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VIRTUAL SCHOOLS IN THE U.S. 2017

Section III Key Policy Issues in Virtual Schools: Finance and Governance, Instructional Quality, and Teacher Quality

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Executive Summary

This section draws from a comprehensive analysis of all proposed and enacted virtual school legislation in 50 states during the 2015 and 2016 legislative sessions, building on our earlier work detailing the 2012-2014 sessions. We again focus on whether legislatures have been moving closer to or further from core recommendations advanced in this NEPC series. Our analysis revealed that state legislatures have proposed many bills that attempt to increase oversight of virtual schools; however, we found little evidence to indicate that legislative actions are being informed by the emerging research on virtual schools.

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Recommendations arising from Section III are for policymakers to:

- Develop new funding formulas based on the actual costs of operating virtual schools.
- Develop new accountability structures for virtual schools, calculate the revenue needed to sustain such structures, and provide adequate support for them.
- Establish geographic boundaries and manageable enrollment zones for virtual schools by implementing state-centered funding and accountability systems.
- 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.
- Develop a comprehensive system of formative and summative assessments of student achievement, shifting assessment from a focus on time- and place-related requirements to a focus on student mastery of curricular objectives.
- Assess the contributions of various providers to student achievement, and close virtual schools and programs that do not contribute to student growth.
- 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 models.
- Work with emerging research to develop valid and comprehensive teacher evaluation rubrics that are specific to online teaching.
- 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.
- Examine the work and responsibilities of virtual school principals and ensure that those hired for these roles are prepared with the knowledge and skills to be effective, particularly with respect to evaluating teachers and promoting best practices.

Section III

Key Policy Issues in Virtual Schools: Finance and Governance, Instructional Quality, and Teacher Quality

As evidenced in this series of policy reports, policymakers continue to struggle to reconcile traditional funding structures, governance and accountability systems, instructional quality, and staffing demands with the unique organizational models and instructional methods associated with virtual schooling. State legislatures continue to respond to challenges raised by virtual schooling, as evidenced by proposed bills that attempt to increase oversight of virtual schools; however, as we discuss below, fewer than 40% of proposed bills have been enacted. In addition, there is little evidence to support the view that legislative actions are informed by the emerging research on virtual schools.

This first section below will revisit the critical policy issues introduced in the 2013-2015 reports, specifically:

- Finance and governance
- Instructional program quality
- High-quality teachers.

In the 2013 report we defined these critical policy areas and presented the emerging research evidence; then, in the 2014 and 2015 reports we shifted our focus to the legislative actions that illustrate how states are addressing evolving virtual school models. The last two reports analyzed legislation, examining all proposed and enacted virtual school legislation in 50 states from 2012, 2013 and 2014. These analyses served as a baseline for this comprehensive analysis of all virtual school legislation introduced in 2015 and 2016 presented here. In addition, we draw on our own research, recent policy reports and research, and popular press accounts. As a reorientation, we reintroduce and provide updates to our earlier tables summarizing critical policy issues, relevant assumptions, and unanswered empirical questions. Lastly, we revisit our policy recommendations and examine multiple data sources to gauge legislative progress toward them.

Comprehensive Analysis of 2015 and 2016 Legislation

Our comprehensive analysis of all proposed and enacted virtual school legislation in 50 states during the 2015 and 2016 legislative session employed the National Conference of State Legislatures (NCSL) Legislative Tracking database. We identified legislation using the keywords *cyber, virtual, online, technology, non-classroom-based, distance learning, digital learning* and *blended learning*.¹ An initial search yielded nearly 1,000 bills in 2015 and 1,400 bills in 2016, with nearly every state considering legislation. Many bills eventually proved related to technology expansion in other public sectors. Closer review targeting new, revised or revoked programs specific to K-12 virtual education narrowed the list considerably. In 2016, 113 bills were considered in 37 states; 33 were enacted, 60 failed and 20 are pending (see Appendix A, which provides a comprehensive listing as well as summaries of relevant bills). In 2015, 98 bills were considered in 28 states; 36 were enacted and 62 failed. The raw number of bills introduced has remained comparable over the last five years.² The

comprehensive bill analysis provides a richer understanding of how legislators are promoting, revising and curbing evolving virtual school models as compared to previous years. In addition, the analysis over the past five legislative sessions has allowed us to track whether legislative trends are moving closer to or further from core recommendations advanced in this NEPC report series.

In 2015, much of the legislative activity on virtual schools occurred within a relatively small number of states, Alabama (n=6), Arizona (n=10), Florida (n=8), Missouri (n=11), Oregon (n = 7), Texas (n=7), and Utah (n=6). As in previous years, proposed legislation ranged from narrow to sweeping. For example, nine states proposed pilot programs, task forces, oversight commissions and state boards to study and oversee the development of virtual schools and their implications (AL, AZ, DE, ID, NJ, ND, OR, UT, VA). For example, the legislatures in Arizona (AZ S1037) and Delaware (DE SCR22) enacted bills that established commissions or task forces to study digital teaching and learning and to explore the expansion of technology in schools. Of the nine bills proposed, five were enacted. This is an increase from the 2014 session, when only four states proposed task forces or oversight commissions.

One important trend to note in 2015 legislative activity is the significant amount of proposed legislation calling for protection of students' online data. In total, 14 bills were introduced in 12 states related to students' online or digital privacy (AR, AZ, CO, CT, DE, GA, NJ, NV, OR, TX, UT, VA). Of the 14 bills, five were enacted. Student privacy protections are an important factor in the growth and development of online learning. Depending on how legislation is written and implemented, it may either inhibit the sector's growth by limiting vendors' ability to use student data or promote the sector's growth by effectively allaying parents' anxiety.

In contrast to 2015, when legislative activity was focused within a relatively small number of states, legislative activity in 2016 was spread across a broader cross-section of states. While 55% of bills were considered in just seven states in 2015, the top seven states considered only 40% of bills in 2016. Indeed, fully 18 states considered three or more bills related to online or virtual instruction in 2016, and 24 states adopted at least one bill.

However, the subjects under debate were broadly similar between 2015 and 2016. In both legislative sessions a significant amount of legislation focused on student data privacy. There was also a continued focus on pilot programs, task forces, oversight commissions and state boards to study and oversee the development of virtual schools; in 2016, 11 bills were introduced in 10 states (CO, MD, MS, MO, NJ, NM, OR, PA, SC, WV). Coupled with the nine similar bills proposed in 2015, these constitute a significant increase in bills focused on oversight and development, compared to 2014 and previous legislative sessions. For example, in Pennsylvania (PA H530) the legislature proposed a bill that would establish a Charter School Funding Advisory Committee tasked with exploring the actual cost of educating a cyber charter school student. Similarly, in New Mexico (NM SM90) the legislature proposed a bill that would establish a study committee charged with examining costs associated with the operation of virtual schools. None of the proposed bills were enacted, and two are pending. In addition, finance and accountability were also significant foci for legislation in 2016, with 12 bills introduced in nine states (AL, KS, LA, LA, MI, MN, NJ, OR, NC, PA, PA, PA) aimed at reducing or limiting virtual school per-pupil resource allocations (seven failed and five are pending). And lastly, bills proposed in five states (PA, GA, NC, ID, CA) aimed to limit profiteering by virtual school operators (three were adopted, one is pending and one failed). For example, in California (CA A1084) the legislature proposed a bill that would have required all charter schools, including virtual charter schools, to operate, or be operated by, only a nonprofit entity. The bill failed.

Two charts in Appendix A highlight the main themes covered by select bills addressing the three policy areas of finance and governance, instructional quality, and teacher quality. Analysis of the substance of select bills is integrated into the following sections with a focus on states exhibiting significant legislative activity and bills that address the three policy areas. Each section concludes with an assessment of how legislative developments during the past five years have moved policy closer to or further from addressing the critical policy issues outlined in our recommendations.

