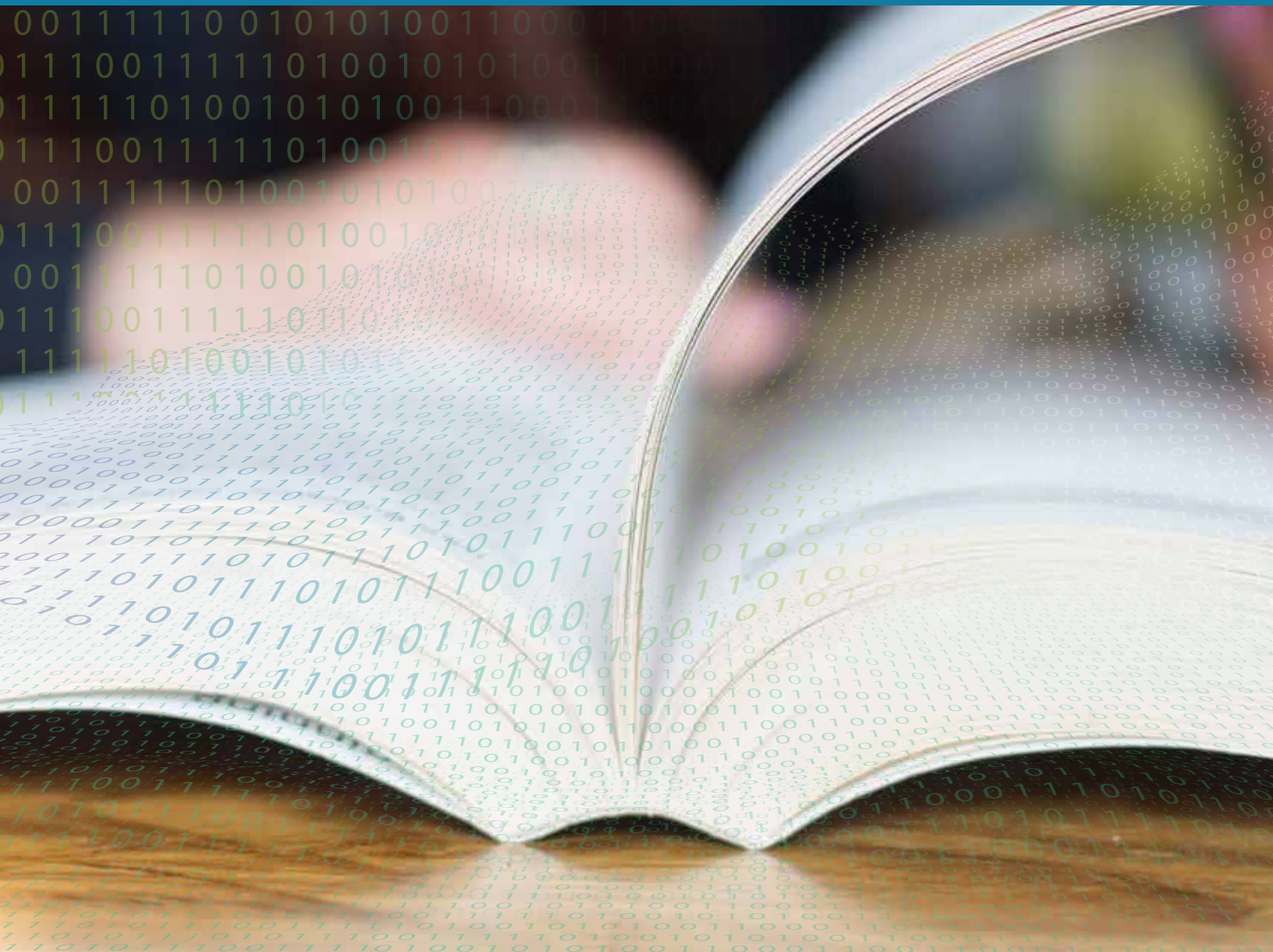


2015 | twelfth edition

KEEPING PACE WITH K-12

DIGITAL LEARNING

An Annual Review of Policy and Practice



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KEEPING PACE WITH DIGITAL LEARNING

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Acknowledgments

This is the 12th annual *Keeping Pace* report. The digital learning world continues to change significantly each year, but the continued support from sponsors, educators, education agencies, state virtual schools, vendors and others has not faltered. We continue to appreciate these people and organizations and everyone who has helped along the way. The cast of *Keeping Pace* sponsors evolves each year, with the only common thread being that they are organizations that share an interest in digital learning and believe that the availability of information and research should be shared with practitioners and policy makers.

This report could not have come about without the dedicated efforts of the close knit team of research colleagues who work with us on a regular basis. We are tremendously grateful to them.

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Preface

Over twelve years of researching, writing and publishing the *Keeping Pace* report, we have seen the online and digital learning space grow and evolve. *Keeping Pace* has always attempted to anticipate shifts in where such activity is concentrated, how practices are changing, advances in technology and devices, and the degree to which state policy impacts digital learning.

Online learning has steadily become a more integral strategy for schools and districts in their efforts to offer students greater access to the courses they need. Where in the past, much of the online learning activity happened at the state level or regional level, more and more schools are exercising greater control over their online and digital learning programs as affordable options are now more available, schools' expertise grows, curriculum and technology products improve, and teachers become more skilled at integrating online courses and techniques into their instruction.

The 2015 edition of *Keeping Pace* reflects this change in the online and digital learning landscape, placing greater emphasis on the users and suppliers of online learning, and how these interrelationships help define the digital learning space, rather than a state-by-state chronicling of activity.

In this edition of *Keeping Pace*, we are providing a greater number of snapshots of digital learning activity to illustrate the why and how behind school and district implementation, and in some cases the policies that shape them. Some snapshots show how suppliers partner with schools to deliver online products and services, and highlight the breadth and depth of activity at the state, district, and school level.

Keeping Pace is also more streamlined than it has been in recent years. One goal for *Keeping Pace 2015* has been to provide more visual representations of data and information, including greater use of tables and graphics to allow readers to more easily analyze, compare, and contrast findings.

Definitions

Digital learning is any instructional practice in or out of school that uses digital technology to strengthen a student’s learning experience and improve educational outcomes. Our use of the term is broad and not limited to online, blended, and related learning. It encompasses a wide range of digital tools and practices, including instructional content, interactions, data and assessment systems, learning platforms, online courses, adaptive software, personal learning enabling technologies, and student data management systems.

An **online course** is a full course education experience in which instruction takes place primarily over the Internet, using an online delivery system to provide access to course content. It may be accessed from multiple settings (in school and/or out of school buildings). A certificated teacher is the teacher of record for the course.

A **hybrid course** is one where the majority of the learning and instruction takes place online, with the student and teacher separated geographically, but still includes some traditional face-to-face “seat time.” In hybrid online courses the online instructor remains the teacher of record even though the student spends time with additional educators.

A **course enrollment** is one student in a single semester-long course or equivalent.

A **unique student** is one individual student, who may take any number of courses.

Online programs work directly with students and deliver online learning services, but are not “schools.” Online programs may include state virtual schools, districts, consortia, and other suppliers.

Supplemental online courses are used to augment a student’s educational program or campus class schedule. Students taking supplemental online courses usually take about 1 to 2 online courses in a school year.

An **original credit course** is one taken by a student for the first time, and is credit bearing. These may be core or elective courses. Original credit courses are also referred to as initial credit or first-time courses.

Credit recovery refers to “a wide variety of educational strategies and programs that give high school students who have failed a class the opportunity to redo coursework or retake a course through alternate means, and thereby avoid failure and earn academic credit.” (*Glossary of Educational Reform*)

Charter schools provide free, publicly funded elementary and/or secondary education to eligible students under a specific charter granted by state-designated charter authorizers or an appropriate authority. Charter schools may have physical campuses, be online, or include elements of both.

Virtual schools are full-time online schools, sometimes referred to as cyber schools, which do not serve students at a physical facility. Teachers and students are geographically remote from one another, and all or most of the instruction is provided online. These may be virtual charter schools or non-charter virtual schools. Online schools typically are responsible for ensuring their students take state assessments, and for their students' scores on those assessments.

Full-time online students are those that take their entire course load online.

Private schools are supported by a private organization or private individuals rather than by the government. Private schools do not receive significant federal, state or local government funding, as opposed to a public school, which is operated by the government or in the case of charter schools, independently with government funding and regulation. The majority of private schools in the United States are operated by religious institutions and organizations.

District statewide or regional operators are districts that supply online courses, instruction, technology and other services to schools both within and outside the originating district. These are sometimes referred to as multi-district online programs.

Regional service agencies (RSA) are "public entities created by state statute, to provide educational support programs and services to local schools and school districts within a given geographic area" (Association of Educational Service Agencies). RSAs function as a level of education agency between the district and state. Regional service agencies go by many names, including intermediate school districts, Boards of Cooperative Educational Services (BOCES), intermediate units, educational service centers, Cooperative Education Service Agencies (CESA), county offices and others.

Intermediate suppliers deliver online courses and services to schools and districts, usually in a single state. They may develop original online content, license content from vendors, or use a combination of original and vendor developed content, which is most often the case. Intermediate suppliers are often some form of governmental entity, including state virtual schools, district statewide and regional programs, regional services agencies, and consortia.

Teacher of record (TOR) is an educator who is responsible for a student's learning activities that are within a subject or course, and are aligned to performance measures, including assignment of the student's final grade in a course. (*Center for Educational Leadership and Technology*)

Suppliers are entities that deliver online courses, instruction, technology tools and/or services to support online learning. Suppliers may be for-profit vendors, education organizations or agencies (re. state virtual schools, regional services agencies), or nonprofit organizations.

Vendors are companies or organizations in the business of developing and delivering a broad range of products and services to the education industry. Vendors deliver online courses, instruction, technology infrastructure and other online services directly to schools and districts for license or purchase, and may provide those same services to intermediates. Vendors may include companies that provide online content, teachers, learning management systems, learning analytics, teacher training and other online products and services.

State virtual schools are intermediate supplier organizations that deliver online courses, instruction and other online learning services to schools and districts across the states in which they operate. State virtual schools are usually created by legislation or by a state-level agency, employ staff, and receive state appropriation or grant funding for the purpose of providing online learning opportunities to students across the state. They also may charge course fees to help cover costs. The organizations may be administered by a state education agency, but may also be 501(c)(3) nonprofits, charter schools, or organizations contracted to operate the state virtual school by the state agency.

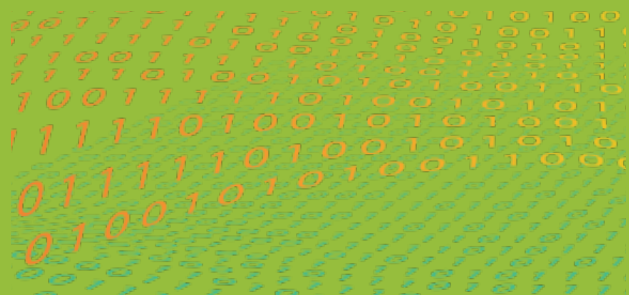
Blended learning is “a formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path, and/or pace; at least in part in a supervised brick-and-mortar location away from home; and the modalities along each student’s learning path within a course or subject are connected to provide an integrated learning experience” (*The Clayton Christensen Institute for Disruptive Innovation*). In most blended learning models, the teacher of record is located in the school building, whereas in online learning the teacher of record is almost always remote, not in the physical school.

Dual credit courses are courses in which a student earns credit from the postsecondary institution offering the course, as well as accruing credit at the student’s home school.

Competency-based learning allows students to advance upon mastery of course content. Competency-based education is based on competencies that include explicit, measurable, transferable learning objectives that empower students. Assessment is meaningful. Students receive timely, differentiated support based on their individual learning needs. Learning outcomes emphasize competencies that include application and creation of knowledge along with the development of important skills and dispositions. (*iNACOL, 2013*)



1 THE STATE OF K-12 DIGITAL LEARNING



ROUGHLY 20 YEARS HAS PASSED SINCE THE WORLD WIDE WEB BEGAN TO BE USED WIDELY, AND INDEED THE OLDEST K-12 ONLINE SCHOOLS AND PROGRAMS ARE BETWEEN 15 AND 20 YEARS OLD. These include the Laurel Springs online private school, which dates to the early 1990s, the Virtual High School, launched with a federal grant in the mid-1990s, the Florida Virtual School (FLVS), which grew out of a Florida Department of Education grant to two districts in 1996, and several small district online schools, such as the Monte Vista online academy in Colorado, which launched in 1997.

These pioneering online schools and programs paved the way for numerous others. In the late 1990s and early years of the new decade two new types of online programs grew rapidly. State virtual schools proliferated across the southeastern U.S., spurred by the early successes of FLVS, and in states in other regions including Michigan and Idaho. Online schools grew quickly as the for-profit companies like K12 Inc. and Connections Academy launched, spurring growth of online schools in many states. Although Connections and K12 were focused primarily on starting and running online schools, other companies including APEX Learning, Aventa (acquired by Fuel Education), E2020 (now Edgenuity), and others began to provide online courses to schools.

Since then, the center of activity and growth has moved from state-level organizations, such as state virtual schools and online charter schools drawing students across entire states, to individual districts and schools. It has also moved from being mostly

online to frequently combining online and onsite components. Most students accessing online courses or content are doing so from a physical school or some other formal learning center, not from home. The number of courses using online content in which the teacher of record is based at the physical school dwarfs the number of courses in which the teacher is online.

But to trace the roots of this in-school online learning activity primarily to the online charter schools and programs like state virtual schools would be a mistake. In fact, the roots of much of the current digital learning activity are in computer-assisted instruction that pre-dates the World Wide Web by many years. While the schools and suppliers who were primarily online adjusted their products and services to account for onsite, school-based use and support, the suppliers with roots in computer-assisted instruction were moving their computer-assisted content into a web-based environment.

