

## Appendix II-A

### Summary of Research Related to the Effectiveness of Virtual Schools<sup>1</sup>

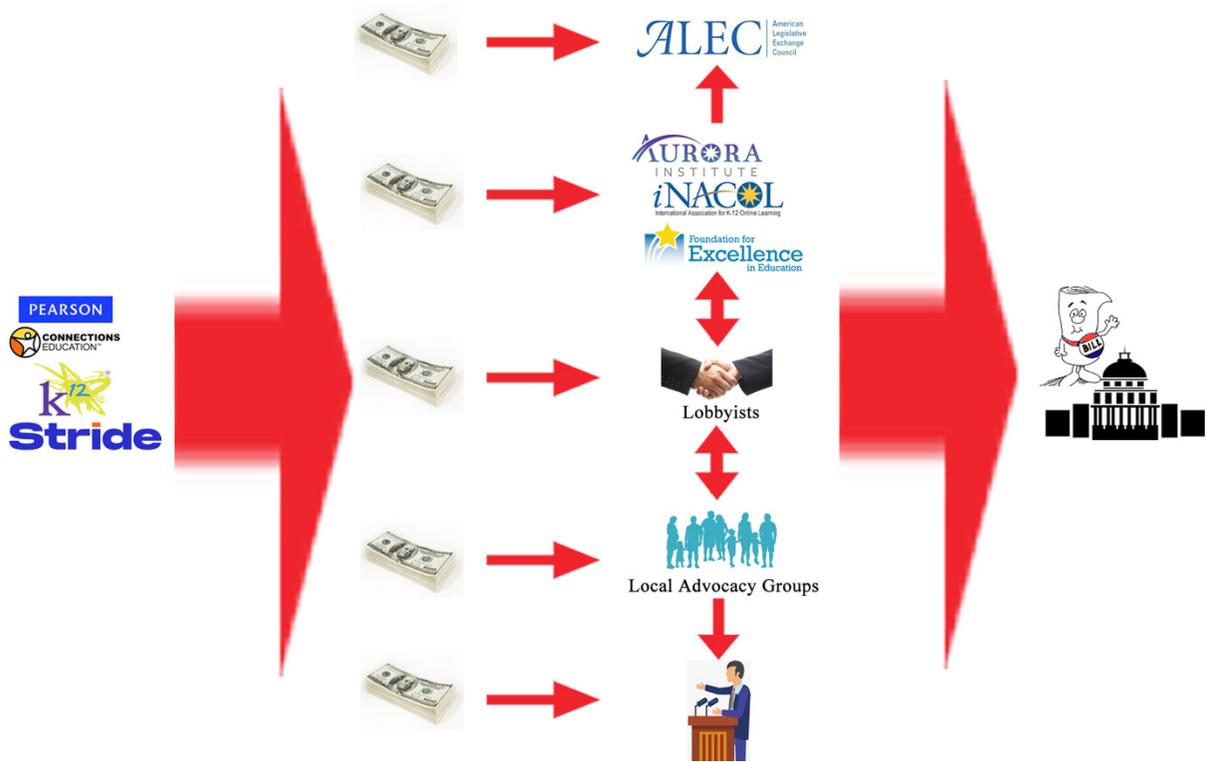
Study	Finding
Michigan (2020)	Students enrolled in full-time virtual schools operated by local education authorities had a pass rate of 51%, while students enrolled in full-time virtual schools operated by public school academies had a pass rate of 49%; compared to the students' non-virtual course pass rate of 76%. <sup>2</sup>
Michigan (2019)	Students enrolled in full-time virtual schools operated by local education authorities had a pass rate of 47%, while students enrolled in full-time virtual schools operated by public school academies had a pass rate of 53%; compared to the students' non-virtual course pass rate of 79%. <sup>3</sup>
Ohio (2019)	"Students attending online charter schools have substantially weaker growth in both reading and math than the average TPS VCRs. The gaps translate to 47 fewer days of learning in reading and 136 fewer days of learning in math for online charter students." <sup>4</sup>
Michigan (2018)	Students enrolled in virtual schools had a pass rate of 49%, compared to the students' non-virtual course pass rate of 78%. <sup>5</sup>
Michigan (2017)	Students enrolled in virtual schools had a pass rate of 53%, compared to the students' non-virtual course pass rate of 78%. <sup>6</sup>
North Carolina (2017)	"For the 2015-16 school year, both VCS received an overall School Performance Grade (SPG) of D which translates numerically to a 52 for Connections and 45 for NCVA respectively. Both VCS received a SPG of C in Reading and an F SPG in Mathematics. Comparatively, during the 2015-16 school year, traditional public schools had a lower percentage of schools with D and F (22.9%) than public charter school (27.7%)." <sup>7</sup>
Ohio (2017)	The students who started e-schools in the lower baseline academic distribution scored lower on state testing and had lower likelihoods of meeting high school graduation standards. Students with prior levels of high achievement also scored lower than their traditional public and charter school peers, but the difference was not as stark as those with lower prior levels of academic achievement. <sup>8</sup>
National (2016)	"Compared to traditional public school students, full-time virtual charter school students have much weaker academic growth overall. Full-time virtual charter schools perform worse than traditional public schools in most states. All subgroups of students have weaker academic growth in full-time virtual charter schools than in traditional public schools. The vast majority of full-time virtual charter schools perform worse than traditional public schools." <sup>9</sup>
Michigan (2016)	Students enrolled in virtual schools had a pass rate of 52%, compared to the students' non-virtual course pass rate of 87%. <sup>10</sup>
Ohio (2016)	"Across all grades and subjects, students who attend e-schools perform worse on state tests than otherwise-similar students who attend brick-and-mortar district schools, even accounting for prior achievement" <sup>11</sup>