Finance and Governance

Our legislative analysis reveals an increase in state bills proposing task forces and oversight boards charged with overseeing the implementation challenges raised by virtual schools. Despite increased attempts to improve oversight and accountability of virtual schools by identifying funding, governance and accountability mechanisms that would allow better control, such improvements continue to challenge policymakers and practitioners. Table 1.1 reintroduces the policy issues, assumptions and empirical questions related to virtual school finance and governance. Below, we update earlier information based on new research and introduce policy issues that have surfaced since the 2015 report.

Linking Funding to Actual Costs of Virtual Schools

Policy debates persist in some states over how to fund full-time virtual schools, both because of cost differences between virtual and traditional brick-and-mortar schools and because of other policy considerations. Developing a comprehensive formula would involve gathering sound and complete data on virtual schools' costs and expenditures related to governance, program offerings, types of students served, operational costs, student-teacher ratios and other factors. In previous reports we highlighted the work of Baker and Bathon (2013)³ who developed a methodology for estimating the actual costs of virtual schools. They outline how costs in virtual schools vary widely compared to those in brick-and-mortar schools. For example, virtual schools have lower costs associated with teacher salaries and benefits, facilities and maintenance, transportation, food service, and other in-person services than their brick-and-mortar counterparts. However, virtual schools may have higher costs linked to acquiring, developing and providing the digital instruction and materials necessary for

Table 1.1 Finance and Governance Questions for Virtual Schools

Policy Problem	Assumptions	Empirical Questions
Linking funding to actual costs	Lower staffing and facilities costs outweigh higher costs associated with content acquisition and technology.	<p>What are the costs associated with virtual schools and their various components?</p> <p>How do the costs change over time?</p> <p>How are costs affected by different student characteristics and contextual factors?</p> <p>What are the implications for weights and adjustments?</p>
Identifying accountability structures	Existing accountability structures provide sufficient oversight of virtual school governance and instructional delivery.	What forms of alternative financial reporting might be useful to policymakers in monitoring the performance of virtual schools?
Delineating enrollment boundaries and funding responsibilities	School choice with open enrollment zones will increase competition and access to higher quality schools.	<p>Are local district educators or state officials best suited to oversee virtual school operations?</p> <p>Who should ultimately be responsible for funding virtual students?</p> <p>How might state-centered vs. local funding lead to a more stable source of revenue?</p>
Limiting profiteering by EMOs	Diverse educational management and instructional services providers will increase efficiency and effectiveness of virtual instruction.	<p>How much profit are for-profit EMOs earning through the operation of virtual schools?</p> <p>What is the relationship between profits and quality instruction?</p>

full-time virtual instruction; they also need to acquire and maintain necessary technological infrastructure. As yet, no state has implemented a comprehensive formula that ties funding allocation directly to virtual schools' actual costs and operating expenditures, despite attempts in many states to propose legislation that attempts to curb or limit funding. But there is new evidence that shows states engaging in a more methodical approach to measuring cost differentials between virtual and traditional schooling models; such efforts could directly inform policymakers.

Activity in 2015 and 2016, as in previous years, indicates that legislation has been introduced—and in some instances enacted—that revises virtual school funding; in addition, new task forces and oversight committees have begun to study cost differentials. These activities suggest a growing awareness among state policymakers that virtual school funding is an area requiring serious consideration. For example, in Kansas (KA SB7) the legislature enacted a bill in 2015 that increased funding allocations for full-time virtual school students and decreased funding for part-time virtual school students. This bill was prompted by a 2015 audit by the Kansas Legislative Division of Post Audit that involved a comprehensive costing-out of full-time and part-time virtual education models. Based on their cost estimates, auditors concluded that full-time virtual students were consistently underfunded, while part-time virtual students were overfunded.⁴ The bill enacted a 23% increase in per-pupil funding for virtual full-time equivalent students for the 2015-16 academic year, and provided an additional 7% increase for 2016-17 academic year (\$5,000 and \$5,600, respectively). Consistent with audit recommendations, the bill also replaced the previous funding formula for part-time virtual students, providing a new base funding of \$4,045 per-pupil for the 2015-16 academic year and substantially decreasing funding to \$1,700 for the 2016-17 academic year.⁵

Similarly, in 2016 the New Mexico Public Education Department issued a report to the Legislative Finance Committee analyzing the performance, cost and governance of selected charter schools.⁶ The report concluded that the two virtual charter schools operating in New Mexico (run by for-profit companies K12Inc. and Connections Academy) are not cost effective, compared to traditional and charter schools—although the conclusions were based not on a methodical or comprehensive costing-out analysis but instead extrapolated from broad comparisons of expenditures on facilities, maintenance, operations and transportation. The report's recommendations to the legislature included the development of an advisory group to “review online education issues, and create statutory requirements for virtual school funding, and student achievement expectations.”⁷ One month after the report was released, new legislation was proposed calling for the development of a state study group charged with addressing the recommendations specific to virtual charter schools advanced by the New Mexico Department of Education (NM SM90). The bill failed.

Additional attempts to curb funding or align it with actual costs of operating a virtual school are evident in other states. In Michigan (MI H5897) a pending bill proposes to reduce state foundation aid payments (for districts in which a cyber charter school is located) to one-third the amount that would otherwise be provided to non-cyber charter schools (“public school academies”). The Oregon legislature proposed a bill (OR S819, failed) that would reduce General Purpose Fund per-pupil revenue based on weighted average daily membership in schools. Percentages dropped to 80% eligibility for K-8 students in a virtual charter school, compared to 95% eligibility for the same population of students in a brick and mortar charter school. Interestingly, for K-12 students enrolled in either a virtual or brick and mortar charter, the eligibility for the same revenue stream is equal at 95%.

Legislative efforts to adjust funding for virtual schools in Kansas appear to employ a more

methodical approach to assessing real operating costs for virtual schools and adjusting funding accordingly; however, the state audit was limited in that it failed to consider some essential operational elements of an effective and efficient virtual school model. While the Kansas audit is an important step in the costing-out process, no state has yet attempted a more comprehensive assessment that details how resources are allocated and activated (including teachers, materials, hardware and software, facilities, and so on) to effect student achievement. While some states have moved to reduce funding, the changes have not been grounded in supporting evidence. Absent a wider empirical accounting of real costs associated with operating a virtual school, the legislative attempts to reconcile appropriate funding for virtual schools will continue to be fueled more by political motivation than by reliable evidence.

Identifying Accountability Structures

Accountability challenges linked to virtual schools include designing and implementing governance structures capable of accounting for expenditures and practices that directly benefit students. For example, it is important to have oversight for costs and the quality of staff, materials and instructional programs— including technological infrastructure, digital learning materials, paraprofessional services, and third-party curriculum. Oversight of other areas, such as student attendance and learning transcripts, is necessary to identify and evaluate instructional time and outcomes.

In 2015 and 2016, there was a significant increase in a new type of bill focused on student data privacy and protection. As the use of technology and online education increases, many states are responding to the need to protect student privacy, including not only information about students, but also the data they may access on the Internet or educational software they use. In 2015, 14 bills were introduced in 12 states related to students' online or digital privacy (AR, AZ, CO, CT, DE, GA, NJ, NV, OR, TX, UT, VA), and five were enacted. And in 2016, 12 bills were introduced in 11 states (CT, HI, IL, KS, MN, NE, NJ RI, UT, VA, WA), and eight were enacted. The bills aimed at: preventing online product providers who contract with districts or states from selling, renting, or disclosing student information and identifiers; prohibiting Internet providers and online product providers from using student tracking information for targeted advertising to students; and requiring districts to develop security protocols linked to recordkeeping and maintenance of student records.