The roots of computer-assisted instruction

The history of computer-assisted instruction (CAI) is long and involved, and includes many organizations. Any attempt to detail its history will inevitably leave out some important developments. Most accounts, however, would point to the PLATO project at the University of Illinois Urbana-Champaign that started in 1960 as the major milestone in the evolution of using computers to deliver instruction. The PLATO system was used to deliver instruction in topics ranging from French to Organic Chemistry and advanced military training. In the early 70s super computer company Control Data Corporation took over the project. By then the PLATO system developers had added a powerful course authoring language called PLATO Tutor, email (Personal Notes), message boards, chat rooms (Taklomatic), instant messaging (Term-Talk), and remote screen sharing. The PLATO user terminals even had a touch screen. First major uses of the PLATO system as well as some other early CAI systems were in higher education, corporate and military training and simulation environments.

The Control Data PLATO project evolved over time and eventually gave birth to two of the most widely adopted product lines for personal computers and Internet, PLATO Learning (now Edmentum) and NovaNet (later acquired by Pearson Education). These systems and others like them have been used in tens of thousands of schools across the country, primarily to provide intervention and remediation for struggling students. Because these students were often recovering credit or retaking material for other reasons, they worked through the computer material with some help from a teacher, but with limited interaction with the teacher and little or no interaction with other students. Credit recovery was a major driver of early CAI programs in schools, and credit recovery remains a major element of the digital learning landscape.

The roots of online learning

Unlike CAI, which began with a focus on in-classroom and learning lab use, the type of online learning we are accustomed to today in K–12 schools had its origins as a form of distance education. The early forms of distance learning were geared toward homebound students (and vocational education at a postsecondary level), and used pre-World Wide Web delivery methods including print materials, CD-ROMS, and video conferencing to deliver instruction and facilitate communication. As distance learning evolved with the advance of the Internet, online courses were developed for Advanced Placement students, or to provide college preparatory courses that were not available in rural or inner-city schools. The growth of online education in postsecondary and professional development contributed to the legitimacy and growth of online learning in K–12. Early forms of online learning initially centered on translating a complete classroom course syllabus to a distance education environment, including similar content and assignments, and then grew to allow for teacher-student interactions, also similar to a traditional classroom. Examples of this type of early online learning program were often created in rural states such as Alaska, North Dakota and Nebraska. 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.

Because online courses often serve as an alternative to regular classroom instruction, and in some cases draw students out of traditional schools, education policy and oversight provisions have evolved to address online learning, while very few regulations address CAI and other uses of education technology. To this day, extensive policies specific to online learning govern online schools, but relatively few policies specific to digital learning govern CAI.

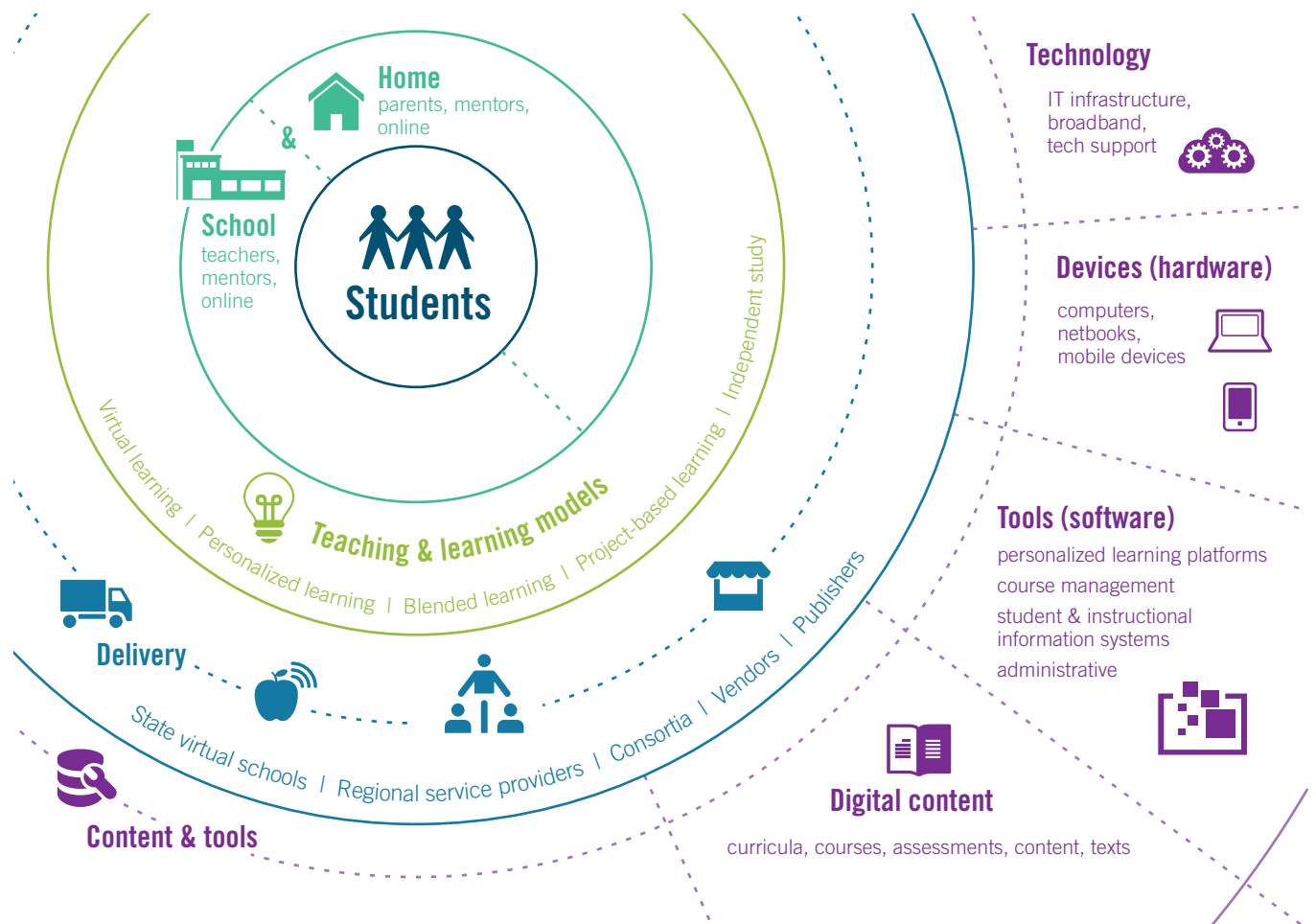
The current digital learning landscape

The key benefits of CAI and online learning were largely complementary, and in recent years online learning and CAI have converged. From a supplier standpoint, Pearson Education exemplifies this evolution: it acquired Connections Education and now offers both Connections courses (roots in online learning) and other online content with roots in CAI. School districts are providing both types of options, and they are often both managed at a district level by one district office. In the Clark County school district in Nevada, for example, the online learning program serving students at home and in schools is closely tied to efforts to support district schools in their move to digital content and devices. This dynamic is increasingly common in traditional school districts.

Much like today's musical artists who often sample other music to re-mix, re-envision, and re-create new songs and sounds, practitioners today are taking different elements of digital learning, with varied backgrounds and sources, for use in their own schools, programs, and classrooms. The online learning and CAI roots of different types of digital learning have been obscured as each has appropriated elements of the other. Three additional elements further complicate the landscape. First, confusion

exists between entities that are schools—those that enroll students and provide a full range of courses and associated services—and those that are suppliers of online courses, tools, and teaching, to schools and also to families who are buying courses and instructional materials. This confusion has been exacerbated by the fact that suppliers may be companies, nonprofit organizations, or public agencies, and that some suppliers have the word “school” or “academy” in their name. Second, some entities are suppliers and also own and operate schools. Finally, in some school districts the line between school and supplier becomes blurred, because the district runs a program that serves its students directly, but that program, often with a name that sounds like a school, is actually an internal school district services function that delivers online courses to students across district schools.

Understanding the layers and their relationships in the universe of suppliers and users, illustrated below, is critical for comprehending the digital learning landscape. For online and digital learning, **suppliers** are entities that provide online and digital learning products and services to schools, and sometimes directly to students, but usually coordinated and monitored by a school. A supplier is not responsible for a student’s academic activity and performance and is not authorized to do so. They do not own the transcript of a student, administer state assessments, assign grade levels, or offer diplomas. Some suppliers, such as state virtual schools, offer courses using teachers employed by the state virtual school, but it is the student’s home school that maintains responsibility. The supplier, offering the online course and perhaps the teacher, is essentially a contracted outsource provider of instructional services to a school. **Schools**, on the other hand, are entities, authorized via state policy, that have the primary responsibility for a student’s education. Schools include traditional public, charter, and private schools; independent study and similar non-traditional schools that enroll students; and online, onsite, and blended schools. Only authorized schools can grant credit towards grade level advancement and confer diplomas.



2 ONLINE LEARNING ACTIVITY IN U.S. K-12 SCHOOLS



A PREVIOUS SECTION PROVIDES KEY DEFINITIONS OF DIGITAL LEARNING TERMS, AND SUBSEQUENT SECTIONS WILL EXPLORE KEY SECTORS ACROSS K-12 PUBLIC EDUCATION. These definitions, sectors, and categories are not naturally and clearly delineated, and as such *Keeping Pace* imposes taxonomy on a discipline that is indistinct and chaotic. The classifications are not 100% accurate and discrete, but are necessary to efficiently explore and explain the field.

Easier to capture are the basic digital learning use cases, because a few types of general use cases, with variations, describe the large majority of digital learning activity.

- Hundreds of thousands of students are attending full-time online schools that provide their entire education. Many of these students (perhaps 20%) were formerly homeschooled, but by enrolling in a public online school these students have become public school students. Other students are attending these schools because they have medical or behavioral issues, are engaged in a time-consuming pursuit such as arts or sports, or have not been academically successful in a physical school and are seeking a different mode of instruction. Most full-time online schools are charter schools that enroll students from across entire states, but a growing number are being run by districts or regional service agencies that enroll students from within a defined boundary.

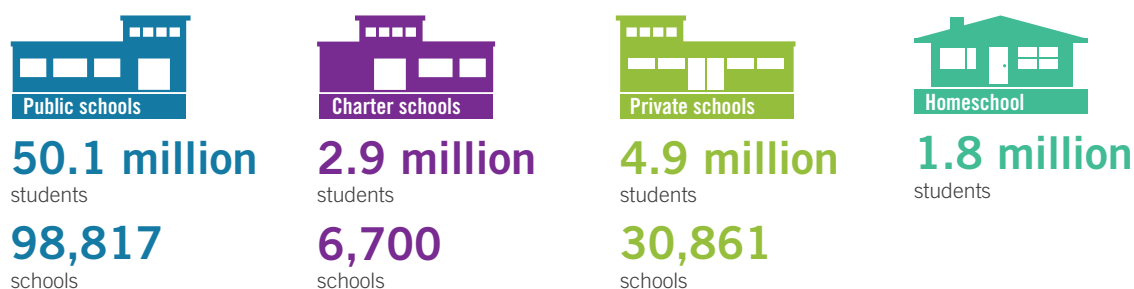
- Millions of students are taking supplemental online courses while attending a physical school. Many of these—the exact number is unknown—are recovering credits. Others are taking advanced, honors, or dual enrollment online courses that are not available as traditional courses. Still others are taking courses that are offered at their physical school, but are taking them online in an extra period, or over the summer, in order to gain scheduling flexibility. The extent to which the student’s enrolling school supports the online courses varies. In some schools the student is supported with a room, computer, and mentor. At the other end of the spectrum, some students take the online courses from home with no support from the physical school. Student success in online courses correlates with local school support.
- An unknown number of students are attending hybrid schools that combine a significant amount of online instruction with a significant amount of face-to-face instruction with a teacher or mentor. The same companies supporting full-time online schools run some of these hybrid schools. Other hybrid schools have their roots in alternative education programs that preceded the spread of online courses. These schools often serve students who are at risk of dropping out, or have dropped out of a traditional school and returned to public education via the alternative program.

In addition to these examples that include a substantial element of online learning, countless further examples of digital learning exist as well. In these additional instances, teachers are using digital tools and resources—most of which are online—in their classrooms. These include the use of websites; Google Apps for Education; countless other software applications for math, reading, and other subjects; classroom management software and learning management systems; and computers, clickers, interactive whiteboards, and other technology products in physical classrooms. The most successful of these educational applications of technology have changed school models and instructional practices, and are worthy of more study than has been done of them. But this *Keeping Pace* report focuses on schools, programs, and courses that have a substantial online element. Many of them have an onsite component as well, meaning that they fit the most commonly used definition of blended learning.

Traditional public schools represent by far the largest sector of K–12 education, and as such they are the largest user of online learning. Nearly all school districts are using online learning at some level. Most of this usage is of supplemental online courses, with smaller numbers of students in hybrid and fully online schools.

FIGURE 1

K–12 education by the numbers





Florida

Florida is the first state in the country to legislate that all K–12 public school students have full- and part-time virtual options, and where funding for an online course follows each student to supplier of the course. In addition to many district programs and full-time online schools, Florida Virtual School (FLVS) is the largest state virtual school in the country, accounting for over 2 million course completions since it opened in 1997. In SY 2014–15, enrollments in one-semester supplemental online courses in Florida, including FLVS and a variety of district programs, exceeded 520,000 course completions. Students taking all of their courses online reached about 11,000.

Florida has a variety of online options for students in grades K–12. **Florida Virtual School** is the main supplemental online course supplier in the state. In 2000, legislation established FLVS as an independent education entity. Legislation enacted in 2002 and 2003 granted parental rights for public school choice, listed FLVS as an option, and defined full-time equivalent (FTE) students for FLVS based on “course completion and performance” rather than on seat time. FLVS is one of only two state virtual schools in the country (out of 24) to be funded based on course completion. Florida students retain the right to choose FLVS courses to satisfy their educational goals (per Florida Statute 1002.37).

