school experience supplements the homeschool experience. In addition, 76% of virtual school students are enrolled in virtual charter schools, making them both virtual school students and charter school students. Appendix I-A contains charts that depict the number of virtual and blended schools and students by state. During the 2019-20 school year, 29 states had full-time virtual schools and full-time blended learning schools. While legislation for virtual schools usually precedes legislation for blended learning schools, five states allowed full-time blended schools to operate not full-time virtual schools: Hawaii, Illinois, New Jersey, Rhode Island and the District of Columbia. Five states have full-time virtual schools although they still do not have full-time blended learning schools.<sup>6,7</sup>

A total of 477 full-time virtual schools met selection criteria for the 2019-20 school year, 24 fewer schools than the 2017-18 report. Enrollments totaled 332,379 students, indicating an increase of nearly 30,000 students and a growth rate of some 11% since 2017-19 (see Figure 1).

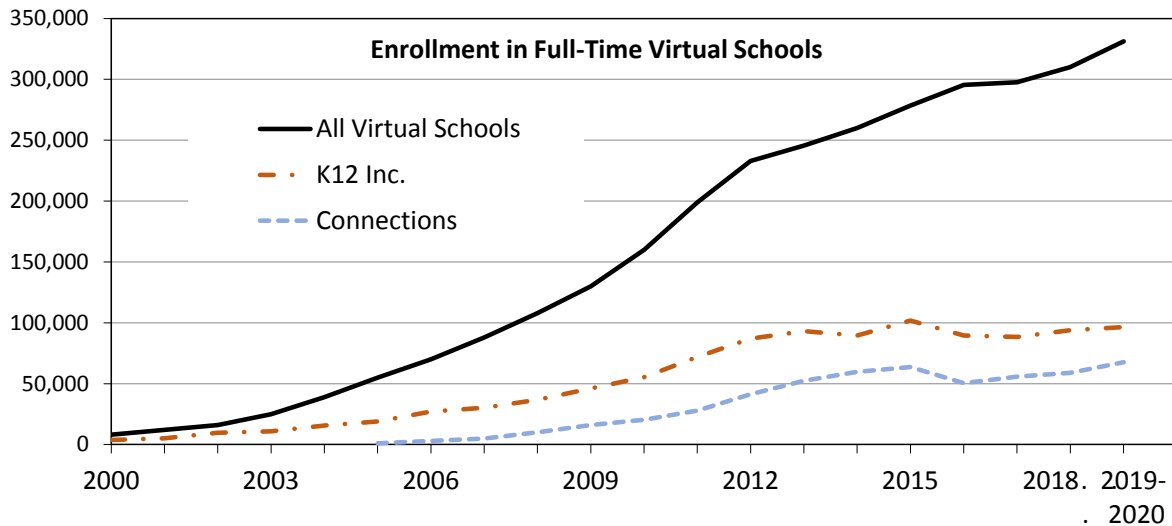
A total of 306 blended schools are included, enrolling 152,530 students. Although the number of blended schools increased by only five, net enrollment increased by just under 20,000 students.

Figure 1 illustrates the estimated enrollment growth in full-time virtual schools over the last two decades.<sup>8</sup> Figure 1 also illustrates the proportion of students in schools operated by the two largest for-profit Education Management Organizations (EMOs), K12 Inc. and Connections Education. K12 Inc. schools accounted for 29.1% of all virtual school enrollments, less than a one percentage point decrease from 2017-18. Connections Education schools accounted for 20.5% of all enrollments, indicating a small increase. Overall, the market share of these two large companies increased slightly since 2017-18, although it is still noticeably lower than 2015-16, when it was 59.5%. Nevertheless, these two key corporate, for-profit players appear to be consistently growing both in the number of schools they operate or work with and the number of students they enroll.

Figure 1 fluctuations for these two for-profit EMOs likely reflect shifts in their relationships with schools, changing from operators of schools to managers of schools or, in some cases, masking relationships entirely by using intermediary nonprofit organizations. For example, these corporations as well as others sometimes shift their relationship with schools from “operators” (EMOs) to “vendors.” In these cases, the EMOs are considered outside orga-

nizations providing specific services or products, primarily access to the EMO’s learning platform and curriculum.

**Figure 1. Enrollment Trends in Full-Time Virtual Schools**



New district-operated schools continue to add to the pool of full-time virtual schools, although they still tend to be small relative to virtual charter schools (see Table 1). As noted above, many were excluded from this inventory because they enrolled fewer than 10 students.

In 2019-20, 239 district virtual schools and 238 charter virtual schools were operating. While the number of district schools decreased by 29 schools since 2017-18, net enrollment increased by just over 18,000 students. The number of charter schools increased by five during the same period, and net enrollment increased by 16,400 students.

District schools now account for just over half of all virtual schools, but their share of enrollments is only 24.2%; charters account for 75.8%. Both continue to increase average school size. District average enrollment per school is 337, while charters average 1,059. A possible explanation is that district schools typically serve smaller targeted populations within district boundaries, while charter virtual schools are more likely to target statewide markets. Another possible explanation is that for-profit companies, which prioritize larger school size to maximize profit, rarely operate district virtual schools.

**Table 1. Distribution of Virtual Schools and Students Across District and Charter Sectors, 2019-20**

|                               | Total Number of Schools in 2019-20 | Percent of All Schools | Students | Percent of All Enrollment | Average Enrollment Per School |
|-------------------------------|------------------------------------|------------------------|----------|---------------------------|-------------------------------|
| District                      | 239                                | 50.1%                  | 80,424   | 24.2%                     | 337                           |
| Charter                       | 238                                | 49.9%                  | 251,955  | 75.8%                     | 1,059                         |
| Total for All Virtual Schools | 477                                | 100.0%                 | 332,379  | 100.0%                    | 697                           |

Private EMOs operated 29.8% of all full-time virtual schools, accounting for 59.1% of enrollment (see Table 2). Both nonprofit-EMOs and independent schools gained about a half percentage point in market share over the past two years.

Although charter schools were much more likely than district schools to be operated by a for-profit EMO, 58 district schools were operated by for-profits, primarily K12 Inc.

K12 Inc. remains the largest EMO in this sector; in 2019-20, it operated 71 full-time virtual schools enrolling 96,771 students, an increase of 8,000 students since 2017-18. Connections Education, the second largest for-profit EMO, operated 44 virtual schools enrolling 68,277 students, an increase of some 12,500 students since 2017-18. With six full-time virtual schools, Epic Charter Schools, largely concentrated in Oklahoma, is growing and in 2019-20 enrolled close to 22,000 students.

It is important to note that this report’s data on private operators likely under-represents the role of for-profit EMOs. In addition to operating some schools as EMOs, K12 Inc. and Connections also had a vendor relationship with scores of others. When an EMO operates a school, it has executive control of the school, including curriculum and programs, as well as hiring of administrators and teachers. In vendor relationships, the private company typically leases its learning platform and curriculum to the school, which retains management all other aspects, including hiring teachers and administrators. In 2018, California did implement legislation that restricted for-profit EMO management of public schools. However, close examination reveals that minor changes in the language of management agreements and, in many cases, the use of nonprofit intermediary organizations have allowed for-profit EMOs to continue doing business as they did prior to the legislation.

Aside from K12 Inc. and Connections Education, a number of other for-profit EMOs have entered the marketplace, although they still remain relatively small. Given the relatively lucrative circumstances<sup>9</sup> under which full-time virtual schools can operate, however, it is likely that still more for-profit EMOs will expand their business models to include full-time virtual schools.

Variance in the for-profit sector’s enrollments is great, with some for-profit EMOs operating schools with more than 10,000 students—and one enrolling more than 14,000 students in a single school unit.

Nonprofit EMOs operated only 41 virtual schools in 2019-20 and increased enrollments by 3,436 students since 2017-18. None are very large or control more a handful of schools. The largest are Learning Matters Educational Group (seven schools), Idaho Virtual Academy (four schools), Compass Charter schools (three schools), and Virtual Education Services Association (three schools).

Independent virtual schools also grew in the last two years, with an addition of 56 schools, although enrollments experienced a net decrease of some 7,000 students. Independent virtual schools averaged 407 students, nonprofit EMO-operated schools averaged 395 students, and—in stark contrast—for-profit EMO-operated schools averaged 1,384 students.