Several states focused on increasing accountability and oversight of the quality of online instructional providers, the materials they use, and course quality. For example, in Arizona (AZ S1117), the legislature enacted a bill that tasks the “state board of education and state-approved charter authorizers to develop standards for the approval of online course providers.”⁸ The bill also requires all new online providers to operate on a probationary status for up to three years or until they can demonstrate students' academic improvement has met the goals outlined in their application. In Ohio (OH S298) a pending bill proposed oversight of blended learning models and a requirement that the state department of education “develop a metric for measuring student performance in schools that operate using the blended learning model”⁹ Similarly, in Colorado (CO H1222) the legislature enacted a bill that created the Statewide Supplemental and Blended Learning Program, charged with improving the administration of blended learning programs through the development of a new BOCES (Board of Cooperative Services). The bill also limits blended learning providers to nonprofit organizations and existing public local education agencies (LEA).

Below, we outline how other states are attempting to address accountability challenges related to virtual school governance as well as limits on and boundaries for virtual school enrollments.

Governance: Increasing state audits and task forces studying virtual school operations have proven important mechanisms for addressing accountability challenges unique to virtual schools. Task forces, study committees and state boards proposed in state legislation have moved beyond the funding challenges outlined above and focused on broader governance challenges. In 2015, the legislatures in Alabama, Arizona, Delaware, Virginia and Utah enacted legislation calling for the development of digital teaching and learning study commissions with a wide range of responsibilities, including: studying the expansion of technology in virtual schools and developing master plans for future virtual learning; developing and expanding professional development and high-quality professional learning standards for teachers working in virtual environments; developing regulations for virtual schools and the online instruction providers they contract with, including accreditation standards; and developing virtual learning standards for students.

Audits conducted by state legislative analysts' offices and auditor generals, either mandated by law or prompted by public calls for accountability, have uncovered important governance challenges for the virtual school sector. For example, in 2016 the Pennsylvania auditor general released an important audit that detailed the governance operations of the Pennsylvania Cyber Charter School.¹⁰ This report followed a series of reports over the last six years issued by the auditor general, who had repeatedly advanced recommendations to the legislature calling for a revision of the Pennsylvania charter school law,¹¹ calling specifically for funding caps in line with the national average, for better linkage of funding and actual costs, and for increased accountability of virtual charter school operators. In addition, the report came in the wake of numerous bills proposed over the last several years aiming at increased fiscal and governance accountability measures (all detailed in this NEPC series of reports on virtual schools)¹²—nearly all of which have failed to pass. The latest bill relevant to these important accountability challenges (PA H530, pending) calls for establishing a Charter School Funding Advisory Committee tasked with exploring the actual costs of educating a cyber charter school student.

In the case of the Pennsylvania Cyber Charter School (PCCS), the latest audit was instigated after the school's CEO was indicted in federal court in 2013 on 11 counts of conspiracy, mail fraud and tax offenses during his tenure as CEO. Among eight key findings, the report found that the board was negligent in monitoring conflicts of interest in cases where board members voted to approve vendor contracts with entities they owned or had a financial interest in. The board also contracted with entities owned by the founder and CEO of the school, including the management company and a local performing arts center. In total, during the three-year audit period, over \$155 million in public funds (nearly half of the cyber charter's total expenditures) were contracted to these two entities. The school board was also negligent in monitoring student attendance in asynchronous self-paced virtual classrooms, where unexcused absences went unrecorded and the school's attendance policy unenforced. The auditors concluded that the lax enforcement of attendance could be a contributing factor to students' low course completion rate. Lastly, the board failed to oversee the management company responsible for monitoring teacher evaluations and maintenance of teacher evaluation records, which jeopardized teachers' eligibility for a Pennsylvania Instructional II certificate after their initial three years of teaching service. The audit found deficiencies in 75% of the teacher evaluation records they reviewed.

In August 2016, the former CEO of PCCS pled guilty to tax conspiracy linked to his misuse of over \$8 million of taxpayer revenues. PCCS was due for reauthorization in 2015, but the petition to renew its charter has not been granted or denied.¹³ The public's concerns about the governance practices of PCCS, coupled with the audit conclusions and the federal indictment of the school founder and CEO, prompted the governor to address the accountability issues raised by virtual charter schools. On the same day when the CEO plead guilty, the governor announced that the Pennsylvania Department of Education would launch a new division responsible for the oversight of finance and academic performance of charter and cyber charter schools.¹⁴

Enrollment limits and boundaries: Monitoring which virtual schools provide education services and to which students, requires delineating enrollment zones and addressing capacity issues. Careful enrollment audits are also necessary to ensure that resident districts are forwarding appropriate local and state per-pupil allocations to virtual schools. Several bills in this analysis address these issues.

In Pennsylvania, a pending bill (PA S1308) would require parents who chose to enroll their student in a cyber charter school outside their "primary region" of residence to pay tuition (the Commonwealth would delineate eight geographical regions as virtual school enrollment zones). The bill does not specify the tuition amount; instead, the language indicates that the cyber school would "receive for each student an amount agreed upon between the cyber charter school and the parents or guardians of the student." In New Jersey, a pending bill (NJ A2274) proposes a graduated payment of the state portion of per-pupil revenue (general fund tax levy) on behalf of a student's school district of residence when a student chooses a virtual charter outside the district. In this plan, the virtual charter school's district "receives funding based on the school district of residence's general fund tax levy per-pupil amount and equalization aid per-pupil amount" when it enrolls students from outside district boundaries. The state would pay 100% of the general fund tax levy per-pupil amount during the first year of operation and then reduce payments by 20% each year for five years. In Louisiana, a bill (LA S149, failed) aimed to reduce by 50%, both the state and local portion of per-pupil revenue that a virtual charter school receives to educate a non-resident student.

In Colorado, a report issued by the state online education task force (created after Colorado HB 14-382 was enacted in 2014 to oversee authorizers of multi-district online schools) recommended developing new quality standards and practices as well as new mechanisms to monitor multi-district virtual schools.¹⁵ The challenges of overseeing multi-district virtual school operations had been highlighted in previous state audits, which documented deficiencies in the quality of services provided and improper accounting of student enrollment.¹⁶ In the 2014 audit¹⁷ the task force made several recommendations to the state legislature. These included developing a certification process for authorizers of multi-district virtual schools incorporating quality standards and practices developed by the task force as well as creating the state support systems and mechanisms necessary to implement the process. The task force recommendations were advanced in a bill in the state legislature (CO SB15-201) in March, 2015 and failed in the same month. A similar bill, again calling for the implementation of the task force recommendations was re-introduced in 2016 (CO S52); however, that bill also failed.

The bills outlined in this section offer examples of attempts to slow or control the scaling-up of virtual schools while policymakers look carefully at the issues virtual schools are raising, as our earlier work recommends. Overall, our analysis indicates that efforts to study virtual school governance issues in order to inform policy changes via task forces or commissions

are becoming more common across several states. Charged with identifying best practices for governance and delivery of online instruction, the publicly funded task forces and commissions may yield important information for policymakers and practitioners. We will continue to monitor and highlight developments in our future reports.