District Franchises of FLVS allow districts to use FLVS courses and LMS using their own teachers to offer online courses to students who reside within the district. FLVS also provides professional development and mentoring for district teachers and administrators, and numerous learning resources and tools. The franchises also serve home education, private school, and other public school students.

Through the **District Virtual Instruction Program (VIP)**, all Florida school districts offer part- and full-time virtual instruction programs for students in grades K–12. Most districts operate more than one virtual program under the VIP umbrella, and the number of options continues to increase due to a requirement for many districts to offer at least three options at all grade levels. Many smaller districts are sharing resources and entering into agreements with regional education consortia to provide their required virtual options.

District Virtual Course Offerings help districts offer online courses for grades K–12 outside of their VIP and district franchises. Beginning in SY 2013-14, students could cross district lines to take online courses from other districts regardless of whether it is offered in their district.

Virtual charter schools give students additional full online options. Florida had eleven virtual charter schools in eight school districts enroll 1,528 students in SY 2014–15. K12 Inc. also operates a small statewide non-charter online school.

FLVS supports the largest number students taking all of their courses online, operating a full-time program in partnership with Connections Academy for grades K–12.

(Florida cont.)

Funding

The District Virtual Instruction Program (VIP) and virtual charter schools are funded through the Florida Education Finance Program (FEFP) when a student successfully completes a course. Districts receive FEFP funding for each student and may operate their own programs, or they may negotiate with their virtual instruction providers for rates below the per-pupil funding. Completions are defined (Rule 1011.61) as earning passing grades or credits for online courses or the prescribed level of content that counts toward promotion to the next grade.

Per-student base funding for virtual programs in SY 2015–16 remains at \$5,230 per full-time virtual education student completion; this equates to less than \$5,230 per student when taking into account students who do not complete. If a student takes six courses, then the per-course completion funding will remain at \$435.83. However, a student's FTE is prorated based on the total number of courses (SB1514), which can be more than six, and therefore less than per course completion rate.

FLVS received an estimated \$162 million in funding in SY 2014–15. FLVS FT is eligible for categorical funding in addition to basic education funding, including exceptional student education (ESE) and English for speakers of other languages (ESOL). ■

Florida's online options and corresponding enrollments

Virtual program / school	Program type	Grade levels served	Student eligibility	Enrollments SY 2014–15	% change
State Level					
Florida Virtual School (FLVS)	Part-time	K–1 and 6–12 Grades 2–5	All students Per s. 1002.455	394,712 course completions 200,844 students	+5%
Florida Virtual School Full Time (FLVS FT)	Full-time	K–12	All students	5,595 students	-5%
District Level					
District Franchises of FLVS	Part-time	Same as FLVS	Same as FLVS	71,000 unique students	
	Full-time			127,363 total course enrollments (PT+FT)	+63%
District Virtual Instruction Programs (VIP); Provider or District-operated	Part-time	K-1 Grades 2–12 Grades 6–12	All students Per s. 1002.455	2,395 unique students	+60%
	Full-time	K–5 Grades 6–12	All students Per s. 1002.455	4,078 students	-12%
District Virtual Course Offerings	Part-time	K–1 Grades 2–12	All students Per s. 1002.455	10,123 unique students	+118%
	Full-time	K–5	All students Per s. 1002.455		
Virtual Charter Schools	Full-time	K–5 6–12	All students per s. 1002.455	1,528 unique students	+128%

All students = Public, private, and home education students

Eligibility per s. 1002.455 = Students must meet one of the following criteria: Prior-year in Florida public school, siblings of virtual students enrolled in current and end of previous year, military dependents who recently moved to Florida, students in grades K–1, students in grades K–5 enrolling in full-time virtual program.

Many of the students taking supplemental online courses are taking courses offered by state virtual schools. In SY 2014–15 state virtual schools in 24 states, representing 40% of the population of the United States, served over 462,000 students who took a total of 815,000 semester-long courses.

FIGURE 2

State virtual schools

Total students taking online courses	Total number of semester equivalent online courses taken by students
462,025	815,482

Average course load per student per semester is 1.77

Six in ten public school students live in states that don't have state virtual schools, and these students are taking supplemental online courses as well. For the first time this year, *Keeping Pace* surveyed a broader range of suppliers of online courses. These are primarily private companies that sell online courses to districts nationwide, ranging from large, long-established publishers to companies that launched to create online courses and schools. Based on extrapolations from these supplier surveys, and additional data available from a few states (published reports and state databases), several school districts, and other sources, we estimate another 2.2 million students taking a total of about 3.8 million online courses. These are mostly in addition to the state virtual school numbers. **Together, they sum to about 4.5 million supplemental online course enrollments.**

FIGURE 3

Projections from multiple, discrete sources

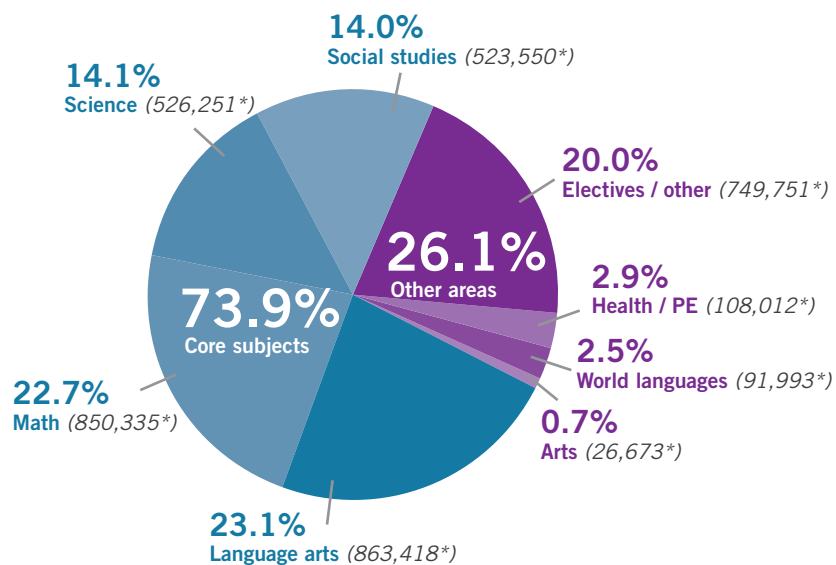
Total students taking online courses	Total number of semester equivalent online courses taken by students
2,254,000	3,800,000

Average course load per student per semester is 1.69

These data provide insight into online course activity at a national level that has never been published. *Keeping Pace* analyzed a representative sample of several million course enrollments to look at how online course usage breaks down by major subject areas. The core subject areas of language arts, math, science and social studies make up four of the top five, with “electives and other” coming in at number three, see figure 4 below. These data support the anecdotal evidence that schools will often select elective online courses for students that the school does not offer. The number of world languages courses is lower than many observers might expect, suggesting that the proverbial example of a rural student taking a Mandarin course, while important to the student, is not nearly as common as core subjects and other electives.

FIGURE 4

Online courses grouped by subject area



*Online course enrollment subtotals from the overall sample.

Total enrollments in this sample were 3,739,983 with 1.4 as the overall average number of courses taken by a student each semester and 1,335,708 the estimated number of unique students taking these courses.



Washington

Washington continues to offer one of the broadest ranges of online options for students of any state in the country. Online programs are operated by a mix of districts, private providers, and consortia, some of which offer both part- and full-time online options. As of September 2015 the Office of Superintendent of Public Instruction (OSPI) and its Digital Learning Department (DLD) listed 19 approved district online school programs providing part- and full-time options statewide or regionally, and 62 single district online school programs. There are 20 approved online course providers serving students statewide, including two operated by school districts. The DLD approves all online school programs for the state: single district online school programs which are poised to serve only in-district students and multidistrict online school programs which are poised to serve students statewide. Although there are no private full-time online schools approved by the DLD, many districts partner with private and approved online course providers to operate their own approved full-time online school programs. As of fall 2015 there are no virtual charter schools in Washington.

Approved online school programs are publicly funded. Students in part- or full-time online courses are enrolled under public education funding. Supplemental online courses may be paid for by the student/parent if the courses are in addition to the 1.0 FTE claimed by their district.

The OSPI and DLD collect online learning data from three state-level sources, 1) the monthly Alternative Learning Experiences (ALE) enrollment report, 2) Comprehensive Education Data and Research System (CEDARS), and 3) the DLD's online course catalog and registration system. All of this information is detailed in the Online Learning Annual Report to the Legislature. The report provides a state-level picture of online activity in Washington.

Washington online learning activity SY 2013–14

THE SCHOOLS

72,787

Number of online courses taken (grades K–12).

222

Total number of schools in 139 districts (out of 295 districts statewide) that have enrolled students in at least one online course.

THE STUDENTS

74%

Number of high school students who have taken fewer than five online courses.*

12%

Number of high school students who have taken 10 or more online courses (enough to be considered full-time online students).*

**Note: Data is limited to high school students for which grade history was available, but provides a representative sample.*

(Washington cont.)

If there are no online learning options within the student's resident school district, a student may request a Choice Transfer out of their resident school district and into another district's OSPI-approved multidistrict online school program for full-time enrollment, per the Choice law (RCW 28A.225.220). Part-time enrollments in multidistrict online school programs are facilitated by inter-local agreements or contracts between the resident and serving district.

There are incentives for schools to enroll students in OSPI/DLD approved online providers. First, it allows the resident district to claim the student for participation in an online course for funding purposes, whether that course is offered by a private or district-run approved online course provider. If the student is not being claimed for state funding, the provider of the online course does not have to be approved by the OSPI. Approval also gives the student the assurance of credit. Regardless of whether or not the student is being claimed for state funding, if a student takes an online course from an OSPI-approved course provider and the course meets local graduation requirements, the student's district must award credit on the student's local transcripts.

Blended learning programs are not included in state reporting mechanisms, though there are numerous school and district initiatives. ■

Charter schools make up less than 6% of total enrollments in the U.S., but full-time virtual charter schools accounted for the large majority of full-time online students and 3.3 million course enrollments. (This is in addition to the 4.5 million course enrollments mentioned above). Two states opened virtual charter schools for the first time in fall 2015, and virtual charter schools continue to grow, although at a relatively slow pace. Numerous states have in place measures that hinder the growth of online charter schools, ranging from enrollment caps to additional reporting requirements to substantial funding cuts, but no state that has allowed online charter schools has subsequently eliminated them.

FIGURE 5

Full-time virtual charter schools

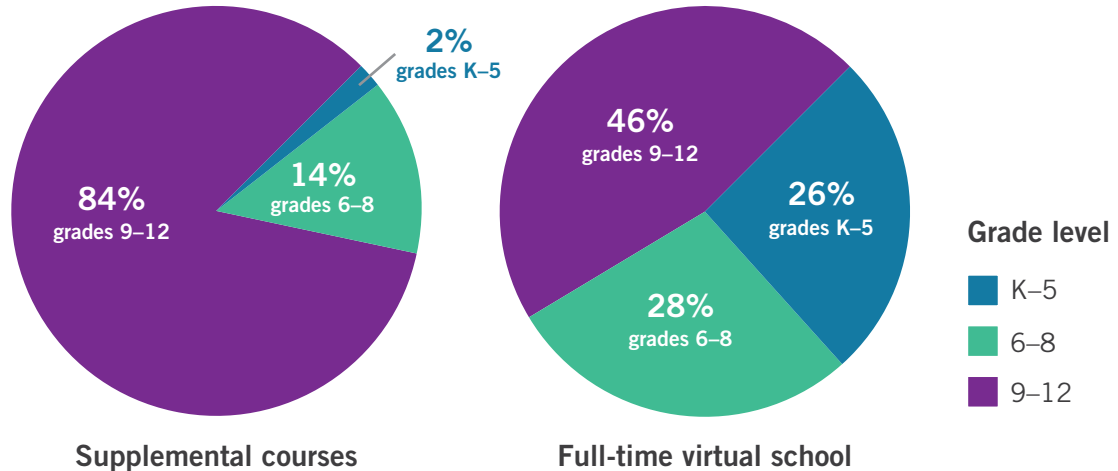
Total full-time virtual charter students	Total number of semester equivalent online courses taken by students
275,000	3,300,000

Average course load per student per semester is 6

Comparing the two sample data sets (supplemental online, and full time online students in virtual charter schools), demonstrates important grade level differences between these two segments. Supplemental is heavily skewed towards high school grades, and full-time virtual charter schools have a more even distribution among grade levels.

FIGURE 6

Online courses taken by grade level



Private schools are a much smaller segment than public schools. The usage of online learning in private schools is generally lower than in public schools, but the use of supplemental online courses is growing. In some states, private school students have access to publicly funded online options on a limited basis; these may be used by students separately from their private school.

Homeschooled students use a variety of online resources that they procure, including courses that combine online delivery with curriculum shipped to students. Faith-based suppliers often provide these. In some states homeschooled students also have access to publicly funded supplemental online courses and full-time online schools. As homeschooled students take some publicly funded online courses or attend online public schools, the lines between homeschool and public school are blurring.



Virginia

Virginia is an example of a state with a history of providing supplemental online learning for students, but one that is still grappling with how to best provide full-time online options.

Virtual Virginia, operated out of the Virginia Department of Education (VDOE) since 2005, has become one of the 10 largest state virtual schools in the U.S. with 24,611 course enrollments in SY 2014–15. Virtual Virginia is funded largely by state appropriation. Virginia public school students may take as many courses as their districts and schools will permit (up to seven). Most students enroll in Advanced Placement courses tuition-free through participation in the VDOE Early College Scholar program; otherwise a per-course fee is charged to districts (based upon the local composite index of each district's ability to pay).