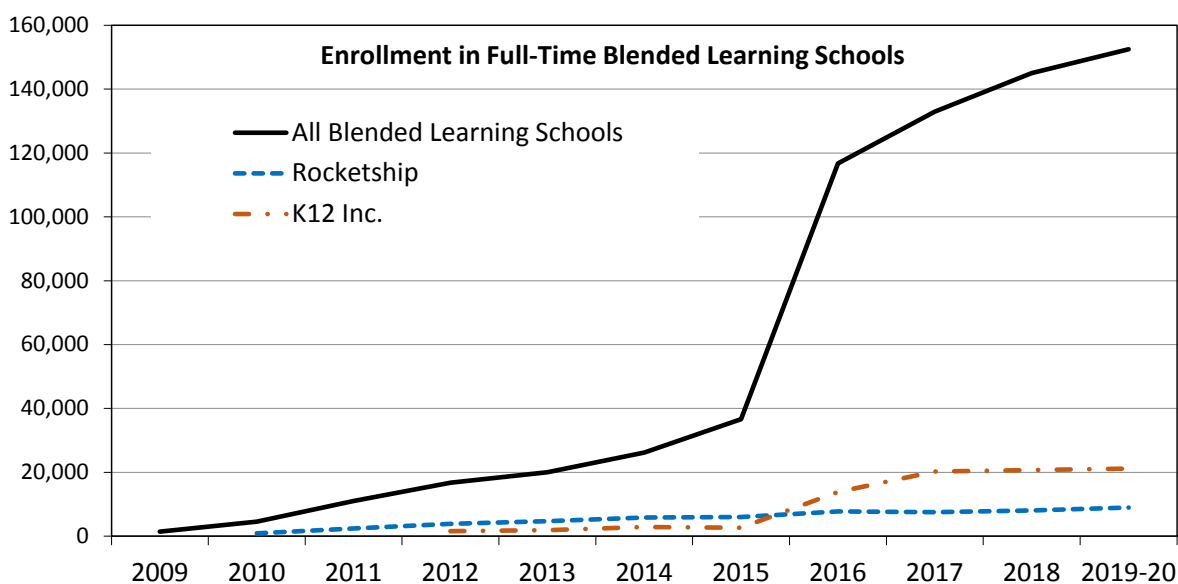
**Table 2. Distribution of Virtual Schools and Students by Operator Status, 2019-20**

|                               | Total Number of Schools in 2019-20 | Percent of All Schools | Students        | Percent of All Enrollment | Average Enrollment Per School |
|-------------------------------|------------------------------------|------------------------|-----------------|---------------------------|-------------------------------|
| Independent                   | 294                                | 61.6%                  | 119,679         | 36.0%                     | 407                           |
| Nonprofit EMO                 | 41                                 | 8.6%                   | 16,181          | 4.9%                      | 395                           |
| For-profit EMO                | 142                                | 29.8%                  | 196,519         | 59.1%                     | 1,384                         |
| <i>K12 Inc.</i>               | <i>(71)</i>                        | <i>(14.9%)</i>         | <i>(96,771)</i> | <i>(29.1%)</i>            | <i>(1,363)</i>                |
| <i>Connections</i>            | <i>(44)</i>                        | <i>(9.2%)</i>          | <i>(68,277)</i> | <i>(20.5%)</i>            | <i>(1,552)</i>                |
| Total for All Virtual Schools | 477                                | 100.0%                 | 332,379         | 100%                      | 697                           |

### *Blended Schools*

We found 306 blended learning schools enrolling 152,530 students in 2019-20. As Figure 2 shows, blended school enrollments have continued to grow over the past few years, although at a slower rate than was evident between 2015 and 2016. The growth is due both to new schools and to EMO-operated schools increasing average size. The pronounced jump in the number of blended learning schools between 2015-16 and 2016-17 was due to a large number of new schools opening as well as to changes in our data collection methods, which helped identify more schools than previously. Among larger EMOs in this sector, K12 Inc. is the largest for-profit and Rocketship Education the largest nonprofit operator.

**Figure 2. Enrollment Trends in Full-Time Blended Schools**



Between 2017-18 and 2019-20, the number of blended charter schools increased by only six—but net enrollments increased by nearly 20,000 students. Average enrollments in both district and charter-operated blended learning schools increased. Across all, average enrollment per school grew from 443 in 2017-18 to 498 in 2019-20 (see Table 3).

**Table 3. Distribution of Blended Schools and Students Across District and Charter Sectors, 2019-20**

|          | Total Number of Schools | Percent of All Blended Schools | Students | Percent of All Enrollment | Average Enrollment Per School |
|----------|-------------------------|--------------------------------|----------|---------------------------|-------------------------------|
| District | 126                     | 41.2%                          | 40,439   | 26.5%                     | 321                           |
| Charter  | 180                     | 58.8%                          | 112,091  | 73.5%                     | 623                           |
| Total    | 306                     | 100.0%                         | 152,530  | 100.0%                    | 498                           |

In 2019-20, 126 blended schools were district-operated and 180 were charter-operated. Enrollments in the charters were substantially larger (623 students per school) than those in district schools (321 students per school). While the charters accounted for 59% of all blended schools, their much larger size accounts for their enrollment of 73.5% of all blended learning students.

Most blended learning schools are district-operated schools with smaller enrollments than those managed by private EMOs (see Table 4). Independents had an average of 397 students per school, nonprofit EMOs an average of 506 students, and for-profit EMOs an average 876 students.

**Table 4. Distribution of Blended Schools and Students by Operator Status, 2019-20**

|                | Total Number of Schools | Percent of All Blended Schools | Students | Percent of All Enrollment | Average Enrollment Per School |
|----------------|-------------------------|--------------------------------|----------|---------------------------|-------------------------------|
| Independent    | 170                     | 55.6%                          | 67,410   | 44.2%                     | 397                           |
| Nonprofit EMO  | 92                      | 30.1%                          | 46,580   | 30.5%                     | 506                           |
| For-profit EMO | 44                      | 14.4%                          | 38,540   | 25.3%                     | 876                           |
| Total          | 306                     | 100.0%                         | 152,530  | 100%                      | 498                           |

EMOs are largely responsible for enrollment growth in full-time blended learning. As in the virtual school sector, the most involved for-profit EMO is K12 Inc. Its 11 schools enroll just over 21,000 students. Connections Education has also been extensively engaged with blended learning schools (these were earlier called Nexus Schools). Over the last several years, however, Connections has reconfigured its work to allow most schools to select more limited services and supports. For this reason, most of the blended schools affiliated with Connections now have a vendor relationship rather than an EMO relationship. Connections is a subsidiary of Pearson Education, and its reorganized school services now fall within the subsidiary Pearson Online and Blended Learning Services.

Other for-profits operating in this sector include Success VLC (12 schools), Opportunities for Learning Public Charter Schools (four schools), Epic Charter Schools (four schools), and Edtec Central LLC (three schools).

Nonprofit EMOs, however, are much more prevalent in the blended sector than their for-profit counterparts. In total, we identified 30 different nonprofit EMOs operating blended learning schools. The two biggest were Rocketship Education (17 schools) and Alliance College-Ready Public Schools (15). Other nonprofits in this sector include Summit Public Schools (11 schools), SIATech (four), FirstLine Schools Inc. (four), Roads Education Organization (four), Pathways Management Group (three), Cornerstone Charter Schools (three), Education for Change Public Schools (three), and Widening Advancement for Youth (three).

## Student Demographics

Data on demographics came primarily from state education agencies for the 2019-20 school year. For a small number of schools lacking readily available data, we used the most recent data from the National Center for Education Statistics, that for 2018-19.