Eliminating Profiteering by Education Management Organizations

In 2015 and 2016, legislators in several states responded to the complicated accountability issues and public controversies linked to for-profit education management organizations (EMOs) providing products and services to virtual schools—including software and curriculum, instructional delivery, school management, and governance. Virtual schools that have contracts with for-profit EMOs serve more than 62% percent of full-time virtual school students.¹⁸ K12 Inc. continues to be the largest of the for-profit virtual school providers, operating 96 schools and serving approximately 97,000 students in 2016—more than 31% of the estimated 309,190 full-time virtual school students in the U.S.. K12 Inc. profits in 2016 were a net \$21 million and total revenues exceeded \$872 million,¹⁹ compared to 2015 net profit of \$43.7 million and total revenues of over \$948 million.²⁰ Total revenues have steadily increased over the last five years and peaked at \$948 million in 2015; however, profits decreased by 20% in 2015 and by nearly 50% in 2016. K12 Inc. explains that the losses in both operating income and net profits are due to “charges related to end-of-life products, software and inventory, reserves, and severance costs that totaled \$28.4 million” in 2015, and \$7.1 million in fees linked to a 2016 lawsuit settlement in California, discussed below.²¹

On the heels of several lawsuits filed against K12Inc. during the last five years,²² K12Inc. was the target of another lawsuit (*The People of the State of California v. K12 Inc. et al*, 2016) filed by the Office of the Attorney General in California (linked to an investigation by the California Bureau of Children’s Justice and the False Claims Unit). K12Inc. operates fourteen virtual academies in California, including eleven California Virtual Academy (CAVA) sites, two Insight sites, and one iQ Academy site, serving over 15,000 students across the state. The investigation by the attorney general was prompted by a May 2012 complaint filed by a CAVA teacher in Los Angeles. The whistleblower teacher alleged that CAVA teachers engaged in improper student attendance recording practices, with teachers recording student log-on times as short as one minute as meeting daily attendance requirements.²³ CAVA submitted the inflated attendance records to the state, yielding more state revenue than they were entitled to receive. Complaints in the lawsuit also alleged that K12Inc. advanced untrue or misleading statements to the public, including: overstating the academic progress of K12 students on standardized tests; improperly reporting the results of parent satisfaction surveys to parents of potential students; falsely reporting that CAVA schools offered a full range of courses necessary for admission to California public universities; overstating the quality of teaching materials; not revealing the hidden cost of computer hardware and internet access; and understating class sizes.²⁴

After the lawsuit was filed, the Office of the Attorney General conducted an investigation of CAVA practices and discovered evidence consistent with all the allegations in the complaint. The lawsuit ended in a settlement agreement between K12Inc. and the attorney general in July, 2016. In a public statement, the attorney general outlined how “K12 and its schools misled parents and the State of California by claiming taxpayer dollars for questionable student attendance, misstating student success and parent satisfaction, and loading non-profit charities with debt.”²⁵ The last element in the statement, specific to loading nonprofit charities with debt, was a CAVA practice first revealed in an expose by the San Jose Mer-

cury News in April 2016²⁶ and later investigated by the attorney general. The investigations revealed a questionable accounting practice that may have enriched K12Inc coffers. Specifically, K12Inc., which the school boards of CAVA sites contracted to manage nearly all operations and administrative functions, invoiced the nonprofit virtual charters for services at an amount exceeding what those schools could afford. When a school could not pay for invoiced services, the for-profit company would issue credits that amounted to debt for the charter schools. Then K12Inc. would report such credits as losses, reducing the for-profit company's taxable income. The San Jose Mercury News reported that "over the past 10 years, the company has doled out more than \$130 million in credits to all California schools it operates" and that losses amounted by the schools K12Inc. operates nationwide have decreased its taxable income by \$179.5 million over the last three years.²⁷ The settlement agreement issued in July 2016 ordered K12Inc. to "provide approximately \$160 million in debt relief to the nonprofit schools it manages—'balanced budget credits' that were accrued by the schools as a result of the fee structure K12 used in its contracts—and will pay \$8.5 million in settlement of all claims." In addition K12Inc. was ordered to engage 60 corrective actions linked to their governance, teaching and learning, and advertising practices.

Following the settlement, the legislature proposed a bill (CA A1084) that would require "a charter school, only operate as, or be operated by, a nonprofit public benefit corporation, a school district, a county office of education, or the University of California."²⁸ The bill's attempt to ban for-profit companies from operating charter schools failed. However, the lawsuit and the attorney general's investigation prompted the State Department of Education to contract the State Controller's Office to conduct an audit of CAVA and its related charter schools. The audit is due to be completed in March, 2017.

While legislative proposals aimed at curbing profiteering by for-profit virtual charter school operators have not been successful over the last several years, efforts by other state officials have shown some success. The actions of the attorney general in California are consistent with our recommendation calling for policy or other actions by public officials to ensure that for-profit virtual schools do not prioritize profit over student performance.

Recommendations

While it is evident that some states have engaged in efforts to address the important finance and governance challenges of operating virtual schools, additional research is needed to identify funding and governance practices that will increase accountability, identify efficient and cost-effective best practices, and eliminate profiteering. Given the evidence detailed above, we reiterate our recommendations from previous reports.

Specifically, we recommend that policymakers and educational leaders:

- Develop new funding formulas based on the actual costs of operating virtual schools.
- Develop new accountability structures for virtual schools, calculate the revenue needed to sustain such structures, and provide adequate support for them.
- Establish geographic boundaries and manageable enrollment zones for virtual schools by implementing state-centered funding and accountability systems.
- Develop guidelines and governance mechanisms to ensure that virtual schools do not prioritize profit over student performance.

Instructional Program Quality

The 2013, 2014 and 2015 reports on virtual schools in the United States asserted that accountability procedures for virtual schools must address not only their unique organizational models but also their instructional methods. Quality of content, quality and quantity of instruction, and quality of student achievement are all important aspects of program quality.³⁰ Here, we again review and update our earlier assertions. Table 1.2 reintroduces issues, assumptions and questions relevant to instructional quality.

Evidence woven throughout this section suggest an emerging trend appears in 2015 and 2016, evident in both related literature as well as in legislation: an increased focus on individualized instruction, with a shift toward mastery-based outputs rather than inputs. While the trend does not appear limited to the virtual schooling environment, it is certainly more prevalent in this sector.

Table 1.2. Instructional Program Quality Questions for Virtual Schools

Policy Problem	Assumptions	Empirical Questions
Requiring high-quality curricula	Course content offered through online curricula is an effective means for meeting individualized education goals.	How is the quality of course content best evaluated? How will the Common Core impact virtual school content and instruction?
Ensuring both quality and quantity of instruction	Instructional seat time is not an accurate measure of learning.	What is the best method of determining learning? What learning-related factors are different in an online environment? Should outcomes beyond subject-matter mastery be assessed?
Tracking and assessing student achievement	Students in virtual schools perform equal to or better than traditional peers and existing empirical work has adequately measured student achievement. Modest gains can be taken to scale.	As some states move to student choice at the course level, what do they need to implement quality assurance from multiple providers? What are effective measures of student achievement? How does course content affect student achievement?

Evaluating the Quality of Curricula

Virtual instruction holds the promise of efficient, highly individualized instruction, reaching students who seek access to quality courses. Online education has been referred to as a “disruptive innovation”³¹ and Clayton Christensen, who pioneered this concept, has predicted that by 2018, half of all high school courses will be taken online.³² Like other disruptive innovations before it, this prediction is not on track to become reality; however, the online

education industry remains at the intersection of a growth explosion and a legislative gap. Estimates currently indicate 200,000 students are enrolled in virtual schools across 200 schools in 26 states,³³ while approximately 4 million students enroll in one or more supplementary online courses each year.³⁴ Further, a 2016 independent survey finds that millennial parents support alternative educational approaches, with 92 percent believing that students should have access to tuition-free online courses,³⁵ indicating continued demand for the sector.

