Virtual Schools in the U.S. 2021
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Executive Summary
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The COVID-19 pandemic has pushed virtual schooling to the forefront of the national educational landscape. Vendor corporations, tech industry trade associations, philanthropists, and venture capitalists—all of whom have been promoting virtual education for over a decade—quickly positioned digital programs and platforms as the obvious solution for schools that had to close buildings to avoid transmitting the virus.

Some of these technologies did, in fact, help educators connect with their students. But the nation’s experience with virtual technologies during the pandemic also revealed fundamental limitations of these approaches and spotlighted serious problems with the rosy vision of a bright new virtual future. Hackers disrupted district connections, held student personal data for ransom, and “zoom bombed” classes. Teachers, students, and parents struggled—with mixed success—to adjust to the virtual education technologies. Parents, when turned to for needed supports, found that they often lacked the time, resources, and knowledge required to meaningfully engage in the technological programming offered. Many students and parents were sidelined altogether because they lack access to broadband, computers, and other digital necessities.

For some students and schools, the pandemic-era turn to new technologies included substantial positives that they plan to build upon in the future. But for the long-standing advocates of these technologies, such isolated movement is not sufficient. Despite the nation’s widespread dissatisfaction with the shortcomings of digital technologies, proponents have continued to frame digital options not only as schools’ go-to response to the pandemic, but also as a leap forward into a post-crisis “new normal” for the core education infrastructure in a radically altered school environment.

Promoted by an array of financial incentives and well-funded and aggressive advocacy, full-time virtual schools (also sometimes referred to as virtual charter schools, virtual acad-
mies, online schools or cyber schools) have attracted a great deal of attention. Their proponents continue to make the case that virtual schools can beneficially expand student choices while improving the efficiency of public education.\textsuperscript{10} They claim, for example, that online curriculum can be tailored to individual students more effectively than curriculum in traditional classrooms, giving it the potential to promote greater student achievement than can be realized in traditional brick and mortar schools.\textsuperscript{11} The research evidence, however, tells a different story. Most importantly, it does not support claims that virtual education produces better student outcomes, as compared to conventional face-to-face approaches to teaching and learning in brick-and-mortar schools. In fact, full-time virtual schools, in particular, have yielded very poor outcomes.\textsuperscript{12} Moreover, the use of digital platforms and learning programs is tied to significant threats to the integrity of schools’ curriculum and instruction programs, their student assessments, and their data collection and record-keeping practices.\textsuperscript{13} Compared to the surface transparency of traditional textbooks, tests, and record books, there is much hidden behind the proprietary curtain of virtual technologies.\textsuperscript{14}

**Purpose of This Report**

*Virtual Schools in the U.S. 2021* provides scholarly analyses of the characteristics and performance of full-time, publicly funded K-12 virtual schools; reviews the relevant available research related to virtual school practices; provides an overview of recent state legislative efforts to craft virtual school policy; and offers policy recommendations based on the available evidence. This report is organized into three sections:

- **Section I**, *Full-Time Virtual and Blended Schools: Enrollment, Student Characteristics, and Performance*, documents the number of virtual and blended-learning schools, their student characteristics, and their performance.

- **Section II**, *Research into Virtual and Blended Schools: A Lasting Legacy of Little Impact*, reviews the relevant available research literature.

- **Section III**, *Key Policy Issues in Virtual Schools: Finance and Governance, Instructional Quality, and Teacher Quality*, provides a review of recent policymaking related to virtual schools.

The number of students enrolled in virtual schools in the U.S. continues to grow. In 2019-20, 477 full-time virtual schools enrolled 332,379 students, and 306 blended schools enrolled 152,530. Enrollments in virtual schools increased by approximately 34,600 students between 2017-18 and 2019-20, and enrollments in blended learning schools increased by approximately 19,500 during this same time period. Virtual schools enrolled fewer minority students and substantially fewer low-income students compared to national public school enrollment.

Virtual schools operated by for-profit EMOs were more than 3.5 times as large as other virtual schools, enrolling an average of 1,384 students. In contrast, those operated by nonprofit EMOs enrolled an average of 395 students, and independent virtual schools (not affiliated with an EMO) enrolled an average of 407 students. With high student-teacher ratios and little or no need to pay for facilities, transportation, breakfast and lunch programs, and other
operating costs, these for-profit virtual schools realize substantial cost savings compared to brick and mortar schools, and therefore are able to profit from current school funding formulas.