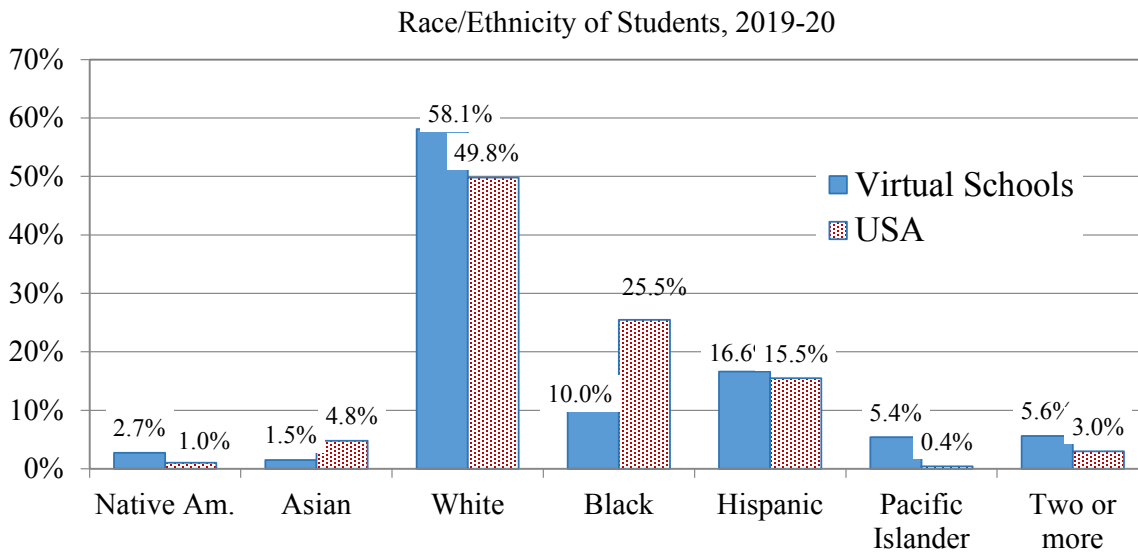
### *Race-Ethnicity*

Data on race/ethnicity was drawn for 386 virtual schools and 263 blended learning schools.

In prior years, the proportion of minority students in virtual schools had slowly increased a few percentage points. Over the last two years, however, the numbers remained largely

unchanged except for a 2% drop in the proportion of Black students and a 5% increase in Native Hawaiian/Pacific Islander students. Aggregate data on student ethnicity from virtual schools continues to differ substantially from national averages.<sup>10</sup> Just over 58% of the students in virtual schools were White-Non-Hispanic while the national mean was 49.8% (see Figure 3). Black and Asian American children were underrepresented relative to the national public school population, while other race/ethnicity groups are relatively similar. The most striking disparity is that only 10% of students in virtual schools were Black while the national average was 25.5%.<sup>11</sup>

**Figure 3. Race/Ethnicity of Students in Virtual Schools Compared with National Averages, 2019-20**



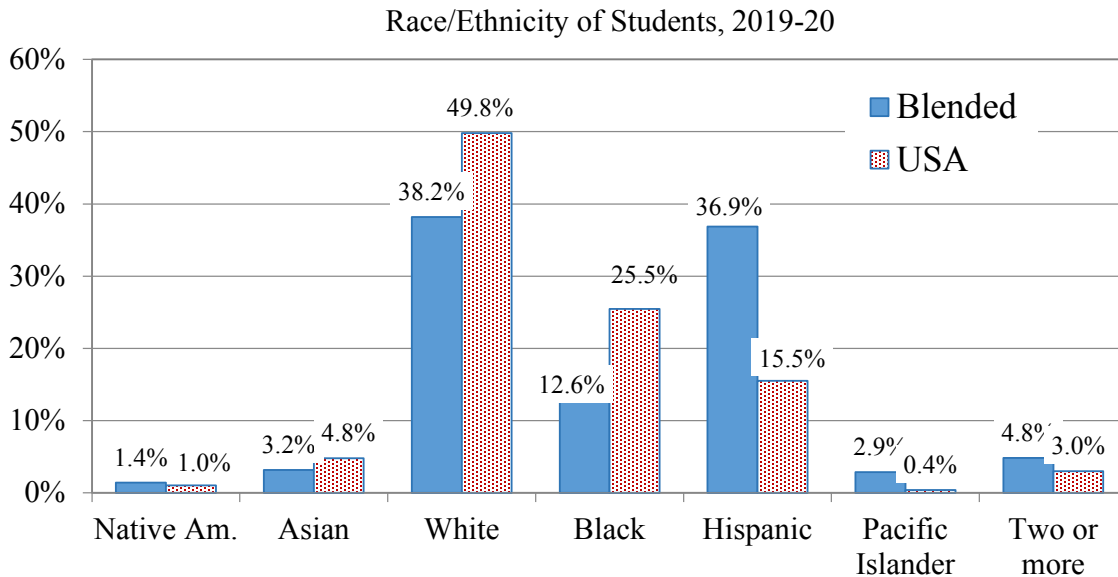
The fact that minority low-income families may have less access to technology may help explain underrepresentation of the Black and Asian American groups, even though some virtual schools lend their students computers and/or pay for internet access. Possible explanations for the over-representation of White students include White flight from urban areas or virtual schools constituting the only viable form of school choice in rural areas with fewer minority students. Also, a 2017 study in Ohio found that students and families appear to self-segregate with low-income, lower achieving White students more likely to choose e-schools and with low-income, lower achieving minority students more likely to choose brick-and-mortar charter schools.<sup>12</sup> These possible explanations warrant further exploration to determine whether they can explain underrepresentation of some ethnic groups.

Figure 4 displays demographics of students enrolled in blended schools. Relative to the student population of virtual schools, the blended school student population better matched national averages. One noteworthy difference is that Hispanic enrollment in blended schools is substantially higher than in traditional public schools. This finding may be explained by the fact that blended learning schools are concentrated in California and Colorado—states with larger concentrations of Hispanic students. As blended schools expand in other states,

it is likely that the overall proportion of Hispanic enrollments will more closely resemble the national average.

As was true for full-time virtual schools, Black students are substantially underrepresented in blended learning; Blacks comprise only 12.6% of enrollment in blended learning schools compared to 25.5% of national public school enrollment.

**Figure 4. Race/Ethnicity of Students in Blended Schools Compared with National Averages, 2019-20**



Charter virtual and blended schools had slightly more minority students than their district counterparts. Those operated by nonprofit EMOs served slightly more minority students than those that were independent or operated by for-profit EMOs.

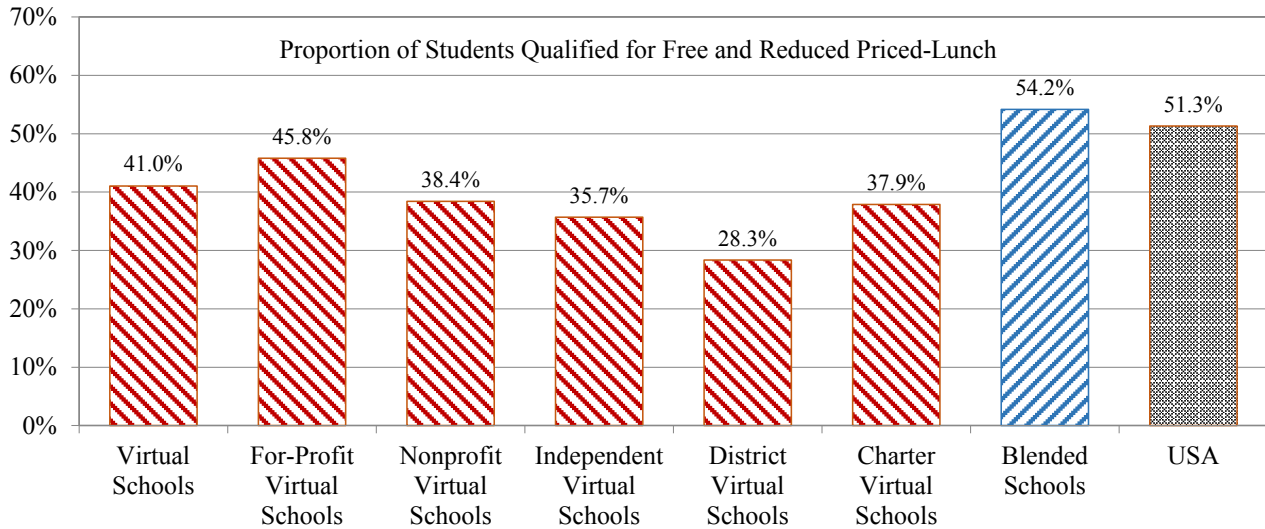
### *Free and Reduced-Price Lunch*

As illustrated in Figure 5, data on students qualifying for free or reduced-price lunch (FRL) was available for 386 virtual schools. Among students in those schools, 41% met FRL requirements—10 percentage points lower than the national average of 51.3%. District schools had a slightly lower percentage (28.3%) than charters (37.9%); for-profits had a higher percentage (45.8%) than nonprofits (38.4%).

Blended schools with available data (263) enrolled a much higher proportion of FRL students than virtual schools. In 2019-20, 54.2% of the students enrolled qualified for free or reduced-priced lunch, more than the national average. For-profit blended schools enrolled 51.7%, independents enrolled 41.8%, and nonprofits enrolled a substantially larger 63.8%. The difference in this area is noticeable, and it may point to a genuine desire on the part of nonprofit schools to provide better learning opportunities for economically disadvantaged students.