To comply with 21st century learning standards that require technological literacy, states range from requiring students to complete at least one online course, to requiring students to have an online “experience,” and to encouraging schools to buy digital content rather than textbooks. However, legislation in this area was limited in 2015 and 2016. Failed legislation in Mississippi (MI H392) would have authorized the use of comparable alternatives to bound paper textbooks. Failed legislation in New Jersey (NJ S3039) sought to establish a task force to study and make recommendations regarding educational technology in classrooms as, it claims, “students are digital natives who live in a global, connected world and need to be educated within this context in order to be college and career ready.”

Yet, given the variability of digital materials and formats, authorizers face numerous challenges in effectively evaluating course quality and monitoring student learning. Because the online environment is flooded with content developed by various providers—ranging from large for-profit organizations to local districts—and in various formats—ranging from individual courses to full grade-level curricula—authorizers or parents often have difficulty ensuring quality content in the current, highly decentralized environment. While growth in the online industry may serve many students who currently lack access to required, remedial or advanced courses, it leaves states scrambling to understand the trends and to provide proper guidance and legislation. According to a 2015 study by the Center on Reinventing Public Education (CRPE), “The primary approaches to regulating online charter quality relate to entry barriers and oversight. States restrict the number of online schools permitted, regulate teaching credentials and other inputs, and impose additional application and oversight requirements. Few state laws provide charter authorizers with guidance to ensure robust performance outcomes or instructional quality in the online environment.”³⁶

In 2015 and 2016, legislators devoted some attention to mandating requirements for monitoring quality curriculum and providers in online environments. Like curricula in traditional schools, online curricula should be aligned with a designated set of standards to ensure that students’ individualized online learning experiences provide the information and skills policymakers deem essential. In fact, a 2015 report states, “All states have included specific language to require that online school curricula align with state standards and assessments. This may be in response to the fact that many online charter providers operate across many states with different learning standards.”³⁷ In the 2014 report, we presented data from the International Association for K12 Online Learning (iNACOL) indicating that states are starting to review online courses to determine alignment with standards and other elements of course quality.

Additionally, in an effort to bring order to the plethora of available curricula, states are starting to focus on creating clearinghouses of reviewed and approved online courses and providers. Legislation in 2015 and 2016 addressing both standards alignment and a clearinghouse of reviewed and approved courses and providers includes the following:

- Enacted legislation in Oklahoma (OK S136) provides for a publicly available database of reviewed and approved supplemental online courses. However, the law does

not limit districts to selecting only approved supplemental courses.

- Georgia passed legislation (GA H502) that outlines the state’s goal to “maximize the number of students ... who complete prior to graduation at least one course containing online learning. This legislation also expands the options for online courses students can take to meet this goal. However, this law also eliminates the requirement for the department to provide a list of approved virtual instruction providers.
- Enacted legislation (AL S72) in Alabama requires the Department of Education to provide a repository of quality content and curriculum for virtual education.
- Maine enacted legislation (ME S435) to create a library of digital educational content and learning resources aligned with the state’s educational initiatives.
- The Michigan Virtual Learning Research Institute, authorized in MI S216, will maintain a public statewide catalog of online courses and provide recommendations and statistics on courses.
- Failed legislation in Missouri (MO H902) would have reserved the right of the state board to evaluate online courses and to ensure they aligned with state standards.
- Oregon failed to pass legislation (OR H2817) that would have allowed students to satisfy high school credits through online courses selected from an approved list compiled by the Department of Education.
- Failed legislation in Arizona (AZ H2207) would have established a master list of approved online courses and providers.
- Louisiana failed to pass legislation (LA H976) that would have updated automatic inclusion thresholds for Course Choice Program.
- Failed legislation (MI H202) in Mississippi would have created the Digital Access Learning and Virtual Instruction Program to publish a list of approved digital programs and providers.
- Pending legislation in Pennsylvania (PA H1915) would establish the Online Course Clearinghouse Restricted Account.
- Though not restricted to virtual schools, the Wisconsin Department of Public Instruction has created an online clearinghouse of teacher-vetted curricular materials in WISELearn, “a centralized location for classroom resources and professional learning resources for all Wisconsin educators.”³⁸

Ensuring Quality and Quantity of Instruction

Trends relating to the quality and quantity of virtual instruction that emerged or continued to demand legislative attention in 2015 and 2016 included: seat time, competency-based education, course-level enrollment, blended learning, dual enrollment, credit recovery and remedial coursework.

Seat Time: The national focus on higher standards, particularly a greater emphasis on critical thinking and skills-driven content, is creating ripple-effect shifts in other facets of K-12

education—especially a shift away from time, based on the Carnegie Unit, as a measure of learning.³⁹ Some states have moved away from “seat time” as an appropriate indicator of student learning, recognizing that simply being at a designated site for a particular number of hours does not guarantee student learning.⁴⁰ In fact, the 2015 *Mathematica* study finds that “three quarters (76 percent) of online charter schools include courses that are self-paced rather than tied to the calendar. One-third of online charter schools rely exclusively on self-paced courses. Consistent with the prevalence of self-paced courses, the instructional method used most frequently in online charter schools is individualized, student-driven independent study. Schools reported that teacher-guided synchronous discussion (that is, students and teachers participating in discussion at the same time) is the next most frequently used instructional method for all grades. Collaborative learning is used less frequently, and lectures are not used frequently in more than one-fourth of online charter schools at any grade level.”⁴¹ “In most online charter schools, synchronous instruction occupies less time than it does in conventional schools. The difference is dramatic: students in the typical online charter school have less synchronous instructional time in a week than students in a brick and mortar school have in a day.”⁴²

The Ohio Competency-Based Education Pilot embraces this shift away from the Carnegie Unit of time, instead granting students credit based on demonstrated mastery, not on the amount of time focused on a subject. Failed Utah legislation (UT S285) would have based funding in a Student-Centered Learning Pilot Program on successful completion of a course rather than the amount of time a student receives instruction.

Competency-Based Education: Affecting both traditional and virtual schools, competency-based education (alternately called proficiency-based learning) is another continuing trend and is closely tied to the issues of seat time and individualization. In the 2014 report, we discussed Maine’s adoption of a proficiency-based learning approach in which “time is the variable and learning driven by rigorous standards is the constant.”⁴³ The Maine Department of Education defines proficiency-based learning as “any system of academic instruction, assessment, grading and reporting that is based on students demonstrating mastery of the knowledge and skills they are expected to learn before they progress to the next lesson, get promoted to the next grade level or receive a diploma.”⁴⁴ A 2015 report cites a California requirement for online schools to create Individualized Learning Plans (ILPs) for every student [as] one approach to promoting personalized education by online educators.⁴⁵

Enacted legislation in Ohio (OH H64) established a Competency-Based Education Pilot to award grant funding for districts to design and implement competency-based models, defined as emphasizing “achievement over enrollment and encourag[ing] school districts to adequately address the personalized learning needs of each of their students.”⁴⁶ The pilot further states, “Instruction is tailored to students’ current levels of knowledge and skills, and students are not constrained to progress at the same rates as their peers. Competency-based education allows for accelerated learning among students who master academic material quickly and provides additional instructional support time for students who need it.”⁴⁷ However, Utah failed to pass legislation (UT S285) to establish a Student-Centered Learning Pilot Program that promoted competency-based instruction. Idaho legislation (ID H110) not confined to virtual education directs the process for identifying districts and charters operating as incubators for mastery education; in 2015, Ohio awarded five grants to implement competency-based programs; and the governor of Georgia recommended a transition to competency-based education.⁴⁸

Course-Level Enrollment: The issues surrounding quality and quantity of instruction

may become more complex before they become clearer. The U.S. Department of Education has confirmed that many traditional high schools across the country do not offer the breadth and depth of courses required for college preparation and admission. For example, nationwide only 50 percent offered calculus while between 10 percent and 25 percent offered no more than one of the core courses necessary in a solid math and science sequence that colleges require.⁴⁹ Further, many rural schools cannot offer a wide range of AP classes or world languages. Therefore, to fill such unacceptable gaps, traditional schools are turning to online providers and driving growth in course-level virtual enrollment. In fact, as stated above, approximately 4 million students annually enroll in one or more online supplementary courses. In 2015, Illinois passed legislation (IL SB1679) directing a review committee to make recommendations on virtual course access programs, enabling students to complete courses online.