Among virtual schools, far more district-operated schools achieved acceptable state school performance ratings (50.7% acceptable) than did charter-operated schools (35.2% acceptable). Relatively more schools operated by nonprofit EMOs performed acceptably: 64.3% of these schools received acceptable ratings, compared with 44.1% acceptable ratings for “independent” schools operated with minimal EMO involvement and 37.2% acceptable ratings for schools operated by for-profit EMOs. Among blended learning schools, the highest performance was seen by charter schools (50.7% acceptable) and lowest performance by the subgroup of schools operated by for-profit EMOs (19.4% acceptable). In the middle were district-operated blended-learning schools (37.8% acceptable). 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%. District-operated schools reported higher graduation rates than charter schools for both virtual (+9.6 percentage points) and blended (+3.5 percentage points).

Very little research on K-12 virtual school practices is available to credibly guide policymakers in their work. A small number of prolific authors conducted much of the published research. Authors with little to no experience with the field conducted the rest, publishing in outlets that also have little experience with the field. Additionally, most of the research focuses on the United States, despite the international proliferation of K-12 virtual schooling.

It is unsurprising, therefore, that NEPC researchers found little evidence of research informing state legislative action on virtual schools in 2019-20. Policymaking was only rarely carried out in the crucial areas of virtual school finance and governance, instructional quality, and teacher quality. In 2019, of the 58 bills considered in 23 states; 17 were enacted while 41 failed. In 2020, of the 59 bills considered in 23 states, 9 were enacted, 42 failed and 8 are pending. In total, fewer than 25% of proposed bills were enacted in 2019 and 2020. Fifty-one bills in 2020 responded to the COVID-19 pandemic (18 were enacted, 18 failed, and 15 are still pending). These pandemic-related bills rarely offered state-level guidance to school districts. Instead, they mandated, in broad strokes, the use of virtual schooling in the 2020-21 school year.

The pandemic exacerbated a trend that NEPC virtual schools’ reports have documented since 2013. While it is clear that virtual schools—particularly for-profit virtual schools—are expanding rapidly, there remains little research evidence to support or justify the expansion. Moreover, there is little policymaking at the state level adequate to the task of ensuring the quality of education that virtual school students receive.

Select Recommendations Arising from Section I

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;

- Use performance data to inform funding decisions; and
- Sponsor research on virtual and blended learning programs and classroom innovations within traditional public schools and districts.

**Select Recommendations Arising from Section II**

It is recommended that policymakers:

- Create goals for a comprehensive research program designed to help develop policy for, and improve practice in, virtual and blended schools; and
- Either create new independent entities, or support existing ones, charged with undertaking long-term research programs to evaluate virtual and blended schools.

**Select Recommendations Arising from Section III**

It is recommended that policymakers:

- Develop new funding formulas based on the actual costs of operating virtual schools;
- Develop guidelines and governance mechanisms to ensure that virtual schools do not prioritize profit over student performance;
- Require high-quality curricula, aligned with applicable state and district standards, and monitor changes to digital content;
- Define certification training and relevant teacher licensure requirements specific to teaching responsibilities in virtual schools, and require research-based professional development to promote effective online teaching; and
- Identify and maintain data on teachers and instructional staff that will allow education leaders and policymakers to monitor staffing patterns and assess the quality and professional development needs of teachers in virtual schools.
Notes and References

Executive Summary

1. From June 2016 through December 2018, Audrey Watters posted a series of blog posts on the education technology industry and its connection to venture capital. Find those posts here:


See also:

HolonIQ (2020). EdTech started the decade with $500m to Venture Capital investments in 2010 and finished 14x higher at $7B in 2019. We expect over $87bn to be invested over the next 10 years, almost triple the prior decade [webpage]. Retrieved April 19, 2020, from https://www.holoniq.com/notes/87bn-of-global-edtech-funding-predicted-to-2030/


For analysis, see:


http://nepc.colorado.edu/publication/virtual-schools-annual-2021-exec-summary


See also, for example:


12 The National Education Policy Center has produced research reports on the performance of virtual schools since 2013. They are all available at https://nepc.colorado.edu/publications/research-briefs