A significant number of supplemental district and regional online programs also exist, including in the four largest school districts in Virginia; Fairfax, Prince William, Virginia Beach and Loudoun. These four district online programs served 13,351 course enrollments over the 2014–15 SY and summer 2015.

Local school boards have been allowed to contract with approved “multidivision” online providers to provide out-of-district online learning programs to students in grades K–12 since 2010 (SB738). There are 22 approved providers as of September 2015.

There are no virtual charter schools and no other full-time virtual schools authorized in Virginia. Although the state does allow charter schools, there were only four operating during the 2014–15 SY. Virginia Virtual Academy (VAVA) was the only full-time online supplier in SY 2014–15, serving students in grades K–7.

Virginia took steps toward providing full-time options in 2014–15. Legislation (HB 324) established Virginia Virtual School to offer both online classes and virtual school programs to students in Virginia. If implemented, Virginia Virtual School will be responsible for all federal and state accountability requirements applicable to those students enrolled on a full-time basis. The School is required to be open to any K–12 student in the Commonwealth.

Virtual Virginia is piloting a “full-time” program of 100 students during the 2015–16 SY. The full-time student pilot may give schools a state-funded option to offer resident students a full-time option while remaining part of the local school. Virtual Virginia is providing supplemental online courses to fill each student's full class schedule while the student remains enrolled in their local school division. Students register through local public school counselors and with the approval of parents and school administration. Students receive diplomas from the resident school and take state assessments at the local school. The pilot will offer all required courses for grades 9–12, plus an additional compliment of World Language courses and electives. The pilot phase of the project is being funded by Virtual Virginia. A long-term funding model for Virtual Virginia's full-time has not been established. ■



Ohio

Digital learning is flourishing in Ohio, which has a number of statewide programs offering full-time online options, supplemental online learning and supporting technology-enriched learning in the classroom.

Ohio had 24 virtual charter schools (“eSchools”) enrolling full-time online students in SY 2014–15. At 38,737 students, Ohio had one of the largest charter school full-time online enrollments of any state in the country. The two largest eSchools, Electronic High School of Tomorrow and Ohio Virtual Academy, accounted for about 66% of the total full-time student enrollments in the state. The vast majority of full-time students (96%) were enrolled in statewide eSchools with the remainder in twelve district-sponsored eSchools where enrollment is limited to the sponsoring or surrounding districts. Effective in SY 2015–16, the state will permit eSchools with over 3,000 students to grow up to 15% annually, while those with fewer than 3,000 can grow up to 25% per year.

Community schools, including eSchools, receive funds directly from the state at the same per-pupil base formula and special education weighted amount as traditional districts (\$5,800 for the 2015 FY); these funds have been transferred from school district allocations. eSchools are not eligible for additional state assistance. District-based eSchools are funded at the same levels as other district schools, and are eligible for other funding categories.

iLearnOhio is an e-learning platform funded by the Ohio General Assembly, which includes a searchable repository of approved online courses and educational content for grades K–12, an e-commerce marketplace and a learning management system for all Ohio schools. Full adoption of the iLearnOhio platform provides teachers, schools and districts with no-cost access to the LMS, tools to build lessons and assessments, a Student Portal with simultaneous enrollment capability, and content-sharing functionality. It also provides local administrator controls to manage access, purchase content, develop and deliver locally developed courses, and track local usage. The iLearnOhio marketplace offers fee-based online courses from a variety of online learning suppliers. The iLearnOhio resource repository includes standards-aligned, peer-reviewed online courses and digital resources from multiple suppliers, assessment items and professional development resources. Public school districts, private schools, regional service centers, STEM schools, two- and four-year colleges and universities and other specialized school programs are able to have full access to iLearn. One-time tuition waivers are available on a limited basis to pay for Advanced Placement courses for public, private, or homeschooled Ohio students. iLearnOhio is administered by the Ohio Resource Center, located at the College of Education and Human Ecology at The Ohio State University, under the direction of the Ohio Board of Regents.

Ohio Resource Center (OhiORC), in partnership with the Ohio Department of Education and the Ohio Board of Regents, provides access to online, peer-reviewed resources to Ohio teachers, including curricular content as well as professional development opportunities. Lessons, assessment tools, and reading intervention materials are available through the

(Ohio cont.)

Literacy K–5 program, while instructional resources for older students are part of an adolescent literacy (AdLIT) site.

There are several active online and blended learning consortia in Ohio. Learn 21 is a consortium of 18 school districts that work together to review online learning supplier products and broker licenses for the members of the organization. Learn 21 offers professional development, digital course design, data integration, and other online and blended learning services to members. The Stark-Portage Area Computer Consortium (SPARCC) serves school districts in Stark, Portage and Carroll counties, and is one of 22 Information Technology Centers (ITC) located throughout Ohio. SPARCC led in the creation of a cooperative of districts that pooled resources for a group purchase of online courses from Florida Virtual School, resulting in an estimated \$500,000 in savings for participants. The independent Ohio Blended Learning Network (OBLN), led by Mentor Public Schools District and facilitated by the nonprofit organization SmarterSchools, has 23 members statewide, ranging from small charter schools to large public school districts. ■

Virtual charter schools in Ohio

School	Statewide or local program	Student enrollment
Akron Digital Academy	Statewide	424
Alternative Education Academy	Statewide	1,861
Auglaize County Educational Academy	District	73
Buckeye On-Line School for Success	Statewide	993
Electronic Classroom Of Tomorrow	Statewide	14,130
Fairborn Digital Academy	District	164
Findlay Digital Academy	District	157
Goal Digital Academy	District	334
Greater Ohio Virtual School	Statewide	457
Insight School of Ohio	Statewide	914
Lakewood Digital Academy	District	110
Lorain K–12 Digital Academy	District	159
Mahoning Unlimited Classroom	District	137
Marion City Digital Academy	District	93
Massillon Digital Academy, Inc	District	74
Newark Digital Academy	District	306
Ohio Connections Academy, Inc	Statewide	3,345
Ohio Virtual Academy	Statewide	11,403
Provost Academy Ohio	Statewide	146
Quaker Digital Academy	Statewide	688
Southwest Licking Digital Academy	District	24
Treca Digital Academy	Statewide	1,896
Virtual Community School Of Ohio	Statewide	793
West Central Learning Academy II	District	56
TOTAL		38,737

Activity in K–12 education sectors

In this section we look at online learning and digital activity across the various U.S. K–12 education sectors, including public schools and districts, charter schools, private schools, university schools serving K–12 students, and homeschool. These are the organizations and functions that are the first-hand educators, directly responsible for students' learning and outcomes in our education system. Our goal is to increasingly understand how and to what extent they are delivering online and digital learning within these sectors.

There is a layer of activity and organizations apart from these education sectors that supplies both online learning services and support to schools—suppliers of online learning. In a later separate section, we will delve into that layer and discuss their activities.

Here, we start with a review of the non-charter public school sector because the vast majority of students in the U.S. attend public schools (84%). Charter schools, particularly virtual charter schools (sometimes called cyber schools), enroll a much smaller percentage of students, but these full-time virtual charter students are usually taking between 6 to 14 online courses in a school year. Private schools, both independent and faith-based schools, are becoming more active in online learning, with some strong similarities in usage to public schools, but with some decided differences, as well. University-based online K–12 schools offer another option for K–12 students, particularly for college-bound and advanced students. Finally, we take a look at students that choose to learn at home instead of at a local public school.

Public schools and districts

Public schools and districts have been using a wide variety of digital content and instructional software for many years. We have seen many examples of innovative and effective use of these tools within instructional programs from the early grades through high school, from core subjects, to advanced learning and to credit recovery.

Of the nearly 55 million K–12 students in the United States, about 47 million (85%) attend non-charter public schools. About 13,500 school districts exist across the country, but the distribution of district size is characterized by a long tail of very small districts. The 50% of districts ranging in size between 1,000 and 25,000 students educate 60% of all students. The largest 2% of districts (those that serve more

than 25,000 students) educate 35% of all students. Districts of under 1,000 students account for 47% of the total number of districts, but only 5.5% of all students; most of these serve rural communities. Three states are home to 45 of the 100 largest districts: California, Florida, and Texas. These larger districts tend to have larger schools, more minority students, and 56% of their students are eligible for free and reduced-price meals (compared to 48% of all public schools in 2013).

Based on observation and information from many sources, we believe that most districts are using some form of digital learning, which may range all the way from full-time online programs, to supplemental online courses, online courses that include some degree of face-to-face instruction, digital learning enhancements to classroom instruction, and to skills software used in math, English Language Arts (ELA), and other classes.

With the development of online courses to supplement student learning in the late 1990's, national and state-level suppliers—vendors, state virtual schools, regional service agencies, and others—began providing schools and districts with online courses and technology. Schools had long been using media resources and technology in the classroom, but online learning emerged as a solution to meet specific school challenges and student needs, including providing:

- Alternatives for scheduling conflicts
- Highly qualified teachers in subjects where teachers were not available, particularly Advanced Placement
- Access to hard to find courses, especially in rural or inner-city schools
- Electives and other accelerated options for college bound students
- Flexibility for athletes, homebound students, those in the arts, dropouts, and pregnant or incarcerated students
- Credit recovery programs for at-risk students
- Solutions for small class sizes and emergency shortfalls in teachers.

Public school students' motivation for taking online courses bear out many of these school goals. Based on a national student survey, 47% of students in grades 9–12 pursue online learning to access courses not offered at the school, and 43% choose to take courses online to be able to work at their own pace. Forty-two percent of students in grades 6–8 cited the desire for extra help as the major reason for choosing an online course.



CLARK COUNTY SCHOOL DISTRICT

Nevada Learning Academy

Clark County School District (CCSD) is the fifth largest school district in the U.S., and unique in that it serves 71% of all Nevada public school students, over 345,000 of them. Nevada Learning Academy at Clark County School District (NVLA) is the primary provider of both supplemental and full-time online learning opportunities for grades 6–12. Launched in fall 2004 as Clark County Virtual High School, it combined with the Academy of Individualized Studies program, expanded online courses for middle schools in the district and became NVLA. CCSD high and middle schools use supplemental online courses from an outside vendor with CCSD teachers in addition to NVLA.

CCSD had 46,957 students take one or more online courses in SY 2014–15 and summer 2015, plus another 955 full-time online students enrolled at NVLA.

Clark County School District online course enrollments

	Online course enrollments	Students part-time	Students full-time
NVLA 2014–15 SY	11,474	5,187	
NVLA summer 2015	12,969	7,263	
Vendor courses FY (rolling enrollments)	86,072	32,113	
Vendor summer 2015	4,614	3,008	
NVLA non-CCSD student enrollments		494	
NVLA full-time students			955

NVLA provides a variety of online options including a middle school hybrid model, where full-time online students come to campus two days a week for teacher led-instruction and project-based learning, and two online programs for high school students that take a competency-based approach. NVLA's Credit by Exam gives high school students an opportunity to demonstrate knowledge equivalent to high school course work through an examination. During the 2014–15 SY, NVLA conducted 1,691 Credit by Exam assessments, where the most popular Credit by Exam subject was Spanish language.

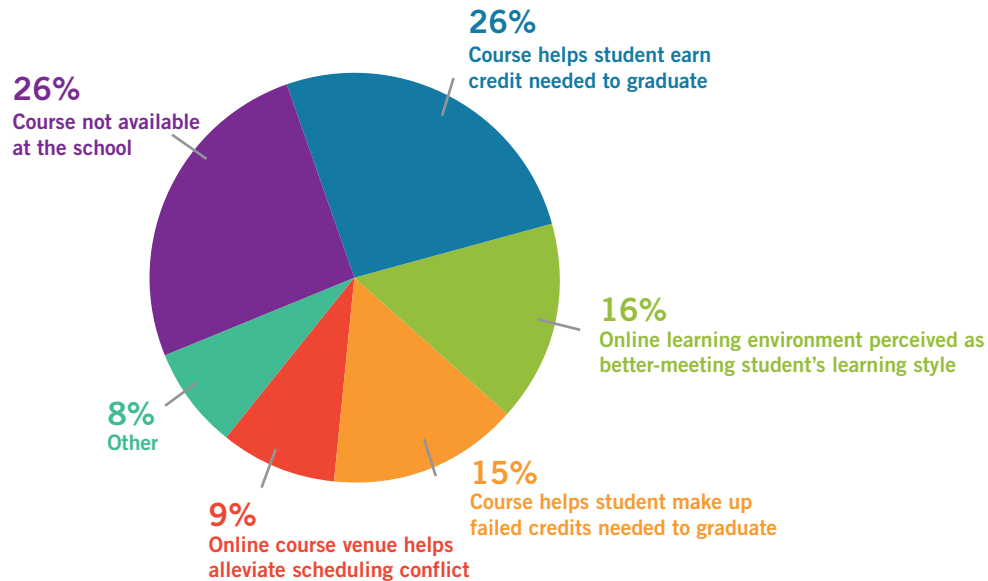
The NVLA independent study program offers high school students flexibility within a mastery-based system. Students work through online content, demonstrating competency. Students attend sessions for proctored end-of-unit assessments until they complete the course. This allows for a shortened timeframe for course completion, typically 6 to 9 weeks. All online classrooms have highly qualified teachers in the subject area. In addition, students have access to a licensed teacher at their assigned proctored testing site who acts a guide or coach. NVLA had 6,010 enrollments in the independent study program during the 2014–15 SY.

Clark County School District has been in the process of creating District-wide online courses for use outside of NVLA. Traditional comprehensive schools can utilize these District-created online courses rather than relying on vendor products. During the 2014–15 SY, 1,439 students were enrolled in CCSD District-created online courses at their neighborhood schools, using site-based teachers. ■

The *Online Learning Annual Report* from Washington's Office of Superintendent of Public Instruction cites student motivation for taking supplemental online courses as reported by course registrars. Figure 7 applies only for supplemental online course use and does not reflect the reasons full-time online students choose that option.