While some states have initiated efforts to maintain an online catalog of approved courses, as discussed above, companies have also risen to the challenge. For example, *ExcelinEd* advocates Course Access, which is a blueprint for legislation and programmatic elements that states can use to expand course offerings across in class, online and blended environments from multiple providers. The policies offer students “expanded curricular opportunities and alternatives that met their unique preferences, schedules and needs.”⁵⁰ One element necessary for Course Access is that “the state (or state-approved entity, or a consortium of states with reciprocity agreements) should maintain a web-based catalog of multiple providers and courses that have been approved based on demonstrated alignment to state academic standards, adherence to national quality standards, and course effectiveness data.”⁵¹ While this approach holds promise for monitoring course quality as well as student achievement, currently only a handful of states (Arizona, Florida, Georgia, Kansas, Louisiana, Michigan, Minnesota, Oklahoma, Oregon, Texas, Utah, Washington, and Wisconsin) offer Course Access through established programs or policies.⁵²

Blended Learning: An emerging trend at the state and district level encourages the adoption of blended learning, with students learning content partly through in-class instruction with a teacher and partly through digital or online media. In Arkansas, the definition of blended learning has extended to include students not interacting in-person with a teacher but meeting online with teachers twice per week for synchronous lessons and online class discussions.⁵³ According to Education Elements, “successful blended learning occurs when technology and teaching inform each other.”⁵⁴

Perhaps the strongest advocacy of blended learning legislation is found in Colorado law (CO H1222), the “Empowering Digital Learning for All Act”; a portion is worth reporting in full:

The overwhelming influence of the rapidly evolving use of technology and the Internet will render high-quality remote digital educational content almost cost-free after a period of declining costs. ... While some school districts have been able to keep pace with the changing context of public education, most have not. The scope of the coming change in the delivery of public education services is massive and more far-reaching than the currently available construct of online learning or blended learning. The scope of the change is such that the advances that the technology revolution brings must be equally available to students throughout Colorado who choose a blended learning environment. The public education system must take advantage of this opportunity to significantly improve statewide educational equity by delivering educational services through the digital learning environment. It is likely that failure to embrace this change

in the delivery of public education services will lead to a decline in the equity and quality of the system of public education in Colorado.

The legislation increases the investment in supplemental online courses and blended learning support, and it designates an organization to develop and administer a statewide plan for implementation.

Other legislation regarding blended learning in 2015-2016 included the following:

- Failed legislation in Utah (UT S285) would have established a Student-Centered Learning Pilot Program that incorporated blended learning along with competency-based education to make individualized instruction the core of the model.
- Florida failed to pass legislation (FL H4013) that would have ended a requirement that students in a blended learning course be full-time students in the school and (FL S470) would have required the same accountability for blended learning and traditional courses.

Dual Credit: The proliferation of virtual courses has created greater opportunities for students to earn dual credit for both high school graduation and college credit. Enacted legislation in Mississippi (MI S2064) defines provisions for high school students concurrently enrolled in post-secondary courses. However, the legislative scan found little focus on dual credit.

Credit Recovery and Remedial Coursework: For students who have failed courses or fallen behind for other reasons, including illness, lack of family stability, teen pregnancy or previous substance abuse, the opportunity to make up high school credits in a non-traditional setting is critical to earning a diploma. Further, some colleges offer remedial coursework through online options for students who need to master high school concepts before tackling college-level work. Providing avenues for credit recovery and remedial coursework has driven a small portion of the legislative agenda. Failed legislation in Missouri (MO H902) would have required each district to identify high school students requiring remedial coursework to prepare for further high school courses, college, or entry-level positions.

Tracking and Assessing Student Achievement

As assessment of student achievement moves from a time-based to a demonstrated mastery-based system, documenting student proficiency becomes a primary concern. Issues requiring policy attention stem from the flexibility inherent in online education and the need for consistent performance evaluations.

State and federal policies that increase demands for demonstrated student achievement make the flexibility of online options an especially important consideration. State legislation allowing students to choose single courses from multiple providers, or to remain enrolled at a traditional school while supplementing coursework through online providers, generates a significant challenge for monitoring student achievement. State accountability systems must evolve accordingly. Ways must be found, for example, to track the combined accomplishments of students who take advantage of multiple learning options in a variety of venues. Research questions that arise include how to track outcomes from such varied providers and how to assess the contribution of a specific course to student proficiency.⁵⁵

Advocates and for-profit companies have claimed that students in virtual schools perform equal to or better than peers in traditional schools.⁵⁶ However, the limited studies on the topic indicate otherwise. For example, a 2011 Stanford University-based Center for Research on Education Outcomes (CREDO) study used a matched pair sampling methodology and found that students in virtual charters in Pennsylvania made smaller learning gains over time as compared to both their brick-and-mortar charter and traditional school counterparts.^{57,58} The 2015 CREDO study, a comprehensive analysis of achievement for students in online charter schools, is even more dire. The report finds that “the majority of online charter students had far weaker academic growth in both math and reading compared to their traditional public school peers. To conceptualize this shortfall, it would equate to a student losing 72 days of learning in reading and 180 days in math, based on a 180-day school year.”⁵⁹

However, even though the low performance of online school students suggests the need for stronger accountability, the trend in virtual schooling may be toward less state-level policy oversight. Even as more online course options are being incorporated, fewer states are changing policy to support the shift; schools and districts can easily contract with online providers outside of a policy framework.⁶⁰ Other factors further complicate efforts to measure student achievement. Consistent data have become more fragmented as states withdraw from common assessments, and parents are increasingly opting their children out of state testing.⁶¹

States are also promoting the individualization trend discussed above through accountability systems. Some states are changing “accountability mechanisms to base them on the educational trajectory of each individual student.”⁶² For example, enacted legislation in Iowa (IA S510) establishes performance metrics including student proficiency, growth, and progress toward graduation. Additionally, 2015 legislation in Utah (UT S222) directs the state board to identify achievement outcome metrics and minimum benchmarks in digital programs. In 2016, Utah (UT H277) developed a grant program to implement the proposal outlined in UT S222. Further, the Arizona Department of Education modified accountability expectations for online schools by focusing on student growth in proficiency and progress toward graduation.⁶³

The legislative scan indicated a moderate focus on enforcing quality standards for student achievement.

Recommendations

While state legislators have increased their focus on digital learning—including but not limited to virtual schools—in 2015 and 2016, they have still not kept pace with the dynamic online education marketplace. Our overall legislative analysis indicates little continued progress over the past year in proactively addressing issues related to instructional program quality. Based on the preceding analysis, we reiterate our recommendations from the previous three reports. Specifically, we recommend that policymakers and educational leaders:

- Require high-quality curricula, aligned with applicable state and district standards, and monitor changes to digital content.
- Develop a comprehensive system of formative and summative assessments of student achievement, shifting assessment from a focus on time- and place-related re-

quirements to a focus on student mastery of curricular objectives.

- Assess the contributions of various providers to student achievement, and close virtual schools and programs that do not contribute to student growth.
- Implement a nationwide longitudinal study across multiple providers and with interim data checkpoints to assess the quality of the learning experience from the student perspective.