**Figure 5. Students Qualifying for Free and Reduced-Priced Lunch, 2019-20**



### *Special Education and English Language Learner Status*

As illustrated in Figure 6, the proportion of special education students attending full-time virtual schools, 6.7%, was far below the national average of 13.1%. Students in this population have an identified disability and an Individualized Education Plan (IEP). A much higher proportion of students with special education needs were in blended learning, (12.4%), a slight increase from the past two years.

Special education data comes from state education agencies and, in some cases, from NCES. It is important to note that data was available for only 124 virtual schools and 33 blended learning schools. Many schools were excluded because there was no data or because the data reported for the schools was actually for the larger district housing the school. Given data limitations, the actual proportion of students with disabilities in virtual and blended schools may be lower than it appears. That proportion is unlikely to be higher, because there is a strong financial incentive to report this data: Categorical funding designated for special education students would noticeably increase revenues.

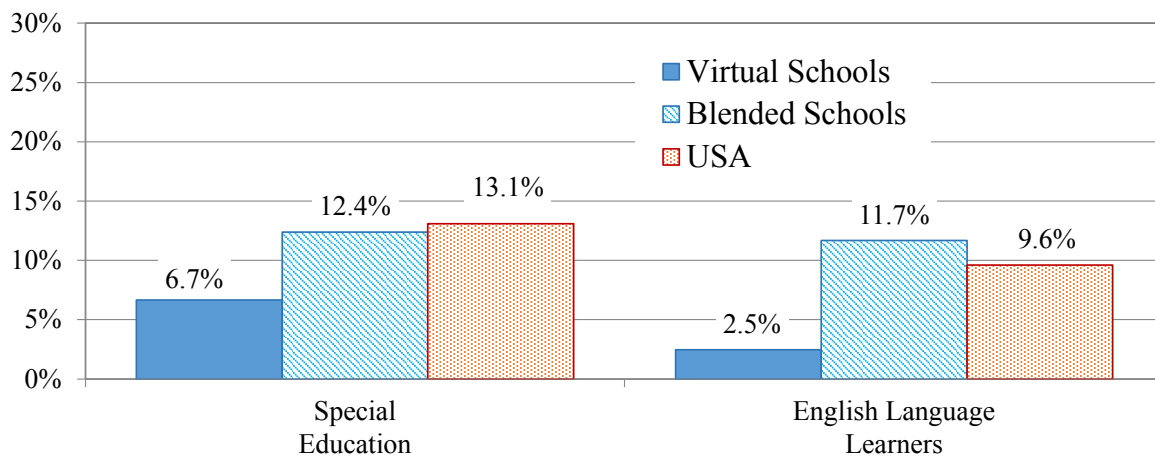
Although blended schools and—to a lesser extent—virtual schools appear to be enrolling a significant proportion of students with disabilities, it is not possible to determine the relative proportions of students with mild, moderate, and severe disabilities, making a comparison with traditional public 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.<sup>13</sup>

The overall proportion of students with IEPs in virtual and blended learning schools indicates that these schools may be becoming more attractive for children with disabilities relative to brick-and-mortar charter schools. It is also possible that these schools are labeling

children at a higher rate after they arrive. Another possibility is that the private companies operating many of these virtual schools are marketing to the special needs population because of the additional federal and state funding that follows them.<sup>14</sup>

Aside from anecdotal evidence from special education teachers who have contacted us, little is known about how virtual schools deliver special education services online. A study from 2012<sup>15</sup> did indicate 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 for students with disabilities were not translating into increased spending on special education.<sup>16</sup>

**Figure 6. Proportion of Students Classified as Special Education, or Classified as English Language Learners, 2019-20**

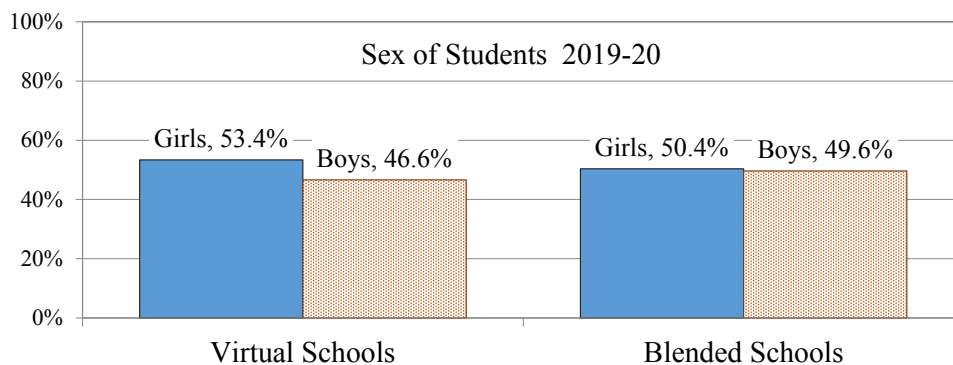


English language learners (ELLs) represent a growing proportion of students in the nation's schools, especially in the states served by virtual and blended schools, since many of these states have high concentrations of students whose first language is not English. Of the 215 full-time virtual schools with available data, only 2.5% of students were classified as ELLs—a striking difference from the 9.6% national average<sup>17</sup> (see Figure 6). In contrast, available data from 194 blended learning schools indicated that English language learners accounted for 11.7% of their student population.

### Sex

While the population in the nation's public schools is nearly evenly split between females and males, the 2019-20 student population in both virtual schools (375 schools with data) and blended schools (257 schools with data) skewed female: 53.4% in virtual schools, and a more equal 50.4% in blended schools (see Figure 7). These ratios remained largely the same for charter, independent and for-profit schools, while the percentage was slightly higher in district virtual schools.

**Figure 7. Distribution of Students by Sex in Virtual and Blended Learning, 2019-20**



### *Enrollment by Grade Level*

To illustrate the distribution of students in virtual schools as accurately as possible, Figure 8 details actual student enrollment by grade for 2019-20; comparisons were based on national averages. A disproportionate number of virtual school students 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 a bit surprising because the lower cost of educating at the primary and lower secondary level has made those options more popular in brick-and-mortar charters, while in general, virtual schools more often serve upper secondary-level options.

District-operated virtual schools served more students at that level than charter schools. For-profit EMOs, unlike nonprofit EMO and independent schools, served comparatively few upper-level students. The dominant for-profits K12 Inc. and Connections Education not only served substantially fewer students at the upper level but also showed stark enrollment drops after Grade 9.

As is true for the largest operators, other for-profit EMO virtual schools typically see steep declines after Grade 9. In contrast, many district-operated schools serve only students in the final few grades of high school, offsetting the for-profit decline in higher grades. This decline in the for-profit grade cohorts may be related to low graduation rates in virtual schools if their dropout rates are high.