Tennessee (2016)	“The scores are generally lower [for the full-time cyber schools] than the scores of the districts that established the schools.” <sup>12</sup>
National (2015)	“Across all tested students in online charters, the typical academic gains for math are -0.25 standard deviations (equivalent to 180 fewer days of learning) and -0.10 (equivalent to 72 fewer days) for reading.” <sup>13</sup>
Georgia (2015)	“In 2013–14, none of Georgia’s three statewide fully online schools: A) met all of the standardized assessment goals included in their respective charter contracts; or B) outperformed the state on the CCRPI ‘achievement’ component.” <sup>14</sup>
Michigan (2015)	“Cyber enrollments had a ‘Completed/Passed’ rate of 54%... whereas Non-Virtual Learners had an 89% ‘Completed/Passed’ rate.” <sup>15</sup>
Kansas (2015)	Online students (which included a combination of full-time and supplemental students) performed at similar levels in reading before and after controlling for student demographics, but that online students performed at lower levels in mathematics compared to their face-to-face counterparts. <sup>16</sup>
Colorado (2014)	“Online school performance on state assessments had been lower across all grade levels and content areas than that of its brick and mortar counterparts.” <sup>17</sup>
Ohio (2014)	“ . . . [virtual] schools experienced lower student performance than their traditional counterparts.” <sup>18</sup>
Arizona (2011)	“ . . . nearly nine of every 10 students enrolled in at least one statewide online course, all had graduation rates and AIMS math passing rates below the state average” <sup>19</sup>
Colorado (2011)	“Half of the online students wind up leaving within a year. When they do, they’re often further behind academically than when they started.” <sup>20</sup>
Minnesota (2011)	“Compared with all students statewide, full-time online students had significantly lower proficiency rates on the math MCA-II but similar proficiency rates in reading.” <sup>21</sup>
Ohio (2011)	“ . . . nearly 97 percent of Ohio’s traditional school districts have a higher score than the average score of the seven statewide” online charter schools. Those schools in Ohio also underperformed brick-and-mortar schools in graduation rates. <sup>22</sup>
Pennsylvania (2011)	“In every subgroup with significant effects, cyber charter performance is lower than the brick and mortar performance.” <sup>23</sup>
Colorado (2010)	“Online students consistently lag behind those of non-online students, even after controlling for grade levels and [almost every individual] student characteristic” <sup>24</sup>
Idaho (2010)	“Students in virtual charter schools generally achieve proficiency in reading and language arts at lower rates than students in non-charter public schools. Students in virtual charter schools consistently achieve proficiency in mathematics at lower rates than students in non-charter public schools. Students in charter schools generally achieve proficiency at higher rates in all subjects than students in virtual charter schools and non-charter public schools.” <sup>25</sup>
Wisconsin (2010)	“Virtual charter school pupils’ median scores on the mathematics section of the Wisconsin Knowledge and Concepts Examination were almost always lower than statewide medians during the 2005-06 and 2006-07 school years.” <sup>26</sup>