High-Quality Teachers

As technology increasingly becomes part of the fabric of everyday life, teachers and students in all contexts need to become more skilled at integrating online resources.⁶⁴ One would be hard pressed to find a school in which technology plays no role in student learning or instructional delivery. As a result, technology use has been generally accepted as a key competency for educators, and the preparation and ongoing professional development of teachers reflects a greater emphasis on integrating technology into instruction.⁶⁵ That said, the context of virtual schooling in which students and teachers are typically separated in time and place introduces unique issues and challenges related to teachers. We still know little about how to identify quality teachers in virtual contexts, how to recruit and retain them, how to evaluate their effectiveness, and how to provide ongoing support to promote best practices. In all of these areas, practice continues to outpace the available empirical evidence.

Our previous reports have identified several policy issues, assumptions, and empirical questions that need to be answered (see Table 1.3). In this section, we revisit those topics in light of new empirical evidence and recent policy developments. We conclude with a set of recommendations.

Table 1.3. Teacher Quality Questions for Virtual Schools

Policy Problem	Assumptions	Empirical Questions
Recruiting and training qualified teachers	<p>Instructional training and professional support tailored to online instruction will help recruit and retain teachers.</p> <p>Effective teaching in a traditional environment easily translates to an online environment.</p> <p>Teacher preparation programs and district professional development programs will re-tool to support online instruction demands.</p>	<p>Can sufficient numbers of qualified online teachers be recruited and trained to ensure the ability of virtual education to offer new opportunities to rural or underserved populations?</p> <p>Which professional skills and certifications for online teachers are the same as for traditional teachers? Which are different?</p> <p>What professional development is relevant for online teachers?</p>
Evaluating and retaining effective teachers	<p>Evaluation of online teachers can mirror that of teachers in traditional settings.</p> <p>Online teachers can support a large roster of students.</p>	<p>How well do evaluation rubrics for traditional settings translate to an online environment?</p> <p>How much direct attention and time is necessary for a student to receive adequate instructional support? What are the implications for teaching load?</p>

Recruiting and Training Qualified Teachers

Despite the heavy reliance on technology and individual pacing in virtual schools, teachers continue to play an important role.⁶⁶ As a recent Evergreen report notes, “Online schools have innovated in a variety of ways, but in most cases they remain based on teacher-student interaction, and in some cases student-student interaction.”⁶⁷ The National Education Association’s *Guide to Teaching Online Courses* identifies an ongoing teacher presence and communication between and among students, teachers, and parents as key components of an effective online education environment.⁶⁸

Recent evidence on virtual schooling identifies some of the factors that influence teachers’ decisions to work in virtual schools as well as factors that virtual schools prioritize when hiring teachers. Based on survey responses from 325 online teachers, a 2015 study found that teachers working in virtual schools “tend to be self-motivated, place a high value on learning and education, and enjoy the challenge and the process of using technology for teaching.”⁶⁹ Another 2015 study comparing online charter schools and brick-and-mortar charter schools affiliated with a charter school management organization found that in both types of schools, the top hiring priority is teachers’ “willingness to work hard in support of the school’s mission.” The second most important factor in virtual schools is applicants’ certification status, while in brick-and-mortar charters it is performance on a sample lesson.⁷⁰ Given that all states require that most online teachers-of-record be certified,⁷¹ this finding suggests that there may be an undersupply of certified teachers in virtual charter schools that forces them to focus more on basic qualifications rather than other criteria emphasizing quality and effectiveness (for example, experience teaching online courses, performance teaching a sample class, or college grade point average).

Recent research on the nature of teachers' work in online schools underscores longstanding concerns about how well the requisite knowledge, skills, and dispositions needed for teaching in traditional brick-and-mortar classrooms transfer to virtual settings. A recent study reported that online charter school teachers' responsibilities are more heavily weighted toward providing individual attention to students (identifying struggling students and grading student work, for example) rather than other tasks like developing curricula, planning lessons, and providing direct instruction. Purchased curriculum packages reduce many conventional teaching responsibilities because courses tend to be pre-designed, self-paced, and involve few if any lectures.⁷² According to the study, teachers in online charter schools spend an average of six hours or fewer each week on synchronous instruction, and even this is highly variable, making it difficult to pin down the nature of teacher work in an online environment and the training and professional development needed to support that work.⁷³ Further, the study found that few teacher preparation programs offer instruction and training in the methods for online teaching, and even fewer offer student teaching placements in online instructional environments. As a result, most of the virtual school teacher respondents reported that any training that they received occurred after graduation, and most of the learning occurred on the job.⁷⁴ Ninety-two percent of online charters reported that their teachers participated in professional development, with more than half reporting online synchronous professional development sessions at least monthly. However, online professional development has been found to have a statistically significant negative correlation with student achievement growth in math.⁷⁵

Virtual school principals have surfaced as a group needing some attention by researchers and policymakers for the first time in our reports. Principals are key to school effectiveness, in their roles both as managers and as academic leaders who evaluate and provide professional development for teachers and staff. A recent study found that almost half of online charter school principals reported that they had no prior experience teaching in an online setting, which raises questions about their ability to evaluate and provide instructional support to teachers.⁷⁶

In our review of 2015-2016 legislation, we identified a number of bills intended to enhance the technological skills of teachers through preparation programs and ongoing professional development. However, virtually all of the proposed legislation applied generally to teachers in all settings, not specifically to teachers in virtual schools. Several bills involved appropriations to establish grant programs supporting the development of more technologically oriented teacher education programs. For example, a 2016 California bill (CA A 2706) that did not pass during the session, proposed appropriating \$2 million from the state's general fund to support pilot programs designed to educate teachers in more effectively integrating technology and digital resources into daily instructional activities in order to promote the "critical 21st century skills pupils need to succeed on California's next-generation online assessments." Similarly, legislation enacted in South Dakota (SD S133) established a grant program to fund the development of "teacher training and classroom access to virtual education and customized learning tools."

Other recent legislative activity indicates that lawmakers are increasingly emphasizing technology and virtual instruction in state certification and licensure programs. Again, few of these bills focused on programs specific to teachers in online schools (e.g., MN S2744 and NC H0130); rather, most of the legislation related more generally to including technology expertise in all teacher preparation programs. For example, a failed Minnesota bill (MN S2744) would have required all colleges and universities with approved teacher licensure programs to include in their preparation programs "the knowledge and skills teacher candi-

dates need to deliver digital and blended learning and curriculum and engage students with technology.” A failed Florida bill (FL H7021) focusing on reading and literacy education included requirements that teacher preparation include practice with classroom technology and online instruction. A failed bill in Virginia (VA H459) sought to require that “every person seeking initial licensure or renewal of a license demonstrate proficiency in the use of educational technology for instruction.” Several of these bills charged the State Department or Board of Education with responsibility for establishing standards and overseeing the quality of these new components of teacher preparation programs. For example, a pending New Jersey bill (NJ S437) requires all teacher certification candidates to complete a technology training program meeting State Board of Education requirements for increasing “proficiency in the understanding, use and application of educational technologies within the classroom.” A failed bill in Nebraska (NE L1026) charged the newly created Educational Technology Center in the State Department of Education with developing a “statewide instructional improvement system that supports personal learning”; the system was to include, among other things, virtual education standards and a certification process for teacher candidates who would teach in a virtual environment. While most of these teacher preparation and licensure bills failed, this legislative activity evidences a growing recognition that all teachers need to learn to use online instructional technologies effectively, which may be why legislation has typically neglected requirements specifically for teachers in virtual schools.