**Figure 8. Enrollment by Grade Level for Virtual Schools and U.S., 2019-20**

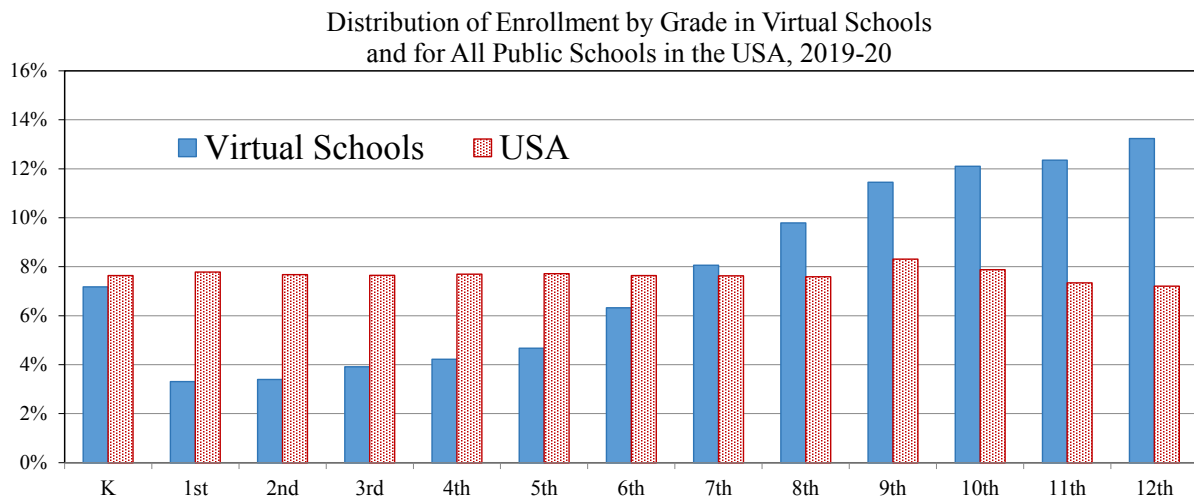
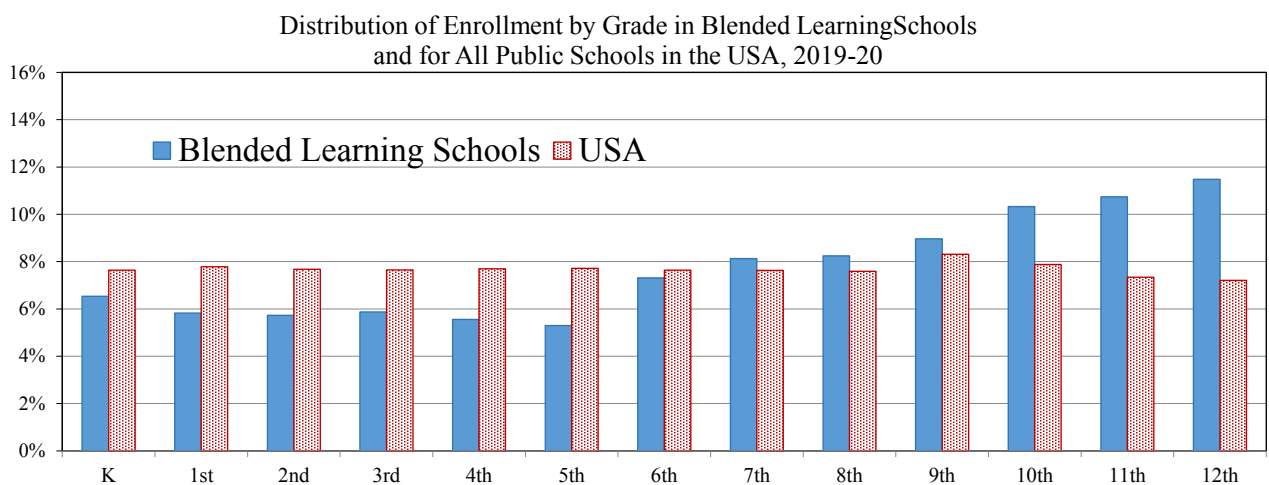


Figure 9 illustrates grade-level student distribution in blended schools, which have high concentrations of high school students and fewer elementary and middle school students. The large concentration of Grade 12 students may be due to students using blended schools for credit recovery or as an alternative for late graduation. Given that students at the upper secondary level are likely to be more technologically savvy, and given that more mature students are better able to self-regulate and work independently, it makes sense to see concentrations of students in those grades attending blended schools. High school students may also have greater expertise and interest in blending learning.

**Figure 9. Enrollment by Grade Level for Blended Schools and U.S., 2019-20**



## Student-Teacher Ratios

Far more schools reported demographic data for their students than reported student-teacher ratios or metrics that allowed for calculating them. However, a number of states did report data on student-teacher ratios at the school level, allowing us to calculate means for them by using 2019-20 enrollment as a weight. This calculation produced a mean ratio representing the average class size that students experienced rather than the average class size that schools provided.

Table 5 contains key indicators related to student-teacher ratios in full-time virtual schools. While the average ratio was approximately 16 students per teacher in the nation's public schools, virtual schools reported nearly twice as many students per teacher (26.8). Even so, this represents a reduction of more than 50% since our last report, when the number of students per teacher was more than 59. District virtual schools had a similar average student-teacher ratio (27.7), slightly higher than that in charters (26.4).

Among virtual schools, independents had a somewhat lower average student-teacher ratio (22.5) than nonprofits (26.4) and for-profits (29.2). The nonprofit ratio was similar to that for all virtual schools.

**Table 5. Student-Teacher Ratios in Virtual Schools, 2019-20**

|                                | Number of Schools with Data | Mean Students per Teacher | SD   | Min  | Max   |
|--------------------------------|-----------------------------|---------------------------|------|------|-------|
| All Virtual Schools            | 209                         | 26.8                      | 41.0 | 1.0  | 261.1 |
| Independent                    | 132                         | 22.5                      | 50.0 | 1.0  | 261.1 |
| Nonprofit                      | 14                          | 26.4                      | 28.6 | 7.0  | 119.8 |
| For-Profit                     | 63                          | 29.2                      | 10.5 | 15.8 | 66.0  |
| District                       | 123                         | 27.7                      | 46.5 | 1.0  | 261.1 |
| Charter                        | 86                          | 26.4                      | 30.2 | 1.0  | 249.0 |
| National Average <sup>18</sup> |                             | 16.0 <sup>19</sup>        |      |      |       |

However, these ratios are heavily affected by many unexpected outliers reporting substantially different numbers than they did earlier. Some virtual schools reported fewer than one student per teacher and others more than 700.

Table 6 includes blended school data by EMO, district, and charter status. On average, blended learning schools have larger student-to-teacher ratios (24.4 students per teacher) than the national average but still lower than that for full-time virtual schools.

In the blended sector, nonprofit-managed schools had the lowest number of students per teacher (21.4), compared to independents (23.3) and for-profits (32.6). District schools (29.2) had a higher ratio than charters (23).

Whereas virtual schools saw significant reductions in the number of students per teacher

across all subsets, blended schools' averages were fairly stable, with some modest reductions of three to four points among certain subsets.

**Table 6. Student-Teacher Ratios in Blended Learning Schools, 2018-19**

|                     | Number of Schools with Data | Mean Students per Teacher | SD   | Min | Max   |
|---------------------|-----------------------------|---------------------------|------|-----|-------|
| All Blended Schools | 200                         | 24.4                      | 21.5 | 2.9 | 152.4 |
| Independent         | 98                          | 23.3                      | 24.0 | 3.1 | 152.4 |
| Nonprofit           | 68                          | 21.4                      | 10.3 | 2.9 | 75.3  |
| For-Profit          | 34                          | 32.6                      | 27.3 | 7.1 | 145.0 |
| District            | 81                          | 29.2                      | 30.4 | 3.1 | 152.4 |
| Charter             | 119                         | 23.0                      | 10.3 | 2.9 | 75.3  |
| National Average    |                             | 16.0                      |      |     |       |

Overall, student-teacher ratios for both virtual and blended schools have improved in recent years, but still lag well behind the national average of 16 students. This has implications for school performance. A correlational analysis between student-teacher ratios and graduation rates of virtual and blended schools showed a weak, but statistically significant, negative correlation between the two variables ( $r = -.189$ ;  $p < .001$ ). In other words, as the number of students-per-teacher at a school increase, graduation rates tend to decrease.

School ratings are discussed in detail below, but it is worth noting here that a comparison of means showed a statistically significant difference in the average student-teacher ratio between schools that had an “acceptable” versus an “unacceptable” performance rating ( $t = -4.18$ ;  $p < .001$ ). Schools with an “acceptable” rating had an average student-teacher ratio of 24.3, whereas schools with an “unacceptable” rating had an average student-teacher ratio of 46.9.

Generally, poor student-teacher ratios will likely continue to perpetuate poor performance indicators for both blended and virtual schools. The averages have improved, but it remains to be seen if the trend will continue, especially considering potential changes due to the massive rise in distance learning triggered by the pandemic. As more districts engage in virtual and blended learning schools, lower student-to-teacher ratios may evolve.

### School Performance Findings

This section reviews overall school report card ratings and on-time graduation rates. General findings and trends are presented and discussed here, while detailed findings by state appear in Appendix I-B.

The first decade of the new millennium provided little research into full-time virtual and blended school student achievement at the K-12 level, and results of existing research were

negative. A review of early evidence on the performance of virtual schools is available in Miron and Urschell (2012)<sup>20</sup> and in Miron, Shank, and Davidson (2018).<sup>21</sup> The second section of this report, “Research into Virtual and Blended Schools: A Lasting Legacy of Little Impact,” offers additional performance information for both full-time virtual and blended learning schools. Existing evidence strongly indicates that virtual schools are performing poorly with no signs of improvement. And, aside from self-reported or self-funded evidence, research indicates that blended learning schools are performing only slightly better.

This overview indicates that virtual schools have been studied more than blended schools, which are likely to receive more scrutiny because of their increasing numbers and size.