Colorado (2009)	“ . . . demonstrating a sincere commitment to student learning and a consistent effort to increase student achievement. It [was] also evident, however, that some programs [were] falling short of the mark.” <sup>27</sup>
Ohio (2009)	Online charter school students experienced significantly lower achievement gains compared to brick-and-mortar charter schools in the state. <sup>28</sup>
Kansas (2007)	Full-time K-12 online students in Kansas scored lower on state assessments than traditional students, particularly in mathematics <sup>29</sup>
Colorado (2006)	Online student scores in math, reading, and writing have been lower than scores for students statewide over the past three years. <sup>30</sup>

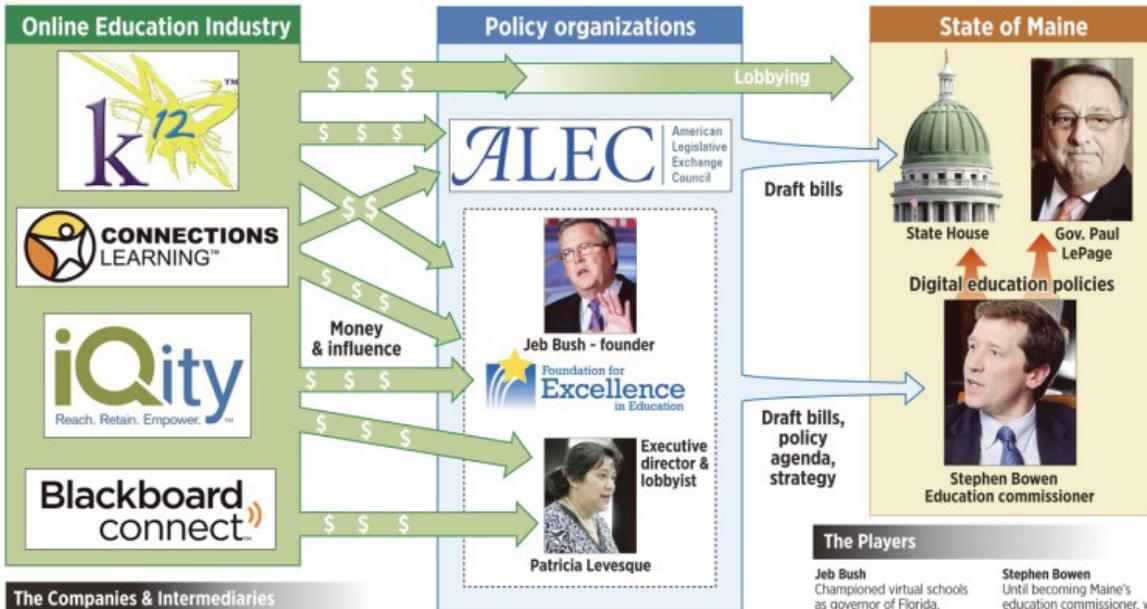
# Appendix II-B

## Factors Influencing Legislation Related to K-12 Virtual and Blended Learning



# Appendix II-C Factors Influencing Maine's Digital Learning Legislation Reforms<sup>31</sup>

## Following the money and influence for digital education



### The Companies & Intermediaries

**Foundation for Excellence in Education:** Conservative foundation supports school choice, abolishment of teacher tenure, and expanded digital learning and full-time virtual schools and removal of "man-made obstacles" to students achieving their "God-given potential." Member of ALEC's education committee.

**American Legislative Exchange Council:** Secretive corporate-funded club for conservative legislators, who are given model bills to call their own back in their state capitals.

**K12 Inc.:** Nation's largest online education company. Seeks to start full-time, taxpayer-funded virtual school in Maine. Funds FFEE, member of ALEC.

**Connections Education:** Nation's second-largest online education company, now a division of Pearson. Seeks to start full-time, taxpayer-funded virtual school in Maine. Funds FFEE, was member of ALEC until May.

**iQity:** Ohio-based online education software company. Funds FFEE. Patricia Levesque has been their lobbyist in Florida.

**Blackboard Connect** Digital education software provider based in Washington D.C. Levesque is their lobbyist in Florida.

### The Players

**Jeb Bush** Championed virtual schools as governor of Florida. Founded, and leads FFEE. Sees Maine as potential "model" for the nation in digital education.