FIGURE 7

Leading reasons for students taking online courses in Washington



Public schools offer a range of online options to meet these student needs. Supplemental online courses give students flexibility and help schools address access and equity issues. Programs at the district level often provide students on local campuses a way to implement a hybrid approach to online learning. Full-time online options allow students to take all of their courses online without attending classes at a physical location. These may be offered through a district or a statewide virtual charter school. Credit recovery options may take the form of a supplemental online course, or more often, a site-based online program. An alternative education or independent study program may include workplace credit, project-based learning and other options. The most prevalent use of digital content is in classrooms where online or local digital instructional content is used to augment courses that are offered on a traditional daily and semester schedule, with the teacher of record located on the school campus.



EPHRATA AREA SCHOOL DISTRICT

Ephrata Virtual Academy

Ephrata Area School District (EASD) is a combination of a rural and a suburban community located in eastern Pennsylvania. The school district is comprised of seven physical school buildings, serving 4,161 students in grades K–12.

Ephrata Area School District operates a well-established online program for students called the Ephrata Virtual Academy (EVA). Through this academy, EASD staff provides a variety of customized learning options for students based on individual student needs. EVA offers both supplemental and full-time online course offerings to students at all grade levels and in all subject areas. The Ephrata Virtual Academy was developed specifically to provide these individualized learning options for students; however, it is important to note that as a result of operating EVA, the school district has realized significant cost savings by retaining students (and the associated state funding) in the district, who may have otherwise enrolled in cyber charter schools.

During the 2014–15 SY, the Ephrata Virtual Academy registered 226 supplemental semester online course enrollments serving a total of 103 unique students. These enrollments spanned all four academic levels within the school district with 96% of all supplemental course enrollments occurring at the high school level. The core subject areas of math, science, language arts and social studies accounted for 88% of supplemental course enrollments. Ephrata Area School District also offers summer school credit recovery to high school students through the virtual academy online courses.

Full-time online student enrollments for this same year were calculated at 144 unique students also spanning all grade levels within the school district. Of these unique student enrollments, 79% were at the high school level.

Online courses available through the Ephrata Virtual Academy are procured from nationally-recognized third-party suppliers. Full-time online courses available through EVA are generally asynchronous, and the full-time online students complete their course work onsite in one of the school district's physical school buildings. Certified EASD online teachers serve as the teacher of record for these courses, while para-educators provide regular onsite support for students in the school building. Students enrolled in supplemental online courses are able to complete their course work either onsite or remotely after traditional school hours.

The staff of the Ephrata Virtual Academy has implemented a quality control process within the program to ensure that students are placed properly and monitored within the online program. In addition, appropriate student support services such as special education support and tutoring services are available to all students taking online courses within the EVA program. ■

School and district online learning activity

Table 1 below presents supplemental online course usage in a variety of school districts, ranging in size from small, medium to large communities, representing over one million students. Summer 2015 enrollments accounted for 17% of the total course enrollments. Most of these districts also enroll full-time students, but typically a very small percentage as compared to supplemental courses.

TABLE 1

Supplemental online course usage in public school districts

School districts	City	State	District enrollment	District schools	Online course enrollments	Summer 2015
Clark County School District	Las Vegas	NV	314,598	377	93,242	12,926
Cobb County School District	Marrieta	GA	111,460	114	3,454	1,339
Ephrata Area School District	Ephrata	PA	4,161	7	226	52
Fairfax County Public Schools	Falls Church	VA	188,545	196	4,782	1,577
Gwinnett County Public Schools	Lawrenceville	GA	173,000	134	5,124	2,397
Horry County School District	Conway	SC	42,031	53	1,189	523
Howard County Public School System	Ellicott City	MD	52,511	76	276	211
Kutztown Area School District	Kutztown	PA	1,340	4	165	0
Loudoun Public Schools	Ashburn	VA	80,000	86	275	1,224
Osnaburg Local Schools	East Canton	OH	864	3	85	14
Prince William County Schools	Manassas	VA	86,209	94	2,835	1,231
Virginia Beach City Public Schools	Virginia Beach	VA	70,000	86	346	1,081
Totals			1,124,719	1,230	111,999	22,575

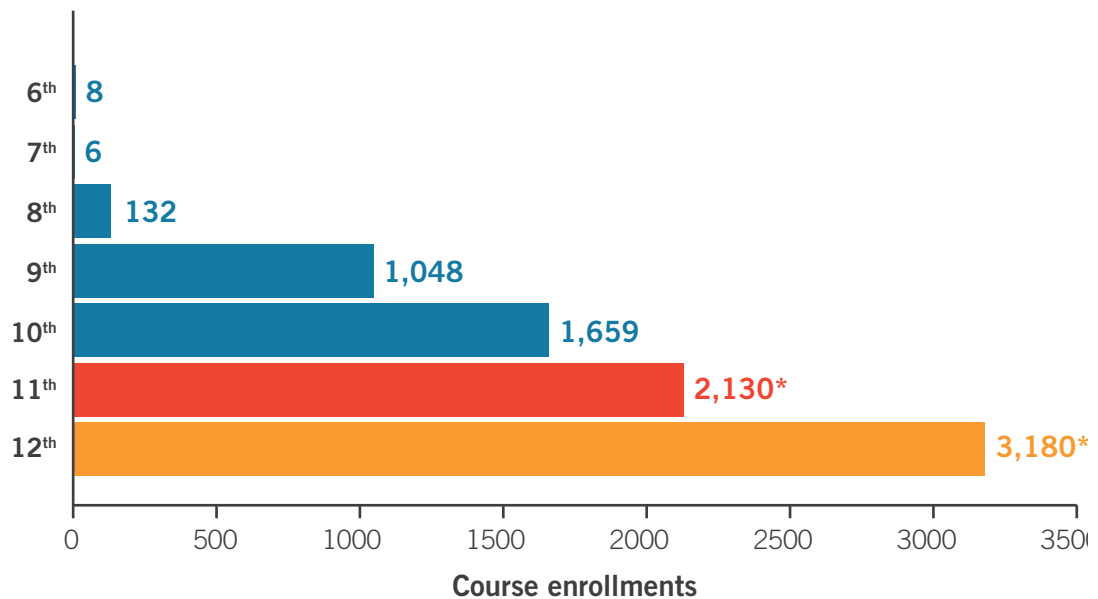
Twelve school districts, from small in size to very large.

Represents over 1 million students in medium and large communities.

Of the twelve districts sampled, the majority of school and district supplemental online course enrollments are in high school grades 9–12, although there is growing activity in the middle schools. The use of online options in elementary remains focused on the integration of online content and technology in the classroom. Based on the district programs studied, almost two-thirds (65%) of the online courses were taken by high school juniors and seniors.

FIGURE 8

Public school districts by grade level Number of supplemental course enrollments



*Almost two-thirds (65%) of the online courses were taken by Juniors and Seniors in high school.

Note: Data from sample of 12 districts listed in Table 1, previous page. This group of districts may or may not be typical, as usage levels by grade does not seem to follow a pattern across the board. Online courses taken by grades K–8 in virtual charter schools, for example, is roughly equal, if not slightly higher than high school.

Although data is from a focused sample of districts, it indicates that usage levels by grade at the district level may not follow the same pattern of usage across the board. Most of the district programs noted above only provide online courses intended for students in grades 9–12. Public school students in grades 9–12 taking online courses through state virtual schools make up 85% of the total enrollments, but most state programs serve grades 6–12.

Core subjects of math, science, language arts and social studies combine for about 50% of course enrollments, among the districts studied.



Frederick County Virtual School

The Frederick County Virtual School (FCVS) has been providing a variety of online options to Frederick County Public School students since 2007. Frederick County is a mid-sized county system in Maryland with about 41,000 students in 66 schools. FCVS had 920 high school students take online courses in a hybrid format during the 2014–15 SY, with another 430 in summer 2015.

Frederick County Virtual School had 50 online teachers in the 2014–15 SY, all from the Frederick County school system. FCVS provides a variety of online programs targeted for specific student audiences, including:

- Virtual Outside of School (VOS) provides supplemental online courses for students to complete coursework outside of the school day with an online teacher of record guiding the learning. VOS students are required to attend one face-to-face session once each month over a 15-week schedule.
- Flexible Evening High School (FEHS) is a rolling enrollment program (start dates monthly) that provides additional face-to-face support, meeting two nights each week. FEHS is an alternative to the comprehensive campus-based learning environment.
- Virtual After School (VAS) and Virtual During School (VDS) programs are focused on credit recovery. VAS students meet with teachers 2–3 times per week, where VDS students meet with a mentor every day. The VAS and VDS courses may last the entire school year.
- Partially Online Summer Session (POSS) is a summer only, open enrollment program intended for independent and self-motivated learners and requires face-to-face sessions once each week for six weeks, in part because of the condensed summer schedule. Many of the core courses require prior experience with course completion.
- Site-Based Summer Session (SBSS) is a summer only credit recovery program with set start and end dates where school staff identifies student participation. Students meet in face-to-face morning sessions four times each week for six weeks.

FCVS also offers the online College Exam Preparation (CEP) program for students planning to take college entrance and Advanced Placement (AP) exams and want an exam preparation options. Online access to exam preparation is available for AP courses, SAT, SAT II and ACT exams. Students receive access to all of the exam preparation materials through June 30 each school year. Students taking advantage of the CEP numbered 585 during the 2014–15 SY.

FCVS is careful to take time to maintain the quality of online instruction through a comprehensive teacher/mentor/proctor training program. It also places emphasis on keeping counselors, administrators, parents and other stakeholders informed and involved. FCVS employs a School Improvement Team model, collaborates with 10 high schools and a career technology center in the county, and has a dedicated six-member staff to implement the program. ■

TABLE 2

Supplemental course enrollments by subject area**A look at the regular two-semester school year 2014-15 and summer school 2015**

	Language arts	Math	Science	Social studies	World languages	Arts	Health & PE	Career & tech ed	Electives & other
SY 2014–15 <i>(2 semesters)</i>	5,558	3,538	3,070	4,390	1,553	2	1,290	1,670	6,995
Summer school 2015	1,014	1,476	540	742	183	0	1,169	1,354	6,478
TOTAL	6,572	5,014	3,610	5,132	1,736	2	2,459	3,024	13,473
	16%	12%	9%	13%	4%	0%	6%	7%	33%

Data from sample of 12 districts listed in Table 1. Represents over 1 million students in medium and large communities.

Electives made up the largest category, accounting for 33% of all course enrollments, with career and technical education at 7% and health and physical education tallying 6% of the total.

District size can have implications for online learning. Smaller districts may have limitations in the availability of online learning delivery capability and/or Internet bandwidth constraints, but are often active users of online learning. In small districts with good Internet access, online courses are often an important method by which the district augments the smaller number of courses offered by the district's own schools.

Larger districts with greater resources often take a more active role in developing online learning for schools in their districts. They are more likely to host their own learning management system, and internally create a portion of their course content. Large districts often use their own teachers to support online students, where mid- and small-sized districts are more likely to take advantage of online instruction from suppliers.

Small districts are unlikely to develop their own content or support a wide range of technology tools. Because the smallest districts have fewer full-time district level administrators, it is rare for them to have someone dedicated to managing digital learning across the district, with online learning responsibilities often falling to someone with less experience and expertise than a person in a similar position in a larger district.

Mid-size districts are more apt to have their own teachers developing digital content and courses, and teaching online courses, although most are using third-party suppliers of courses and teachers as well.

Finding valid data on statewide online course enrollments, reaching down to the school and district level, is difficult. One example of the difficulty of relying on school reported online learning data is in Michigan. Over 319,000 "virtual learning" enrollments were reported to the MDE by districts during

Online Learning in California



In California, 1,077 schools reported students taking one or more online courses during the 2014–15 SY, with about 600,000 online course enrollments covering both supplemental and full-time online courses.

California schools online learning activity

Students taking online courses are reported in two categories	K–8 students	9–12 students	Total students	Estimated course enrollments*
At least one, but less than 50% of student's course load	2,100	53,700	55,800	274,800
50% or more of students' full course load	14,747	17,715	32,462	324,620
TOTALS	16,847	71,415	88,262	599,420

Sources: 2014-15 California Basic Educational Data System (CBEDS), California Charter Schools Association (CCSA)

* Course enrollments estimated based on average student course loads for each grade span range, as well as estimating load factors for the two reporting categories (50% or more and at least one but less than 50%)

Data is self-reported online learning activity by schools for SY 2014–15 in California Basic Educational Data System (CBEDS). The majority of reported online learning courses also fall under the classification of “independent study.” However, the independent study category includes a variety of course formats, online learning being only one of those options, so it can be challenging to determine what portion of these are actually full online courses versus a lower level of online activity supplementing some other type of independent study format. ■

SY 2013–14. For their reporting purposes “virtual learning” was defined as students receiving instruction via “virtual learning, online learning or computer courses; distance learning; or self-scheduled virtual learning.” At the request of the Michigan Legislature, the Michigan Virtual Learning Research Institute (MVLRI) authors an annual report highlighting enrollment totals, completion rates, and the overall impact of virtual courses on K–12 pupils. The report revealed significantly larger virtual learning enrollment numbers reported by districts than originally anticipated, far exceeding the number of online course enrollments reported by the two largest online suppliers in the state. Other states also ask or require districts to provide online or virtual activity, but the interpretations of definitions of online courses or virtual learning vary from school to school.



THE VIRTUAL HIGH SCHOOL

Prince William County Schools

The Virtual High School @ PWCS has offered an online learning program to resident students for more than 15 years. More than 13,000 students in grades 9–12 have completed credits through the VHS since 2000.

Students are able to work at their own pace within semester benchmarks. Highly-qualified instructors provide online facilitation as well as direct instruction. Most of the course content is developed in-house by PWCS/VHS instructors working along instructional designers.