Virtually all of the proposed legislation applied generally to teachers in all settings, not specifically to teachers in virtual schools

Unlike legislation focused on teacher preparation and licensure, recent bills promoting ongoing professional development to improve teachers’ technological skills met greater success, although only six states (DC, ID, KS, LA, NC, and TX) require specialized professional development for online teachers.⁷⁷ While a few bills considered in the 2015 and

2016 legislative sessions did focus exclusively on those teachers (for example, MS S2064), again the majority applied to the general teacher population. Several examples illustrate the range and reach of these efforts. The Utah legislature enacted a bill (UT H277) that established a grant program to promote digital teaching and learning technologies as a mechanism to improve educational outcomes for the state’s students. The program emphasizes “high-quality professional learning” in digital teaching and learning methods. Colorado enacted a bill (CO H1222) increasing the state’s investment in supplemental online courses and blended learning as well as in professional development, mentoring, and technical assistance. The Michigan legislature enacted a bill (MI S216) that requires increasing numbers of teachers and administrators to engage in professional development focused on integrating digital technology into curricula and instruction. And finally, Pennsylvania’s legislature enacted a bill (PA H1606) establishing a grant program to support the expansion of “hybrid” learning through a variety of investments, including professional development.

As in our earlier reports, this analysis of legislative activity found little progress toward establishing and implementing requirements for the preparation, certification and ongoing professional development of teachers working in full-time virtual schools. While policy reports have made recommendations for online teacher education and licensure requirements,⁷⁸ most of the 2015 and 2016 state legislation aimed at enhancing teachers’ abilities to effectively use instructional technology applied to all teachers—a reflection of the proliferation of education technology in all types of schools. While recent research demonstrates that the responsibilities of online teachers are different than those of traditional classroom teachers, more work is needed to understand the specific roles of teachers in virtual schools and the preparation they need to be effective there. The same holds true for virtual school

principals. We also need better information on the demand for, and supply of, state certified teachers working in online environments. In the current context where demand appears to exceed supply, virtual schools are likely to prioritize credentials over quality in teacher hiring decisions.

Evaluating and Retaining Effective Teachers

The issues of teacher evaluation and retention continue to receive much attention in policy and research related to traditional brick-and-mortar schools. Our last report recognized the challenges of using conventional, albeit imperfect tools, for teacher evaluation in virtual settings. Due to factors like asynchronous instruction, limited (if any) face-to-face time, and student self-pacing,⁷⁹ neither standards-based evaluation tools with established rubrics to guide observation and evaluation of teachers' classroom performance⁸⁰ nor value-added measures based on students' growth in standardized test scores translate well to full-time virtual schools. Some recent evidence does, however, provide some indication of how virtual teachers are monitored and evaluated. Most virtual schools report that their teachers are observed by peers (58%), master teachers (59%), or administrators (93%) at least once each year, though it is not clear how these observations are conducted in an online setting. Further, administrator observation of teachers in online charter schools occurs less frequently than in brick-and-mortar charter schools.⁸¹ Existing research still offers little guidance on how best to evaluate the performance of virtual teachers, and the 2015 and 2016 legislation sessions saw no new legislative activity related to teacher evaluation in virtual schools.

Likewise, our analysis of teacher retention reveals a dearth of empirical evidence and little legislative activity. The literature on traditional classroom teachers has found that teachers who are more satisfied with their working conditions are more likely to remain in them. As a result, in past reports much of our attention to retention issues focused on factors identified in the literature as related to teacher satisfaction in virtual schools. That said, researchers have identified "a critical need to determine the job satisfaction of K-12 online teachers and identify the factors that influence satisfaction or dissatisfaction as they related to the teachers' intent to remain in the field of online teaching."⁸² One notable factor in online settings is class size, but recent evidence also identifies other elements of workload and conditions for success as relevant.⁸³ For example, teachers in the California K12 Virtual Academies have raised serious concerns about student attendance. One teacher, for example, indicated that "only a fraction of her 75 or so students regularly attend class, and she has no way of knowing if the others watch her recorded lessons."⁸⁴ This anecdotal evidence is indicative of a broader finding based on national data that virtual school instruction tends to involve a "limited number of live contact hours and a lean staffing model."⁸⁵

Generally speaking, class size and working conditions for teachers in virtual schools are not receiving policymakers' attention. On average, online charter schools continue to have substantially higher student-teacher ratios than their brick-and-mortar counterparts. The average pupil-teacher ratio in online charter schools is 30:1 compared to 20:1 in brick-and-mortar charter schools and 17:1 in traditional public schools.⁸⁶ Class sizes in online schools are highly variable with averages of 39 students per class in online elementary schools, 60 per class in middle schools, and 71 per class in high schools. Only five states (AR, CA, MN, NC, and OH) have imposed class size restrictions on online charter schools, and only one state requires individualized learning plans for all students in those schools.⁸⁷

The only 2015-2016 legislative attention to issues surrounding attendance and regular

contact between students and instructional staff was a bill enacted in North Carolina (NC H1030). It requires virtual charter schools to ensure that each student is assigned to a learning coach, who is responsible for providing “daily support and supervision of students,” ensuring “student participation in online lessons,” and coordinating “teacher-led instructional sessions and State assessments.”

Taken together, our analysis reveals new descriptive evidence on how virtual school teachers are evaluated and a broader notion of the factors that may contribute to their satisfaction (and perhaps retention). However, more empirical evidence is needed to understand how these activities are actually carried out in virtual settings (for example, how a teaching observation is conducted) and to identify how various practices might promote improved student outcomes. Largely absent from recent legislative agendas were issues of teacher evaluation, working conditions, and retention.

Recommendations

Quality teachers are a critical factor in realizing the promise of virtual education to improve both the efficiency and the equity of public education by harnessing technology’s potential to provide cost-effective, broad access to high-quality instruction. But based on our legislative analysis, we conclude that little progress has been made over the past two years on issues related to teacher quality in virtual contexts. Given the increasing recognition of instructional technology’s potential benefits, state legislatures have considered a number of bills related to the importance of educating all teachers in the effective use of technology and online resources. A number of states have enacted bills related to initial certification and, to a greater extent, ongoing professional development in these areas. That said, little attention has been given to the unique challenges related to ensuring an adequate supply of high-quality teachers in virtual schools.

Given the information above, we reiterate our recommendations from last year’s report and added to them two new topics directly related to promoting teacher quality in virtual schools: one deals with the need for data collection on staffing⁸⁸ and the other recognizes the importance of virtual school principals.⁸⁹ Specifically, we recommend that policymakers, educational leaders, and researchers work together to:

- 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 models.
- Address retention issues by developing guidelines for appropriate student-teacher ratios and attending to other working conditions (for example, student attendance) that may affect teachers’ decisions about where to work.
- Work with emerging research to develop valid and comprehensive teacher evaluation rubrics that are specific to online teaching.
- 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.
- Examine the work and responsibilities of virtual school principals and ensure that those hired for these roles are prepared with the knowledge and skills to be effective, particularly with respect to evaluating teachers and promoting best practices.

Notes and References - Section III

- 1 LexisNexis® State Net® & National Conference of State Legislatures (2015/2016). Data was derived from LexisNexis® State Net® Bill Tracking Database using the keywords: *cyber, virtual, online, technology, nonclassroom-based, distance learning, digital learning and blended learning*. The keyword *blended learning* was added to the 2015 and 2016 legislative bill analysis, and was not used in previous searches of the StateNet® Bill Tracking Database.
- 2 In 2014, 131 bills were considered in 36 states; 38 were enacted, 62 failed (31 were pending at end of legislative session). In 2013, 127 bills were considered in 25 states; 29 were enacted, 7 failed (92 were pending at end of legislative session). In 2012, 128 bills were considered in 31 states; 41 were enacted and 87 failed.
- 3 Baker, B.D. & Bathon, J. (2012). *Financing Online Education and Virtual Schooling: A Guide for Policymakers and Advocates*. Boulder, CO: National Education Policy Center. Retrieved November 12, 2013, from <http://nepc.colorado.edu/publication/financing-online-education>
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