**Patricia Levesque** Bush's chief education adviser, executive director of FFEE, which pays her through her lobbying firm, which represents online education companies. Advises Bowen on Maine policy.

**Stephen Bowen** Until becoming Maine's education commissioner, was a member of ALEC's education committee. Outsourced digital education policy development to Levesque and FFEE.

**Gov. Paul LePage** Issued an executive order Feb. 1 embracing FFEE's agenda for digital education, most of which was written by FFEE. K12 Inc. spent \$19,000 to help get him elected in 2010.

## Appendix II-D

### THE STATE SCHOOL AID ACT OF 1979 (EXCERPT) Act 94 of 1979

**388.1698 Michigan Virtual University; Michigan Virtual Learning Research Institute; Michigan Virtual School; online and blended educator professional development programs; virtual course offerings; home-schooled or nonpublic school student; report; advisory group; submission of budget; definitions.**

Sec. 98.

(1) From the general fund money appropriated in section 11, there is allocated an amount not to exceed \$7,500,000.00 for 2020-2021 for the purposes described in this section. The Michigan Virtual University shall provide a report to the legislature not later than November 1 of each year that includes its mission, its plans, and proposed benchmarks it must meet, including a plan to achieve the organizational priorities identified in this section, in order to receive full funding for 2021-2022. Not later than March 1 of each year, the Michigan Virtual University shall provide an update to the house and senate appropriations subcommittees on school aid to show the progress being made to meet the benchmarks identified.

(2) The Michigan Virtual University shall operate the Michigan Virtual Learning Research Institute. The Michigan Virtual Learning Research Institute shall do all of the following:

(a) Support and accelerate innovation in education through the following activities:

(i) Test, evaluate, and recommend as appropriate new technology-based instructional tools and resources.

(ii) Research, design, and recommend virtual education delivery models for use by pupils and teachers that include age-appropriate multimedia instructional content.

(iii) Research, develop, and recommend annually to the department criteria by which cyber schools and virtual course providers should be monitored and evaluated to ensure a quality education for their pupils.

(iv) Based on pupil completion and performance data reported to the department or the center from cyber schools and other virtual course providers operating in this state, analyze the effectiveness of virtual learning delivery models in preparing pupils to be college- and career-ready and publish a report that highlights enrollment totals, completion rates, and the overall impact on pupils. The Michigan Virtual Learning Research Institute shall submit the report to the house and senate appropriations subcommittees on state school aid, the state budget director, the house and senate fiscal agencies, the department, districts, and intermediate districts not later than March 31 of each year.

(v) Provide an extensive professional development program to at least 30,000 educational personnel, including teachers, school administrators, and school board members, that focuses on the effective integration of virtual learning into curricula and instruction. The Michigan Virtual Learning Research Institute is encouraged to work with the MiSTEM advisory council

created under section 99s to coordinate professional development of teachers in applicable fields. In addition, the Michigan Virtual Learning Research Institute and external stakeholders are encouraged to coordinate with the department for professional development in this state. Not later than December 1 of each year, the Michigan Virtual Learning Research Institute shall submit a report to the house and senate appropriations subcommittees on state school aid, the state budget director, the house and senate fiscal agencies, and the department on the number of teachers, school administrators, and school board members who have received professional development services from the Michigan Virtual University. The report must also identify barriers and other opportunities to encourage the adoption of virtual learning in the public education system.

(vi) Identify and share best practices for planning, implementing, and evaluating virtual and blended education delivery models with intermediate districts, districts, and public school academies to accelerate the adoption of innovative education delivery models statewide.

(b) Provide leadership for this state's system of virtual learning education by doing the following activities:

(i) Develop and report policy recommendations to the governor and the legislature that accelerate the expansion of effective virtual learning in this state's schools.

(ii) Provide a clearinghouse for research reports, academic studies, evaluations, and other information related to virtual learning.

(iii) Promote and distribute the most current instructional design standards and guidelines for virtual teaching.

(iv) In collaboration with the department and interested colleges and universities in this state, support implementation and improvements related to effective virtual learning instruction.

(v) Pursue public/private partnerships that include districts to study and implement competency-based technology-rich virtual learning models.

(vi) Create a statewide network of school-based mentors serving as liaisons between pupils, virtual instructors, parents, and school staff, as provided by the department or the center, and provide mentors with research-based training and technical assistance designed to help more pupils be successful virtual learners.