### *Methodology*

State education agencies provide a metric for school performance when they assign school performance ratings, typically on school report cards. While some of our earlier research incorporated mean performance on state assessments, here we focus only on school report cards because they provide a more holistic picture. A second and more compelling reason is that over the past two years, many states introduced new tests aligned with college- and career-ready standards, while others changed their cut scores or expectations for “proficiency,” or they adopted a new scoring scale. When states took such actions, test results were no longer comparable over time. Moreover, some states now report limited or no school performance data from state assessments.

Performance data is limited by the availability of report cards for schools and districts. As a result of the changing and currently incomplete database, variations in school performance since our last report should be interpreted cautiously.

Gaps in report card ratings are due to several factors. Due to current flux in accountability systems resulting from new requirements under the Every Student Succeeds Act (ESSA) and from flexibility waivers and extensions granted under the Elementary and Secondary Education Act (ESEA), many states have suspended their accountability systems as they finalize new formats and transition to new standards and state tests. Several states do offer some school report card data but are not currently assigning an overall performance rating; others have no current school report card data available and offer no explanation. Finally, Wyoming does not count virtual schools as separate entities but instead assigns student data to the brick-and-mortar buildings students would otherwise attend. While the state does report on virtual schooling in aggregate, it does not separate the achievement data of students attending virtual schools full-time from those taking one or two classes online. As a result, meaningful school ratings for virtual and blended schools were available for only 28 of the 40 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 deci-

sions about where to send their children to school, but others have not reported any data at all during current transitions.

### *State School Performance Ratings*

Current report card data is comparable to that in our last report, although it still suffers from the same limitation: a lack of available data for all states. Further, there is also insufficient detail from some states as to what measures or indicators are used to determine school performance. While annual school report cards often include multiple measures varying from state to state, they tend to include student performance in math and English/language arts, graduation rates, and achievement gaps. In some states, measures also include performance in science and social studies; percentage of students taking advanced coursework like Advanced Placement (AP), International Baccalaureate (IB), and dual-credit courses; performance growth; college and career readiness; attendance; staff retention; student and parent satisfaction; and/or ACT/SAT scores. But even as the type, number, and weighting of such indicators in formulas to determine overall school performance ratings vary across states, such ratings do reflect an individual state's educational values. Therefore, they provide a reasonable representation of an individual school's performance relevant to state expectations.

For the purposes of this report, a coding system was used to aggregate ratings across the 28 states with school performance data. Each received one of three possible ratings: “academically acceptable,” “academically unacceptable,” or “not rated” (meaning that the state assigned overall school performance ratings for 2019-2020 but did not do so for that particular school). Due to the impacts of COVID-19, many states opted not to offer summative performance ratings for the 2019-20 school year, and so some data from 2018-19 was substituted. It is also important to note that in addition to some schools being not rated within a state, there are also a number of states that do not assign schools an overall summative rating. These include California, Hawaii, Idaho, Kansas, Kentucky, Maine, Minnesota, Nebraska, Tennessee, and Utah. When states did include overall ratings, state agencies may have provided guidance about how to interpret them. Lacking such guidance, we determined a cutoff score based on two factors: an interpretation of the scale being used and the number of schools receiving each rating. This common coding system for individual schools allowed for aggregate findings within and across states.<sup>22</sup>

Overall school performance ratings for virtual and blended schools were available for only 28 out of the 40 states included in this year's report, either for reasons noted above or because state ratings for 2019-2020 had not been released in time for this report's publication. Given inescapable limitations on data, the school performance results captured here should be interpreted cautiously.

Overall school performance ratings for 2019-20 (or 2018-19) are based on report cards in the following, with italics indicating which are additions since our last report: Alaska, *Alabama*, Arkansas, Arizona, Colorado, District of Columbia, Florida, Georgia, *Illinois*, Indiana, Louisiana, Massachusetts, *Michigan*, Nevada, *New Hampshire*, *New Jersey*, New Mexico, North Carolina, Ohio, *Oklahoma*, *Oregon*, Pennsylvania, Rhode Island, South Carolina, South Da-



kota, Texas, *Washington*, and Wisconsin. Unfortunately, although Utah had school performance ratings for 2017-18, it had none for 2019-20, presumably due to COVID-19 impact.

Performance ratings were potentially available for 338 (70.9%) of 477 full-time virtual schools and 157 (32%) of 306 blended learning schools. Both received fewer acceptable state ratings for 2019-20 compared to 2017-18, with the percentage for virtual schools dropping from 48.5% to 42.8%. A total 44.1% blended schools were judged acceptable.

Of the 103 for-profit EMO virtual schools rated, 35 (34.0%) were found acceptable (see Table 7). Of these, K12 Inc. managed 47 and Connections Education 28; all other EMOs managed one to three schools each. Of the K12 Inc. schools, 34 (72.3%) were rated unacceptable. Of the 28 Connections Education schools, 16 (57.1%) were rated as unacceptable. Of the 31 rated blended schools operated by for-profit EMOs, only six (19.4%) were found acceptable. All 12 Success VLC schools were found unacceptable, as were four of five K12 Inc. schools. All other for-profit EMOs managed one to three blended schools each. Consistent with our overall findings, virtual schools appear to be outperforming blended schools in the for-profit sector: 34.0% acceptable and 19.4% acceptable, respectively.

**Table 7. Percentage of Virtual Schools with Acceptable School Performance Ratings, 2019-20**

|                   | Acceptable |                                 | Unacceptable |                                 | Unrated |       |
|-------------------|------------|---------------------------------|--------------|---------------------------------|---------|-------|
|                   | N          | Percent of Schools with Ratings | N            | Percent of Schools with Ratings | N/A     | Blank |
| Full-Time Virtual | 119        | 42.8%                           | 159          | 57.2%                           | 60      | 144   |
| Independent       | 75         | 44.1%                           | 95           | 55.9%                           | 38      | 87    |
| Nonprofit         | 9          | 64.3%                           | 5            | 35.7%                           | 13      | 14    |
| For-Profit        | 35         | 37.2%                           | 59           | 62.8%                           | 9       | 43    |
| Charter           | 50         | 35.2%                           | 92           | 64.8%                           | 20      | 76    |
| District          | 69         | 50.7%                           | 67           | 49.3%                           | 40      | 68    |

*Note.* Unrated: N/A = schools within states that have overall school performance ratings, but are not available for certain schools; Unrated: Blank = schools in states without overall state performance ratings.

Of the 27 nonprofit EMO virtual schools rated, nine (33.3%) were rated acceptable. Within this nonprofit group, only one EMO managed more than three schools: Learning Matters Educational Group managed seven schools, with two (28.6%) rated acceptable. Of the 30 blended schools operated by nonprofit EMOs, 14 (46.7%) were found acceptable. In this group, only FirstLine Schools operated more than three schools. All four of its schools were rated unacceptable, representing 36.4% of all unacceptable ratings (11) for nonprofit managed blended schools. The several other EMOs in this category managed one to three schools each. In contrast to a general trend for virtual schools to outperform blended schools, in this nonprofit EMO-managed sector, blended schools (46.7% acceptable) outperformed virtual schools (33.3%)

The schools managed by one large nonprofit EMO—Rocketship Education— are not included here, because the states or districts it serves do not report performance ratings. This is a notable exclusion, because Rocketship manages 17 schools, all blended charters. The EMO’s single school in Wisconsin received an acceptable rating. Of Rocketship’s total 17 schools: 12, or 70.6% were in California; two, or 11.8% were in Tennessee; another two, or 11.8%, were in the District of Columbia.

Of the 170 independent virtual schools that had ratings, 75 (36.2%) were found acceptable by their respective state accountability systems. Ninety-five (55.9%) of these schools had unacceptable ratings.

In addition to the 159 virtual schools that received unacceptable ratings, 60 virtual schools were not rated at all. In some cases, states did not provide ratings because schools did not meet participation rate thresholds; in other cases, the lack of ratings was unexplained.

The 44.1% of blended schools rated acceptable in 2019-20 appears effectively unchanged from the 44.6% rating in 2017-18. Table 8 contains relevant key findings.

Over the last two years, performance ratings for nonprofit EMO blended schools have notably improved, from almost none rated acceptable in 2017-18 to over half (56%) now rated acceptable. A partial explanation is that specific schools included in the inventory have changed substantively. Slightly less than half of all independent blended schools had acceptable ratings (49.4%), a slight increase from 2017-18 (47.8%). Over the same period, the percentage acceptable for district schools declined (from 54.8% to 37.8%) while that for charter schools improved (from 35.3% to 50.7%).