Students often take online courses to achieve scheduling flexibility and increase participation in specialty programs, or advanced placement coursework. VHS has improved on-time graduation rates by offering students accelerated semester options to work ahead or recover credit.

The VHS offers blended programs to allow seniors to take courses online while concurrently participating in college courses, internships, or other job opportunities during their senior year. The program has won a national curriculum award and is approved by the NCAA as a non-traditional program. Annual enrollment averages 1,500 students, including the popular six-week summer session.

Several school partnerships have expanded the ability for students to complete courses either as an additional offering, or as part of a school-based program incorporating the online courses into traditional classrooms. Examples of hybrid/blended programs and partnerships include the following:

- Senior Flex allows current seniors to take two courses online as part of their regular schedule, in an accelerated format with full credit earned in a semester. Both students and teachers have their schedules flexed to accommodate online instruction outside the school day.
- Jump Start allows rising seniors to take a free online course the summer before their senior year to reduce crowding, allowing for senior year advancement and providing an online experience to prepare the students for college and career. Jump Start courses are funded by the school and students agree to take only six classes the following year.
- Language Flex programs help students achieve credits in one or more world language courses starting in middle school so they are on track for an advanced diploma. ■



ALBUQUERQUE PUBLIC SCHOOLS

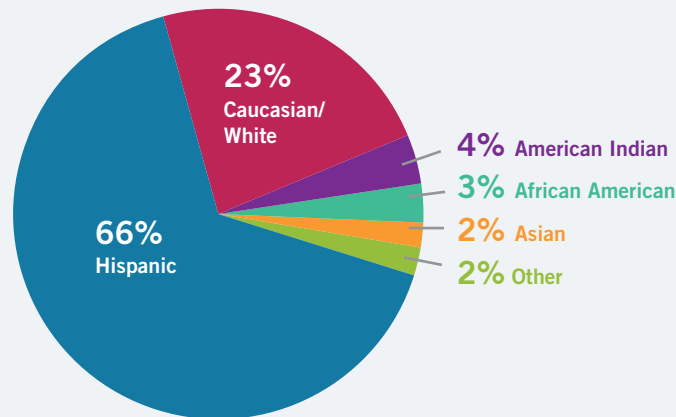
eCADEMY Virtual High School

Albuquerque Public Schools (APS) is the largest school district in New Mexico with 88,000 students, more than the next six largest districts in the state combined. APS' eCADEMY Virtual High School is an alternative online school that combines a supplemental online course approach with face-to-face instruction and campus support for K–12 students. The eCADEMY serving K–12 students, had about 7,000 course enrollments in SY 2014–15, and an additional 75 fully online students.

The eCADEMY has implemented a new model of integrating its online teachers on school campuses starting in the fall 2015. The program places an eCADEMY teacher as an Online Learning Coach in each comprehensive high school for three integrated support periods each day. This increases face-to-face interventions with students at their home schools and enhances the existing partnership between high schools and eCADEMY. The program also increases course availability through Advanced Placement and Honors offerings, providing all students with equal access to appropriate levels of coursework.

Equity is an important driver for the eCADEMY hybrid online model. APS and eCADEMY have a majority-minority student population. Sixty-eight percent of students qualify for free and reduced-price lunch, far above the national average of 48% (NCES, 2011). Many APS students do not have access to computers or Internet at home, and rely on access on campus to complete online assignments.

eCADEMY student demographics



Online courses incorporate an element of face-to-face support that includes meeting at a variety of time and days during the week to accommodate the students' school and work schedules. The coursework is flexible, but not fully self-paced. It is often released to the students in a methodical, careful way by the teacher who has assessed the pace and proficiency of student learning. Campus time is required based on performance.

eCADEMY has an open enrollment policy and students pay a semester registration fee of \$25. Students that progress rapidly through a course are allowed to move on to a second course upon completion of the first under the same \$25 semester registration fee. ■

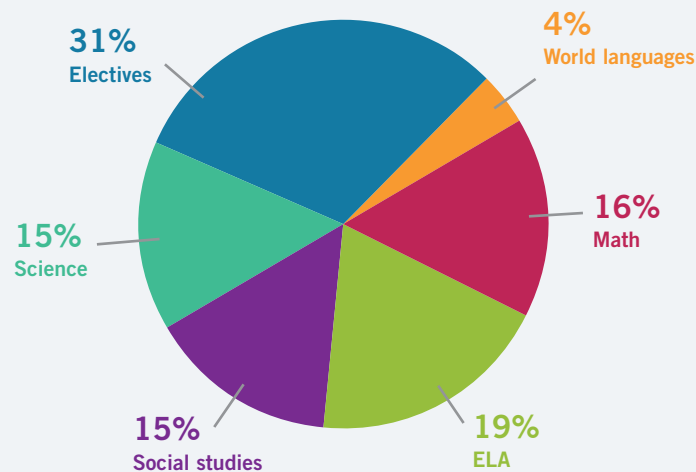


Gwinnett Online Campus

Gwinnett County Public Schools (GCPS) is a large suburban school district outside of Atlanta, Georgia, with approximately 173,000 students. The Gwinnett Online Campus is an accredited school within GCPS that had 5,124 course enrollments during the 2014–15 SY, plus an additional 2,397 enrollments over the summer of 2015. Gwinnett Online Campus (GOC) also enrolled over 500 full-time students in grades 4–12 in SY 2014–15, all GCPS resident students.

The instructional program for students in grades 4–9 offers a blended approach to online in which supplemental online students can attend Learning Labs on campus two mornings per week or login from home to join the live class sessions. These students meet face-to-face with their online teacher once per week that replaces the online lesson for that day. High school students taking online courses are able to come to campus once per week and meet with the Department Chair or their online teacher to receive additional curricular support. Students enrolled in science courses also attend live science labs every three weeks. About 65% of course enrollments during the 2014–15 SY were in the core subject areas of math, English language arts, science and social studies.

Course enrollments by subject area SY 2014–15



Gwinnett Online Campus students score above the average on District Developed Assessments in the majority of subject areas across grades 4–12. All state assessments and final exams are taken on campus in proctored settings. ■



Oasis Academy

The Oasis Academy is a hybrid independent study school for high school students run by the Santa Cruz County Office of Education (SCCOE), Santa Cruz, California. It is located on the campus of Cabrillo Community College, and is designed to meet the needs of students in grades 9–12 who benefit from a personalized learning program located on a college campus. Students work with their parent or guardian, teacher, and counselor to design a personalized learning plan that includes one or more of the following:

- Weekly one-on-one meetings with an Oasis teacher on the Cabrillo Campus
- Online courses offered by Oasis Academy
- Concurrent enrollment in local community college courses, which may be online or on the campus
- Tutoring with additional subject-specific teachers
- Regional Occupational Program career technical education courses
- Service, academic, or vocational internships.

Oasis students may fulfill the requirements for admission to a University of California or California State University school through a combination of Oasis and Cabrillo coursework. Tuition is waived for up to 11 credits.

Oasis is one of 19 Alternative Education options offered through the SCCOE. Students often arrive in Alternative Education credit-deficient as a result of failed courses at their prior schools. Oasis students also often need advanced courses not available at their comprehensive school. Typically students are affected by one or more significant life challenges. These include academic failure, drug and alcohol abuse, homelessness, criminal activity, truancy, expulsion, poverty, lack of fluency in English, and various other traumas. In addition to ensuring that all students have access to courses required for graduation, Alt Ed provides a variety of programs to meet student needs including counseling, special education services, work-based learning, and employment counseling.

Flexible individualized student learning plans allow students to meet graduation requirements through a choice of traditional or hybrid learning opportunities. Online credit recovery courses provide students an efficient way to remediate and gain the confidence to refocus on graduation.

The SCCOE Alternative Education program licenses common-core aligned courses from Accelerate Education, which are accessed via the BrainHoney learning management system. Oasis provides the teacher to review, correct, proctor and instruct students in person or online. If students find they need additional assistance, tutoring is available. All students come to the campus for state- and district-required assessments.

Oasis Academy had 125 students who completed 189 half credit online courses in SY 2014–15. Online learning is used in other County Office Alternative Education programs as well. In SY 2014–15 out of 671 enrolled students across all programs, 243 students (36%) completed 582 online courses. About half of students taking online courses completed a single online course, a quarter completed two, and a quarter completed more than two. The course titles most often completed were in social studies and health, followed by career-technical education courses, physical and life sciences, and electives. ■



Bend-La Pine Schools Online

Bend-La Pine is the 6th largest school district in Oregon, with 28 schools and about 17,100 students in grades K–12. It also has a comprehensive online program, Bend-La Pine Schools Online, which serves about 3,000 students per year with full-time and part-time online course options. The program began ten years ago by offering online courses to high school students across the district. While this option was accessed by students recovering credits, it was mostly used by students supplementing their in-school options. The program has grown and is in its fourth year of providing a far wider range of full-time and part-time online courses for students who may access the courses from a district school, or from home. The district partners with Fuel Education, which provides online courses and state certified teachers who teach the courses. The options are in four categories, all of which serve students at all grade levels:

- Online courses for students who are enrolled full-time in district schools (in Oregon, full-time is 4 or more classes). This is the largest single category, with about 2,000 students taking online courses and 5–7 courses at a physical school. Most of these students are in high school and about 75% enroll in core, standard, honors or AP original credit courses. About 25% use credit recovery courses. The district allows students to take as many online courses as they would like, at district expense, even though each student's funding is capped at 1 FTE.
- Full-time online school for students who take courses from home. The full-time online school has about 400 students, about half of whom are high school students. The number of elementary students in the full-time online school is growing rapidly—likely because of the addition of a local, district-employed K–5 teacher who provides significant enrichment.
- Part-time online enrollment combined with part-time homeschool. This is a smaller category, but one that the district expects to grow. Oregon law is unusual in that it allows students to enroll in a public school for between one and three courses; in these cases the school receives part-time funding for the student that is equal to half of the funding for a full-time student. This funding mechanism allows the district to offer online courses to students who are also homeschooled.
- Part-time online enrollment combined with part-time on-site schooling for K–12. This is the smallest category, but is also growing.

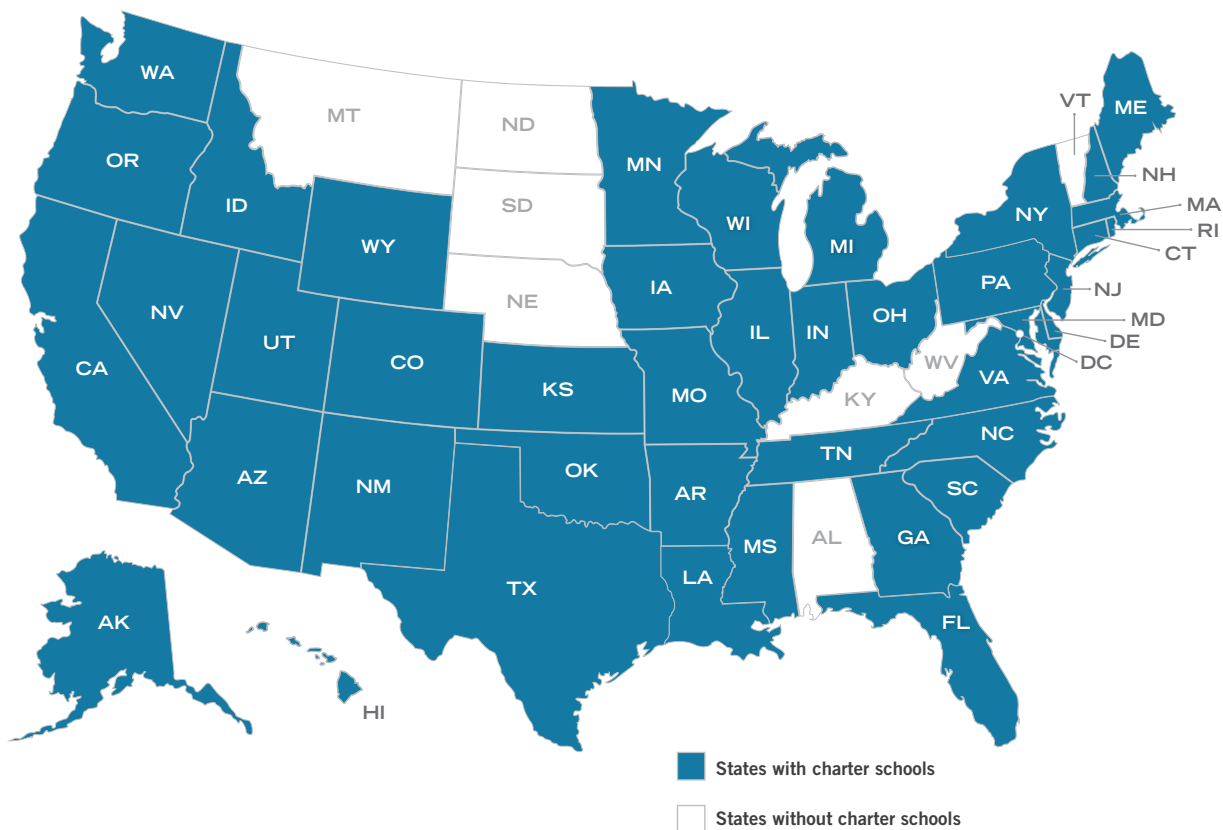
Bend-La Pine Schools Online is a program of the district, not a school. Students are officially considered to be enrolled in one of the physical schools, and may take part in extracurricular activities in that school. ■

Charter schools

Charter school laws exist in 42 states and the District of Columbia, and most of these states have charter schools operating as of SY 2015–16. Alabama just passed its charter school law in 2015, and charter schools have not yet opened; and in Washington State the charter school law was found to be unconstitutional in September 2015, leaving the fate of charter schools there uncertain. About 6,700 charter schools exist in the United States as a whole, serving 2.9 million students representing 5.8% of the total student population. California alone has 1,184 charter schools—almost a fifth of all charters in the U.S. The number of charter schools and the number of students attending charter schools has grown steadily since the first charter school law was passed in Minnesota in 1991. The state charter school laws vary widely in how many charter schools they allow, who authorizes charter schools, and the authorizing process. The result is that the number of charter schools and the percentage of students they serve varies widely by state. California has the most students in charter schools, and Arizona has the highest percentage of its students in charter schools of any state, according to the National Center for Education Statistics, at 14%. The number of charter schools and the number of students attending charter schools has been growing steadily overall and in many individual states, although not all.