(vii) Convene focus groups and conduct annual surveys of teachers, administrators, pupils, parents, and others to identify barriers and opportunities related to virtual learning.

(viii) Produce an annual consumer awareness report for schools and parents about effective virtual education providers and education delivery models, performance data, cost structures, and research trends.

(ix) Provide an internet-based platform that educators can use to create student-centric learning tools and resources for sharing in the state's open educational resource repository and facilitate a user network that assists educators in using the content creation platform

and state repository for open educational resources. As part of this initiative, the Michigan Virtual University shall work collaboratively with districts and intermediate districts to establish a plan to make available virtual resources that align to Michigan's K-12 curriculum standards for use by students, educators, and parents.

(x) Create and maintain a public statewide catalog of virtual learning courses being offered by all public schools and community colleges in this state. The Michigan Virtual Learning Research Institute shall identify and develop a list of nationally recognized best practices for virtual learning and use this list to support reviews of virtual course vendors, courses, and instructional practices. The Michigan Virtual Learning Research Institute shall also provide a mechanism for intermediate districts to use the identified best practices to review content offered by constituent districts. The Michigan Virtual Learning Research Institute shall review the virtual course offerings of the Michigan Virtual University, and make the results from these reviews available to the public as part of the statewide catalog. The Michigan Virtual Learning Research Institute shall ensure that the statewide catalog is made available to the public on the Michigan Virtual University website and shall allow the ability to link it to each district's website as provided for in section 21f. The statewide catalog must also contain all of the following:

(A) The number of enrollments in each virtual course in the immediately preceding school year.

(B) The number of enrollments that earned 60% or more of the total course points for each virtual course in the immediately preceding school year.

(C) The pass rate for each virtual course.

(xi) Support registration, payment services, and transcript functionality for the statewide catalog and train key stakeholders on how to use new features.

(xii) Collaborate with key stakeholders to examine district level accountability and teacher effectiveness issues related to virtual learning under section 21f and make findings and recommendations publicly available.

(xiii) Provide a report on the activities of the Michigan Virtual Learning Research Institute.

(3) To further enhance its expertise and leadership in virtual learning, the Michigan Virtual University shall continue to operate the Michigan Virtual School as a statewide laboratory and quality model of instruction by implementing virtual and blended learning solutions for Michigan schools in accordance with the following parameters:

(a) The Michigan Virtual School must maintain its accreditation status from recognized national and international accrediting entities.

(b) The Michigan Virtual University shall use no more than \$1,000,000.00 of the amount allocated under this section to subsidize the cost paid by districts for virtual courses.

(c) In providing educators responsible for the teaching of virtual courses as provided for in this section, the Michigan Virtual School shall follow the requirements to request and

assess, and the department of state police shall provide, a criminal history check and criminal records check under sections 1230 and 1230a of the revised school code, MCL 380.1230 and 380.1230a, in the same manner as if the Michigan Virtual School were a school district under those sections.

(4) From the funds allocated under subsection (1), the Michigan Virtual University shall allocate up to \$500,000.00 to support the expansion of new online and blended educator professional development programs.

(5) If the course offerings are included in the statewide catalog of virtual courses under subsection (2)(b)(x), the Michigan Virtual School operated by the Michigan Virtual University may offer virtual course offerings, including, but not limited to, all of the following:

(a) Information technology courses.

(b) College level equivalent courses, as defined in section 1471 of the revised school code, MCL 380.1471.

(c) Courses and dual enrollment opportunities.

(d) Programs and services for at-risk pupils.

(e) High school equivalency test preparation courses for adjudicated youth.

(f) Special interest courses.

(g) Professional development programs for teachers, school administrators, other school employees, and school board members.

(6) If a home-schooled or nonpublic school student is a resident of a district that subscribes to services provided by the Michigan Virtual School, the student may use the services provided by the Michigan Virtual School to the district without charge to the student beyond what is charged to a district pupil using the same services.

(7) Not later than December 1 of each fiscal year, the Michigan Virtual University shall provide a report to the house and senate appropriations subcommittees on state school aid, the state budget director, the house and senate fiscal agencies, and the department that includes at least all of the following information related to the Michigan Virtual School for the preceding state fiscal year:

(a) A list of the districts served by the Michigan Virtual School.

(b) A list of virtual course titles available to districts.

(c) The total number of virtual course enrollments and information on registrations and completions by course.