**Table 8. Percentage of Blended Schools with Acceptable School Performance Ratings, 2019-20**

|                   | Acceptable |                                 | Unacceptable |                                 | Unrated |       |
|-------------------|------------|---------------------------------|--------------|---------------------------------|---------|-------|
|                   | N          | Percent of Schools with Ratings | N            | Percent of Schools with Ratings | N/A     | Blank |
| Full-Time Blended | 119        | 44.1%                           | 80           | 55.9%                           | 14      | 149   |
| Independent       | 75         | 49.4%                           | 44           | 50.6%                           | 9       | 74    |
| Nonprofit         | 9          | 56.0%                           | 11           | 44.0%                           | 5       | 62    |
| For-Profit        | 35         | 19.4%                           | 25           | 80.6%                           | 0       | 13    |
| Charter           | 50         | 50.7%                           | 34           | 49.3%                           | 8       | 103   |
| District          | 69         | 37.8%                           | 46           | 62.2%                           | 6       | 46    |

*Note.* Unrated: N/A = schools within states that have overall school performance ratings, but are not available for certain schools; Unrated: Blank = schools in states without overall state performance ratings.

In addition to the 80 blended schools that received unacceptable ratings, 14 blended schools received no rating at all.

## Graduation Rates

Four-year graduation rates were obtained from state sources and checked to ensure a common measurement standard of students graduating from high school within four years after entering ninth grade. Percentages include all types of diplomas, traditional and otherwise, although states may specify different rates for different types of diplomas.

Many states did not issue report cards due to the coronavirus pandemic, and several (Georgia, Hawaii, Kentucky, Nebraska and Wisconsin) did not have graduation data available for 2019-20. In such cases and where possible, data from the prior school year (2018-19) was used. In states with available graduation rates, some schools' rates were masked because of low enrollment; other relatively new schools may not have had a complete 9-12 student cohort. And, of course, many schools served only grades below the high school level. Of the 472 virtual schools in the inventory, information on graduation rates was available for 310 (65.7%); of the 305 blended schools, information was available for 176 (57.7%).

As Table 9 illustrates, on-time graduation rates of 54.6% for full-time virtual and 64.3% for blended schools were lower than the overall average national graduation rate of 85% (NCES, 2020). Blended schools outperformed virtual schools by nearly 10 points, and while falling below the national average, their rate indicates an improvement of 2.8 points over the 2017-18 rate of 61.5%. Virtual schools experienced similar improvement, 4.5 points over the earlier rate of 50.1%. These increases for both school types continue the promising trend of improving graduation rates evident in earlier reports.

**Table 9. Four-Year Graduation Rates, 2019-20**

| Virtual Schools                          | Number of Schools with Data | Graduation Rate | Blended Learning Schools | Number of Schools with Data | Graduation Rate |
|--|-----------------------------|-----------------|--------------------------|-----------------------------|-----------------|
| All Virtual Schools                      | 310                         | 54.6%           | All Blended Schools      | 176                         | 64.3%           |
| Independent Virtual                      | 191                         | 53.1%           | Independent Blended      | 101                         | 67.7%           |
| Nonprofit Virtual                        | 30                          | 57.2%           | Nonprofit Blended        | 42                          | 69.5%           |
| For-Profit Virtual                       | 89                          | 55.4%           | For-Profit Blended       | 33                          | 53.9%           |
| <i>K12 Inc.</i>                          | <i>(46)</i>                 | <i>(56.3%)</i>  | <i>K12 Inc.</i>          | <i>(7)</i>                  | <i>(80.9%)</i>  |
| <i>Connections</i>                       | <i>(30)</i>                 | <i>(62.0%)</i>  | <i>Success VLC</i>       | <i>12</i>                   | <i>(28.6%)</i>  |
| District Virtual                         | 149                         | 61.8%           | District Blended         | 77                          | 66.7%           |
| Charter Virtual                          | 161                         | 52.6%           | Charter Blended          | 99                          | 63.2%           |
| Overall Average National Graduation Rate |                             | 85%             |                          |                             | 85%             |

Despite slow improvement, current graduation rates across nearly all subgroups of virtual and blended schools are poor compared to the 85% overall average national graduation rate.

Independently managed virtual schools slightly underperformed all virtual schools with a graduation rate of 53.1%, while independently managed blended schools overperformed all blended schools with a graduation rate of 67.7%.

Rates in for-profit and nonprofit virtual schools were 55.4% and 57.2%, respectively. Within the subgroup of EMO-managed virtual schools, the graduation rate for Connections Education was 62.0%, and for K12 Inc., 56.3%. Notably, the blended schools from K12 Inc. that reported data came within some four points of the national average. Blended schools managed by Success VLC demonstrated very poor rates, with just over one in four students graduating. For virtual schools, profit status had no major bearing on graduation rates; each subset differed by only three to four points. For blended schools, however, for-profit schools lagged behind independent and nonprofit schools in graduation rate by approximately 15 points.

For 2019-20, graduation rates for both charter and district virtual and blended schools improved. In 2017-18, district virtual and blended schools had graduation rates of just 50.9% and 58.3% respectively, but those rose to 61.8% and 66.7% this year, a marked improvement. In contrast, the graduation rates in charter virtual and blended schools improved only very slightly over the same time span: rates in charter virtual schools moved from 49.9% to 52.6% and in blended schools from 62.8% to 63.3%.

For both virtual and blended schools, graduation rates in district schools outpaced those in charter schools, by 9.2 points in virtual schools and by 3.5 points in blended schools.

### *Highlights from Select States*

A summary of school performance ratings assigned to virtual and blended schools is included in Appendix I-B. Some of the findings in states were particularly noteworthy. In Texas, for example, the details specific to its school performance ratings indicated that schools could receive an assigned grade from A to D and be considered acceptable in the state assessment system. Because of this, it was no surprise that all the Texas schools were rated as acceptable, even though some were assigned a rating (or grade) of D. Texas may appear to be a leader in virtual education—but it is important to remember that ratings are relative to individual state standards and expectations. The lack of national measures of school performance means across state comparisons should be carefully interpreted. In addition to Texas, New Hampshire also had acceptable school performance ratings assigned to all of its three schools (two virtual and one blended) considered in this study.

In direct contrast, Pennsylvania found all 16 of its rated virtual and blended schools to be performing unacceptably. (Three were unrated for unspecified reasons.) Graduation rates for the state's virtual and blended programs were also poor, 54.7% for virtual schools and 32.5% for blended schools.

In Louisiana, 9 of 12 schools with ratings were judged unacceptable, and two were not rated for unspecified reasons. Only one school, a district-managed virtual school, received an acceptable rating, an A. Louisiana's graduation rates were available only for its virtual schools. Similar to the very poor school performance ratings, the graduation rate for Louisiana vir-

tual schools was 41.9%.

Ohio, too, had predominantly unacceptable ratings, with 15 (88.2%) of 17 rated schools deemed unacceptable. A single school earned an acceptable rating, and one was unrated for unspecified reasons. Similar to the case in Louisiana, weighted graduation rates for Ohio's virtual schools were very low with 52.0% for virtual and 44.7% for blended schools.

By far, Michigan had the most schools with school performance ratings: 80. Of these, 71 (88.8%) were rated unacceptable. Michigan employs a 100-point scale, with 60 the cutoff score for acceptable. The 71 schools with unacceptable ratings had scores ranging from 1.48 to 54.37 (based on 2018-19 data). As was true in other states with high unacceptable rates, weighted graduation rates for both virtual and blended schools were low, 45.4% and 44.0%, respectively.

Florida offers many options for virtual schools, including enrollment in state-level Florida Virtual Schools (FLVS), FLVS franchises, and District Virtual Instruction Programs (VIPs). Of 38 schools identified in this report (35 virtual and three blended), 29 schools were rated. Nineteen (65.5%) were judged acceptable, and 16 of those earned an A. A majority (17) of these successful schools were state-level FLVS, and two were FLVS franchises. Of the 10 schools rated unacceptable, only one was a state-level FLVS; four were K12 Inc. schools. This data suggests that Florida's FLVS initiatives are comparatively successful; however, missing data makes it difficult to determine how representative this picture may be. The state's weighted graduation rates were better on average than the school rankings, at 82.2% rate for virtual schools. (Blended schools rates were unavailable.)