FIGURE 9

States with charter schools



There are charter schools in 42 states and the District of Columbia. Alabama has recently passed charter legislation to allow charter schools, but none have open as of fall 2015.

Full-time online charter schools

Full-time online charter schools operated in 25 states during SY 2014–15 and served about 275,000 students. About 175,000 of these students attend schools supported by K12 Inc. or Connections Academy, the two largest for-profit charter school management operations. States with the highest number of students attending these schools include Arizona, Georgia, Ohio, and Pennsylvania.

TABLE 3

Virtual charter schools

A sample of 15 of the 25 states that have virtual charter schools

State	Student enrollment ¹	Estimated semester online course enrollments ²
Arizona	34,636	415,632
California	17,967	215,604
Colorado	10,734	128,808
Florida	1,528	18,336
Georgia	19,412	232,944
Indiana	8,353	100,236
Louisiana	4,077	48,924
Michigan	6,737	80,844
Minnesota	9,612	115,344
Nevada	6,409	76,908
Ohio	38,737	464,844
Oklahoma	8,124	97,488
Oregon	7,248	86,976
Pennsylvania	36,001	432,012
Utah	3,619	43,428
Wisconsin	6,543	78,516
TOTALS	219,737	2,636,844

Sample represents 15 of the 25 states that have virtual charter schools.

¹ Data as reported by state agencies in each state

² Estimated total semester-equivalent courses taken by students. Estimate based on average semester course load per student of 6 courses



South Carolina Connections Academy

South Carolina Connections Academy (SCCA) was the first online charter school in South Carolina, opening in the fall of 2008 after the state legislature passed H3097, the law allowing online charter schools for the first time. SCCA is authorized by the South Carolina Public Charter School District, which is the state-level authorizing entity that has been designed in part to authorize virtual schools. SCCA operates in partnership with Connections Academy, the national organization that is part of Pearson Education, and provides the technology platforms (Connexus for asynchronous instruction, and LiveLesson for real-time instruction), online content, teachers and professional development, and support for clubs and other extracurricular activities. SCCA serves about 3,700 students. The school offers all grades K–12, but about 50% of students are in the high school, 30% in middle school, and 20% elementary school. Students tend to be from Columbia, Charleston, and Greenville—which are the major population centers of the state—but all parts of the state are represented. At least one student attends the school from every county in South Carolina. The school opened with 500 students and has grown steadily, although growth has slowed in recent years. The school size is not capped by state law or its charter. All students are full-time, as is required by state law.

About 43% of SCCA students report that they qualify for free or reduced price lunch. This is lower than the state as a whole, but SCCA (and other online schools) believe that the number may be higher, because students in online schools have no incentive to report income status given that the school does not serve lunch. The student population is about 78% Caucasian, 10% African American, and 5% Hispanic. About 15% of students have an Individualized Education Plan or a 504 plan, and about 10% are gifted. Both of these numbers are increasing; the school believes this is because parents increasingly recognize that the school's Personalized Performance Learning® approach particularly helps these (and all) students. For example, students in grades K–8 take a test called LEAP® (Longitudinal Evaluation of Academic Progress®) both at the beginning and end of the year. The LEAP test is used to identify areas of strength and weakness in the student's learning profile and to measure student growth during the school year to help formulate learning goals. At the high school level, 67 students are taking Advanced Placement or dual credit courses, and about 70% of graduating students go on to two-year or four-year colleges.

H3097 included a requirement that 25% of instruction be in real-time, so the school has a greater percentage of synchronous instruction than many other online charter schools. Much of this instruction takes place via the LiveLesson instruction platform, but phone conversations between teachers and students, and field trips, also count towards this requirement. SCCA has a particular focus on socialization and the school community. The school coordinates field trips that may be educational (to a museum) or entirely for fun (picnics). It has both a career club and a college planning club, and arranges visits to businesses and colleges. It also offers three Talent Networks designed for its middle and high school students who are actively involved in competitive sports, visual and performing arts, or advanced STEM (science, technology, engineering, and mathematics) coursework.

The school does not provide computers or subsidize Internet access for students. ■

Overall the number of students in full-time online charter schools appears to be growing slowly. Although some state legislators and other policymakers have expressed concern that full-time online charter schools would attract a large percentage of students from physical schools, no state has experienced such a major shift. Even in states that have had full-time online charter schools for many years, no more than about 3% of the student population is attending these schools. There is a limit to the number of students and families who choose an online school, because of the belief that face-to-face socialization is a key component of student maturation, and because many parents are unable to serve as a learning coach for their children in the home. In addition, with the increase in the number of online options being offered by districts to their students, a student or family who needs a short-term online school is increasingly likely to choose the local district option.

Characteristics of full-time online charter schools include the following:

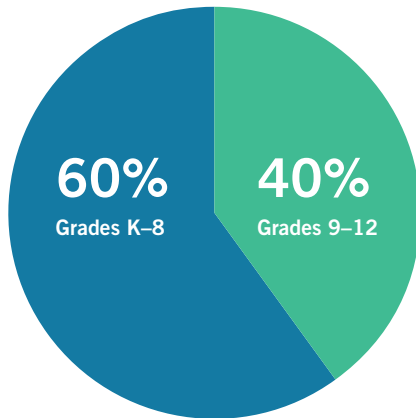
- Although many schools serve between 500 and 2,500 students, others are larger and a few have more than 10,000 students, including the Georgia Cyber Academy, Pennsylvania Cyber Charter School, and Electronic High School of Tomorrow in Ohio.
- Most students in online charter schools are attending schools supported by private education management organizations (EMOs), the largest of which are K12 Inc. and Connections Academy. The schools contract with the EMOs to provide online courses, the learning management system and other technology, and print materials for younger students.
- Online charter schools that are not supported by the EMOs contract with other suppliers who provide a learning management system, and often online courses. These schools may have to customize content for courses to align with state standards. Charter schools may use a state-specific supplier, such as the state virtual school, for some courses such as a state history course. Charter schools may also use their own teachers and staff to develop online courses.
- These schools usually draw students from across entire states, and have few or no requirements for students to physically attend a location, other than for taking state assessments. They may offer physical locations that students can attend to receive onsite support, such as the Arizona Virtual Academy learning centers operated at YMCA locations in the Phoenix area, but onsite attendance is not required.
- Collectively these schools serve all grade levels, but methods of instruction vary significantly between grade levels. Younger students spend less time online and use more print materials, and use a parent or other learning coach for help. Older students spend more time online, use fewer print materials, and communicate mostly with their teacher online. Even for schools that operate physical learning centers, most communication between teachers and students is online (both synchronous and asynchronous) or by telephone.
- Online charter schools are responsible for students' state assessments, and are graded, as all charter schools are, based on the state's performance framework.

- They often provide extensive professional development for teachers, because they are not able to hire enough teachers with sufficient previous experience teaching online.
- They serve students with much higher rates of mobility than the student population as a whole.
- In the case of elementary and middle school students, many attend an online school due to temporary reasons (illness, injury, behavioral issues, allergies). In high schools, many students move to an online school because they are behind and at risk of dropping out of school altogether.

Many online charter schools serve all grade levels, but high school students are served at rates higher than the general school population (but lower than the rate at which high school students take supplemental online courses).

FIGURE 10

Virtual charter school grade levels



Based on a representative of virtual charter schools, 60% of students are in grades K-8, and 40% are in grades 9-12



Georgia Cyber Academy

The Georgia Cyber Academy (GCA) is an online charter school that serves students in grades K–12 from across Georgia. The Georgia State Charter Schools Commission, which is the state-level, independent charter school authorizing entity, is the authorizer for GCA. The school operates in partnership with K12 Inc., which provides online content, Georgia-certified teachers, professional development, the technology platform, and other services. GCA customizes the content to meet state standards requirements.

GCA opened in fall of 2007, initially as an online program of a brick-and-mortar charter school. In 2014, after state policy and regulatory changes that eventually resulted in the creation of the Georgia State Charter Schools Commission, GCA became an independent school. It is now among the largest online schools in the country, serving a total of about 14,200 students; of these about 4,900 are in elementary school (K–5), 4,300 are in middle school (6–8), and 5,000 are in high school. All counties in Georgia have at least one student in the school. All students are full-time taking six courses per semester, which is a provision of the school's charter. A very limited summer program exists for a few full-time GCA students, but the large majority of course enrollments take place during the fall and spring semesters.

The elementary, middle, and high schools share a single head of school and other administrators, but also have school-specific teachers and administrators, as programs for students of different ages are quite different. For example, elementary students work on print materials quite a bit; these are mailed to families by the school. High school students' instructional materials and communications are almost entirely online. Elementary school students also tend to have more time flexibility, while high school students are held to schedules with weekly requirements. All students have an Individualized Learning Plan (ILP), which is developed by teachers and counselors.

Many online high schools have students who arrive behind in credit accumulation, often leading to high dropout rates and low four-year graduation rates. GCA has several programs that identify and work with students at risk of dropping out. These include a Family Academic Support Team, made up of staff members who work with students and families, and serve as a liaison between students, families, teachers, and other school administrators. Many of these communications are online, but in certain counties with high numbers of students attending GCA the school provides a regional coordinator who works with students and families face-to-face.

GCA also has a robust dual enrollment program, with more than 100 students taking college courses from 35 colleges and universities. Dual enrollment is supported by the state, and is completely free for students. GCA finds that dual enrollment is a particularly good option for online students because they have scheduling flexibility so students can more easily attend college courses on campus, and they are comfortable taking online college courses because of their experience with online high school courses. ■

Hybrid charter schools

Hybrid charter schools, in which students take online courses and are also required to attend a physical campus for a significant number of hours on a regular basis as well, are a second category. Similar to the full-time online charter schools, some hybrid charter schools are run by national education management organizations, and others are independent. Examples include the following:

- Nexus Academy is a network of seven college prep charter high schools operated by Connections Education, which is the partner for Connections Academy online schools. The first five Nexus Academy schools opened in fall 2012 in Ohio and Michigan; the network added one school in fall 2013 in each of Indiana and Michigan. Each school is small—under 250 students—and in total the seven schools enrolled just over 1,000 students in SY 2014–15. Nexus Academy students report to campus four hours per day, four days per week, and work away from campus for about 14 hours per week. English and math instruction is provided by face-to-face teachers working with students in small groups based on their learning needs. Students access other courses online partly at the school, supervised by specially trained para-educators who help them stay on track and connect with their online teachers, and partly from home or other locations.
- K12 Inc. manages hybrid charter schools in California (San Francisco and Silicon Valley Flex Academies) and New Jersey (Newark Prep Charter School). Students in the California schools attend the campuses during regular school hours to meet attendance and funding requirements, but courses are primarily online and most teachers are online as well. Onsite teachers and tutors provide additional help to students individually and in small groups.
- Other hybrid charter schools operate independently of EMOs. Similar to the independent full-time online schools, these charter schools acquire technology platforms and some content from suppliers, while also often creating at least some online content, and in most cases providing their own teachers. Some of these charter schools (and other charter schools that mostly provide instruction onsite) use courses from state virtual schools and other regional or state-specific providers. A greater percentage of hybrid charter schools, compared to full-time online charter schools, are independent of national management organizations. They often serve a single school district or region from which students are able to attend the physical campus.

Other charter schools with significant digital learning activity

Many other charter school networks and individual charter schools are associated with digital learning, but most or all instruction is delivered during school hours with an onsite teacher. Examples of these schools and networks, which were profiled in more detail in *Keeping Pace 2014*, include Ednovate (which operates USD Hybrid High and other schools), Matchbook Learning, Summit Public Schools, Carpe Diem, KIPP, Aspire Public Schools, Rocketship Education, and Firstline.

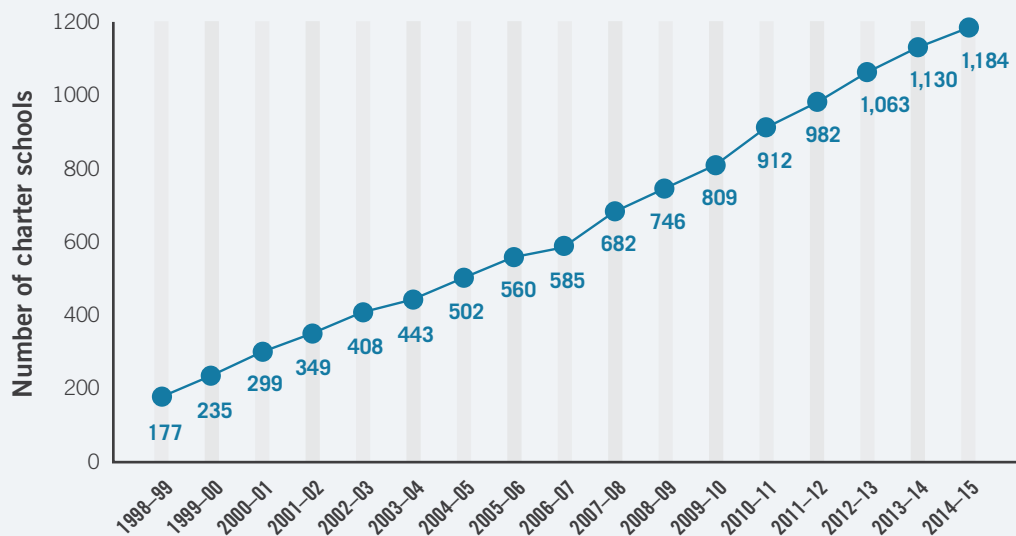


Charter schools in California

California was the second state in the nation to pass a charter school law, after Minnesota. It now has the most charter schools and charter school students in the U.S. Charter school growth in California has been steady ever since the charter school law was passed.