(d) The overall course completion rate percentage.

(8) In addition to the information listed in subsection (7), the report under subsection (7) must also include a plan to serve at least 600 schools with courses from the Michigan Virtual

School or with content available through the internet-based platform identified in subsection (2)(b)(ix).

(9) The governor may appoint an advisory group for the Michigan Virtual Learning Research Institute established under subsection (2). The members of the advisory group serve at the pleasure of the governor and without compensation. The purpose of the advisory group is to make recommendations to the governor, the legislature, and the president and board of the Michigan Virtual University that will accelerate innovation in this state's education system in a manner that will prepare elementary and secondary students to be career and college ready and that will promote the goal of increasing the percentage of residents of this state with high-quality degrees and credentials to at least 60% by 2025.

(10) Not later than November 1 of each year, the Michigan Virtual University shall submit to the house and senate appropriations subcommittees on state school aid, the state budget director, and the house and senate fiscal agencies a detailed budget for that fiscal year that includes a breakdown on its projected costs to deliver virtual educational services to districts and a summary of the anticipated fees to be paid by districts for those services. Not later than March 1 each year, the Michigan Virtual University shall submit to the house and senate appropriations subcommittees on state school aid, the state budget director, and the house and senate fiscal agencies a breakdown on its actual costs to deliver virtual educational services to districts and a summary of the actual fees paid by districts for those services based on audited financial statements for the immediately preceding fiscal year.

(11) As used in this section:

(a) "Blended learning" means a hybrid instructional delivery model where pupils are provided content, instruction, and assessment, in part at a supervised educational facility away from home where the pupil and a teacher with a valid Michigan teaching certificate are in the same physical location and in part through internet-connected learning environments with some degree of pupil control over time, location, and pace of instruction.

(b) "Cyber school" means a full-time instructional program of virtual courses for pupils that may or may not require attendance at a physical school location.

(c) "Virtual course" means a course of study that is capable of generating a credit or a grade and that is provided in an interactive learning environment in which the majority of the curriculum is delivered using the internet and in which pupils are separated from their instructor or teacher of record by time or location, or both.<sup>32</sup>

## Notes and References Appendix II

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- 1 For a more descriptive summary of the findings, as well as potential ideological bias of almost all of the studies from 2006 to 2018, see:  
  
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- 3 Freidhoff, J. R. (2019). *Michigan's K-12 virtual learning effectiveness report 2017-18*. Michigan Virtual University. Retrieved January 6, 2021 from <https://mvlri.org/research/publications/michigans-k-12-virtual-learning-effectiveness-report-2017-18/>
- 4 Center for Research on Education Outcomes (2019). *Charter school performance in Ohio* (p. 17). Retrieved February 23, 2019, from [http://edex.s3-us-west-2.amazonaws.com/publication/pdfs/OH\\_state\\_report\\_2019\\_FINAL.pdf](http://edex.s3-us-west-2.amazonaws.com/publication/pdfs/OH_state_report_2019_FINAL.pdf)
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- 9 National Alliance for Public Charter Schools, 50-State Campaign for Achievement Now, & National Association of Charter School Authorizers. (2016). *A call to action to improve the quality of full-time virtual charter public schools* (p. 4). Retrieved May 3, 2021, from <http://www.publiccharters.org/wp-content/uploads/2016/06/Virtuals-FINAL-06202016-1.pdf>
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- 11 Ahn, J. (2016). *Enrollment and achievement in Ohio's virtual charter schools* (p. 9). Thomas B. Fordham Institute. Retrieved February 23, 2019, from <https://edexcellence.net/publications/enrollment-and-achievement-in-ohios-virtual-charter-schools>
- 12 Potts, K., & Donaldson, P. (2016). *Legislative brief: Virtual schools in Tennessee* (p. 2). Offices of Research and Education Accountability. Retrieved February 23, 2019, from <https://web.archive.org/web/20180803005205/https://www.comptroller.tn.gov/repository/RE/Virtual%20Schools%202016.pdf>
- 13 Woodworth, J.L., Raymond, M.E., Chirbas, K., Gonzales, M., Negassi, Y., Snow, W., & Van Dongle, C. (2015). *Online charter school study* (p. 23). Center for Research on Education Outcomes. Retrieved May 3, 2021, from

<https://credo.stanford.edu/publications/online-charter-school-study>

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