Enrollment in the 19 Florida schools rated acceptable ranged from 29 to 2728 students, with an average size of 348. In contrast, enrollment in 10 schools rated unacceptable ranged from 31 to 2405, with an average size of 567. This finding suggests that schools rated acceptable are typically smaller than schools rated unacceptable—but given the imbalance in the numbers of acceptable/unacceptable schools, caution in drawing that conclusion is advisable.

In addition to state data appearing in Appendix I-B, school-level detail on state acceptable and unacceptable ratings has been compiled; authors will consider requests for them.

## Recommendations

Full-time virtual and blended learning schools represent potentially promising new school reforms. In general, however, their overall performance remains poor, with little substantive improvement evident over time. Moreover, their continued expansion undermines the overall education system in two ways. First, most students who choose these schools fare poorly in terms of measurable learning. And second, the reforms redirect an increasing portion of the public resources to schools largely operated by private education management organizations.

We reiterate that this study focuses only on full-time virtual schools and full-time blended learning schools. We are aware, however, that a growing number of districts and individual

schools are creating virtual and blended learning “programs.” We are also aware that teachers within traditional public schools are innovating and increasingly employing blended learning. Although we know little about such programs and classroom innovations, it is likely that they maintain lower and more suitable student-to-teacher ratios and produce better outcomes. More research is needed to understand if such efforts might indicate features or strategies leading to more successful outcomes.

In light of current evidence that full-time virtual and blended learning schools continue performing poorly, it is recommended that policymakers:

- Require federal and state education agencies to accurately identify and monitor full-time virtual and blended schools, remedying gaps in information on their performance.
- Ensure and enforce sanctions for virtual and blended schools performing inadequately.
- Use performance data to inform funding decisions.
- Establish requirements for reduced student-to-teacher ratios.
- Slow or stop the growth in these sectors until all reasons for their relatively poor performance have been identified and addressed.
- Sponsor research on virtual and blended learning programs and classroom innovations within traditional public schools and districts.
- Sponsor evaluations of promising models for virtual and blended learning schools, including district efforts born of the pandemic.
- Convene events with scholars, practitioners, representatives from state and federal education agencies, and other policymakers to more carefully design a model for full-time virtual schools. Such a model should include finance and oversight mechanisms ensuring that virtual schools focus on the interests of taxpayers and students, not of corporations.

## Notes and References Section I

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- 1 The authors will consider requests to obtain or review their school-level data sets from which findings are based.
- 2 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 March 26, 2021, from <https://nepc.colorado.edu/sites/default/files/nepc-rb-k12-miron.pdf>

Molnar, A. (Ed.). Miron, G., Huerta, L., Cuban, L., Horvitz, B., Gulosino, C., Rice, J.K., & Shafer, S.R. (2013). *Virtual schools in the U.S. 2013: 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-2013>

Molnar, A. (Ed.). Rice, J.K., Huerta, L., Shafer, S.R., Barbour, M.K., Miron, G., Gulosino, C., Horvitz, B. (2014) *Virtual schools in the U.S. 2014: 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-2014>

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>

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>

Molnar, A., Miron, G., Gulosino, C., Shank, C., Davidson, C., Barbour, M.K., Huerta, L., Shafer, S.R., Rice, J.K., & Nitkin, D. (2017). *Virtual schools report 2017.* Boulder, CO: National Education Policy Center. Retrieved June 16, 2017, from <http://nepc.colorado.edu/publication/virtual-schools-annual-2017>

Miron, G., Shank, C., & Davidson, C. (2018). *Full-time virtual and blended schools: Enrollment, student characteristics, and performance.* Boulder, CO: National Education Policy Center. Retrieved November 20, 2018, from <http://nepc.colorado.edu/publication/virtual-schools-annual-2018>

Molnar, A., Miron, G., Elgeberi, N., Barbour, M.K., Huerta, L., Shafer, S.R., Rice, J.K. (2019). *Virtual schools in the U.S. 2019.* Boulder, CO: National Education Policy Center. Retrieved March 26, 2021, from <http://nepc.colorado.edu/publication/virtual-schools-annual-2019>
- 3 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 do not offer the complete state-mandated curriculum; they simply offer individual courses that students can choose to take. Such a program would never receive an NCES ID no matter how many students enroll because it is not a school. Although no systematic data is available, some speculate that districts may be using the virtual programs as a way to place or “park” students who are not succeeding in the face-to-face classes due to learning obstacles or disciplinary reasons.
- 4 Special education is an obligation of school districts (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.
- 5 Compiling an aggregate data set of the 40 states would have been possible, albeit time-consuming. Unfortunately, that would have introduced other methodological problems since a few of these larger states inconsistently reported school-level data for charter schools, which serve most students in virtual and blended learning

schools.

- 6 Alabama, Iowa, Kentucky, Maine, South Carolina, and South Dakota.
- 7 Beyond the 40 states with either virtual or blended schools, some states also allow other virtual education options, in several alternative formats such as individual online classes, or supplemental online coursework. These were beyond the scope of this research. Further, virtual and blended program as well as individual class innovations that occur within districts and brick-and-mortar schools are also excluded from this study because they are not classified as “schools.”
- 8 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.
- 9 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 March 18, 2021, from [http://www.pressherald.com/news/virtual-schools-in-maine\\_2012-09-02.html](http://www.pressherald.com/news/virtual-schools-in-maine_2012-09-02.html)
- 10 Note that we compare virtual and blended schools from 39 states with the national average representing 50 states. A comparison group of 39 states would likely be slightly closer to the distribution in virtual and blended schools. The 11 states that might be pulled out from the national average, however, are all very low-population states and would have minimal influence on the national average. Ideally, it would be preferable to compare demographics for each virtual or blended school with the population in the actual catchment area from which they enroll students. Such analyses are beyond the scope and budget of this study.
- 11 Comparisons with demographic composition of charter schools in the nation are 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 Ahn, J., & McEachin, A. (2017). Student enrollment patterns and achievement in Ohio’s online charter schools. *Educational Researcher*, 46(1), 44–57. Retrieved August 20, 2019, from <https://doi.org/10.3102/0013189X17692999>  
  
An additional study also examines shifting enrollments in Pennsylvania virtual schools over time and some key financial consequences. See Mann, B., & Baker, D.P. (2019, February). Cyber charter schools and growing resource inequality among public districts: Geospatial patterns and consequences of a statewide choice policy in Pennsylvania, 2002–2014, *American Journal of Education* 125(2), 147-171.
- 13 Miron, G. (2014). Charters should be expected to serve all kinds of students. *Education Next* 14(4), 58-59.
- 14 For example, one Ohio school with an exceptionally high rate of special education student enrollment (22.1%) actively promotes its school for students with disabilities who seek a least restrictive environment. A post on the school website 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. Retrieved February 3, 2021, from <https://www.ohdela.com/media-center/blog/ohdela-fits-all-student-needs.html> [inactive link]. <https://ohdela.com/about-us> links to school website which talks more generally about how children with special needs are served.
- 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. Retrieved March 28, 2021, from <http://hdl.handle.net/1808/22567>

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 *State nonfiscal public elementary/Secondary education survey, 2011-12 v.1a*. United States Department of Education, National Center for Education Statistics, Common Core of Data (CCD) Retrieved January 17, 2021, from <https://nces.ed.gov/ccd/stnfnis.asp>

19 The pupil/teacher ratios have remained consistent at approximately 16:1 over the past several years. Projections suggest that this ratio is likely to remain constant for public schools.

NCES (2016). The Table 208.20. *Public and private elementary and secondary teachers, enrollment, pupil/teacher ratios, and new teacher hires: Selected years, fall 1955 through fall 2026*. Washington DC: National Center for Education Statistics. 2013-441. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved December 1, 2014, from [https://nces.ed.gov/programs/digest/d16/tables/dt16\\_208.20.asp](https://nces.ed.gov/programs/digest/d16/tables/dt16_208.20.asp)

20 Miron, G., & Urschel, J. (2012). *Understanding and improving full-time virtual school: A study of student characteristics, school finance, and school performance in schools operated by K12 Inc.*, Boulder, CO: National Education Policy Center. Retrieved November 27, 2018, from <http://nepc.colorado.edu/files/nepcrbk-12miron.pdf>

21 Miron, G., & Shank, C., & Davidson, C. (2018). *Full-time virtual and blended schools: Enrollment, student characteristics, and performance*. Boulder, CO: National Education Policy Center. Retrieved November 20, 2018, from <http://nepc.colorado.edu/publication/virtual-schools-annual-2018>

22 It is important to note that states' respective standards and expectations vary, with some states setting high standards and others being more lenient.

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