The number of online charter schools in California is somewhat misleading, however, because the national charter management companies operate multiple schools due to the requirement that online schools serve students only within contiguous counties. Both K12 Inc. and Connections Academy operate more schools in California, relative to the number of students in those schools, than in any other state. Both companies also operate single schools in other states that are the same size or larger than their California schools combined, based on the number of enrolled students. ■

California charter school growth: 1998–2014



Source: California Charter Schools Association (CCSA)

California charter school fast facts

THE SCHOOLS

1,184

Total charter schools in CA. Most of any state.

87

New charter schools opening in SY 2014–15.

240 Number managed by a charter management organization (CMO).

THE STUDENTS

547,800

Estimated students attending charters statewide as of 2014–15.

33,525

New charter school students in 2014–15.

91,000

Estimated students currently on charter school waiting lists in CA.

7%

Percentage student enrollment grew in 2014–15.

*(Charter schools in California cont.)***California K12 Inc. and Connections Education charter schools**

California virtual academies	K–8 students	9–12 students	Total students	Total semester course enrollments
California Virtual Academy @ Fresno	605	–	605	7,260
California Virtual Academy @ Jamestown	30	115	145	1,740
California Virtual Academy @ Kings	228	341	569	6,828
California Virtual Academy @ Los Angeles	2,256	1,409	3,665	43,980
California Virtual Academy @ Maricopa	1,377	–	1,377	16,524
California Virtual Academy High @ Maricopa	–	668	668	8,016
California Virtual Academy @ Sand Diego	1,932	1,223	3,155	37,860
California Virtual Academy @ San Joaquin	912	662	1,574	18,888
California Virtual Academy @ San Mateo	468	366	834	10,008
California Virtual Academy @ Sanoma	433	318	751	9,012
California Virtual Academy @ Sutter	524	387	911	10,932

California Connections Academies	K–8 students	9–12 students	Total students	Total semester course enrollments
California Connections Academy @ Capistrano	1,369	1,191	2,560	30,720
California Connections Academy @ Central	186	162	348	4,176
California Connections Academy @ North Bay	41	35	76	912
California Connections Academy @ Ripon	390	339	729	8,748

Total of both major CMO charter schools in California	K–8 students	9–12 students	Total students	Total semester course enrollments
California Virtual Academies	8,765	5,489	14,254	171,048
California Connections Academies	1,985	1,728	3,713	44,556
TOTALS	10,750	7,217	17,967	215,604

Source of list and data: California Department of Education. Course enrollments estimated by Evergreen.



TRIO Wolf Creek Distance Learning Charter School

TRIO Wolf Creek is a hybrid charter school in Minnesota that has the capacity to serve 200 students in grades 9–12. Because of its high rate of student mobility, during the course of the school year it serves a total of about 300 students. It accepts students up to age 21, and about one-third of its students are between 19–21 years old. The school is authorized by the Chisago Lakes School District #2144, and pays the district for a variety of financial, technological, transportation, nursing, and special education services. Wolf Creek students are able to take part in extracurricular activities through the school district, giving them an easily available option for sports and other pursuits.

Students may work entirely online or visit the school's campus, but the school recommends that students work at the campus for at least five hours per week. TRIO believes that about 75% of students visit the school regularly for 3–5 hours each week. Although most students live in the district or nearby towns, some reside several hours away, so an even higher percentage of nearby students is using the physical campus. TRIO is finding that it has more demand for part-time students than it is able to fill, but the school believes its primary mission is to serve full-time students.

In addition to the students who are over age 18, a significant percentage of students arrive at the school behind in credit accumulation. The school is focused on working with students who require extra assistance, and even the students who arrive while in the earlier high school grades are often at risk for a variety of social, emotional, or life reasons. The school therefore has a focus on having mental health counselors available, and finds that students tend to spend their time on campus working with their counselors. The school stresses that all academic requirements (except for some testing) can occur entirely online.

The school assigns each student a lead Learning Manager, who works with the student to create an Individual Graduation Plan. Learning Managers are certified teachers with expertise in specific subject areas, so that the school has teachers for major subject areas and special education. But perhaps more importantly, the Learning Manager creates a long-term relationship with the student around the student's academic plans and goals.

Similar to other high schools in Minnesota, Wolf Creek offers dual enrollment courses with area colleges to allow high-achieving high school students to earn college credit. The school allows students who have successfully completed at least one course to check out a computer from the school. In addition, students who qualify for free or reduced-price lunch also qualify for a computer at a reduced price and low-price Internet access from their Internet service provider. ■

Private and independent schools

Private schools in the United States educate about 4.89 million, or 8.9%, of all school-age students. Private schools fall into several main categories (Catholic schools, Jewish schools, other religious schools, and independent schools), and online, blended and other digital learning models vary across these categories. In addition to the private schools that first existed as physical schools and have added online components, several entirely online private schools have been created as well.

TABLE 4

Private school segments

Catholic	Jewish	Other religions	Nonsectarian / Independent
6,873 Schools 22% of all private schools 1,928,389 students 42.9% of all private school students	954 Schools 3% of all private schools 245,425 students 5.5% of all private school students	13,259 Schools 43% of all private schools 1,431,224 Students 31.8% of all private school students	9,775 Schools 32% of all private schools 889,807 Students 19.8% of all private school students
Digital learning elements specific to private schools			
<ul style="list-style-type: none"> Across private school segments (although not across all individual schools), schools tend to have less digital learning activity than public schools. Some schools resist the use of technology because of cultural or religious beliefs; others resist online learning because they believe that online learning does not provide the necessary level of personal attention that students and parents expect in a private school. Key barriers to increased adoption are 1) teachers tend to have greater control of their classrooms than in public schools, making school-level changes difficult; 2) parents are generally satisfied with existing private school options or, to the extent that they seek changes, don't believe that online or blended learning models will generate those changes. Schools that are adopting digital learning often do so to broaden their course options, to meet the needs of students with unusual needs (students in the arts, athletes) and to reduce costs of operating the school. Online and blended learning activity in some segments is being driven by foundations and nonprofit organizations who are providing funding, support, and expertise to help schools interested in adopting online or blended learning. This is particularly true in Jewish schools, and to a lesser extent Catholic schools. Foundations provide financial support to schools directly, and also pay digital learning suppliers for online courses, professional development, and other services. More segment-specific suppliers exist within the independent school segment than other segments; for example, the Global Online Academy and the Online School for Girls provide online courses to augment course catalogs that are often deep but not very broad because of the small school sizes. A few small suppliers work exclusively with private schools, and often in one segment of private schools. Aside from these segment-specific providers, suppliers are mostly the same hardware, content, and technology providers that work with public schools. 			

Catholic schools

Catholic schools are the largest single category of private schools, making up about 22% of schools enrolling 43% of private school students. Similar to other private school segments, much of the digital learning activity in Catholic schools is not primarily online, but is instead focused on classroom use of technology with goals of promoting technology-based instruction, and in some cases reducing costs. Decisions regarding online courses are often made at the school level, although in some cases (e.g., Chicago, New Jersey, Los Angeles, and Miami) the diocese supplies online courses to member schools, and in a few instances offers a fully online education to Catholic students. The blended learning initiative developed by Seton Education Partners is explicitly focused on “using technology to make Catholic schools financially viable.” Seton first partnered with the Mission Dolores Academy in San Francisco, and has expanded to schools in Seattle, Los Angeles, Philadelphia, Cincinnati, and Milwaukee. Seton reports that the schools in San Francisco and Seattle have made “tremendous gains,” outperforming national averages for student growth based on NWEA MAP scores.

Quite a bit of activity within Catholic schools is still in early stages, with many programs having been started only a few years ago. For example, the Virtual Catholic High School, started by the Union Catholic Regional High School, opened in fall 2014. It is growing and expanding to new schools, including elementary Catholic schools, in school year 2015–16.

Jewish and other religious schools

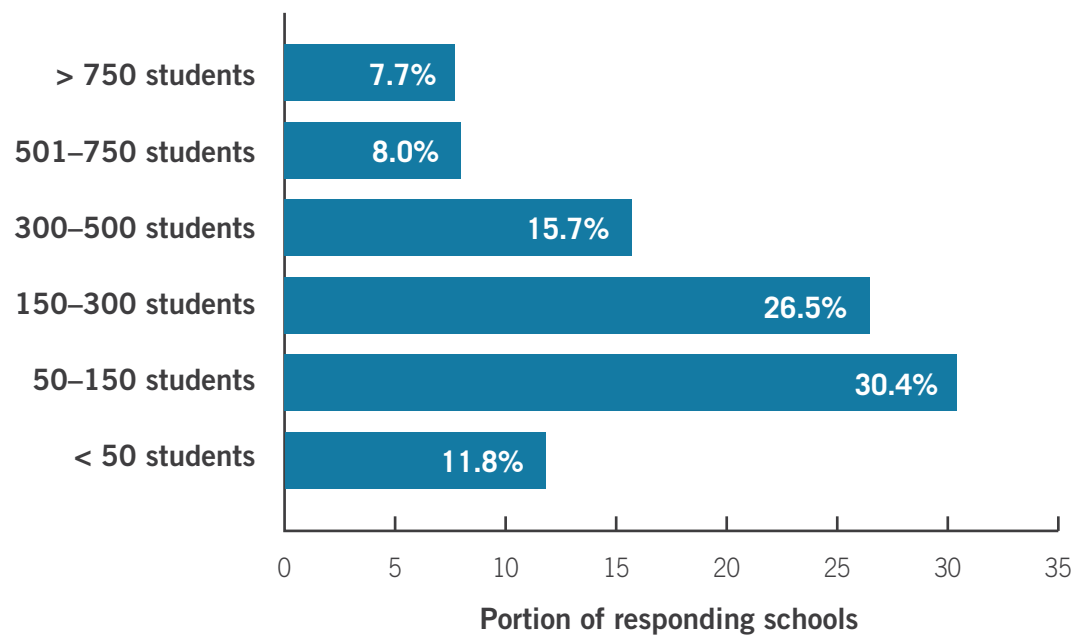
All other religious schools, including Jewish schools, represent a second category of private schools. Because of the involvement of several foundations interested in online and blended learning in Jewish day schools, these schools have more digital learning activity, and the level of activity is better understood, than in other private school segments. Still, much is unknown about online and blended learning within Jewish schools.

The main source of information about online and blended activity in Jewish schools is the *Online/Blended Learning State of the Field Survey*, dated March 2015 and published by The AVI CHAI Foundation. The study surveyed 550 Jewish day schools using a web-based survey tool, and received 334 valid responses, for a response rate of 61%. Different types of schools (Community, Conservative, Orthodox, and Reform) responded at rates that are fairly representative of the Jewish day school population as a whole. Responding schools were from 34 states, and about 9% of respondents were from Canada. In addition, the study was conducted as a follow-up to a survey in 2012, and the report includes some analysis of changes over time, suggesting that online and blended learning has grown considerably in Jewish day schools in the past three years.

Private schools across all segments are generally smaller than public schools, and as a group the responding Jewish day schools are fairly small. More than half of the schools have fewer than 300 students, and 30% have 150 students or less. This is substantially smaller than the size of the average U.S. public school, which had about 550 students as of school year 2009–10. The small size of Jewish day schools has led some of them to seek online learning options in order to provide more course options for students than they are able with their relatively small teaching staffs. Foundations are interested in the use of online and blended learning to develop cost efficiencies given that the number of students in each class tends to be much smaller than the number in larger public schools.

FIGURE 11

Size of school population among respondents



Number of students in Jewish day schools responding to the online and blended learning survey. Most private schools are smaller than the average public school, which leads them to develop online and blended learning programs primarily for reasons related to scale and cost. Source: Online/Blended Learning State of the Field Survey, AVI CHAI Foundation, March 2015.



The Yeshiva High Tech Jewish Day School partnership with the City of Angels Independent School

Yeshiva High Tech (YHT) school is a Jewish day school in Los Angeles that offers onsite Judaic studies, and blended general studies in partnership with a public independent school in the Los Angeles Unified School District. By combining these modes of instruction, Yeshiva is able to offer a wide range of courses to students while keeping tuition lower than the cost of the average Jewish day school.

Yeshiva High Tech has about 50 students across grades 9–12, and 13 staff members and teachers including teachers for math, science, and humanities. Students take Jewish studies courses at Yeshiva from teachers at the school. For general studies courses, however, students take online courses that are offered by the City of Angels School (COAS). Students arrive at Yeshiva High Tech in the morning, and soon after breakfast provided by the school they typically begin their academic day by working in online courses.

The City of Angels School is the only independent study school within the Los Angeles Unified School District (LAUSD). It enrolls 2,300 students; some of whom are mostly or entirely online, and others who work from one of 25 instructional sites throughout the district.

The students take all of their general studies courses through the City of Angels School. COAS receives funding for these students, who receive a Los Angeles Unified School District diploma upon graduating. COAS sends a teacher to the Yeshiva High Tech school once per week to work onsite with students, and students also receive support on other days from the Yeshiva teachers and staff. COAS follows students' progress towards meeting their graduation requirements, as it does with all of its students. In addition, the YHT teachers communicate with COAS regularly in order to help the students in their general studies classes. COAS courses use digital content from Edgenuity, which is a district-approved provider, and is approved by the University of California for A–G requirements

For Yeshiva High Tech, the partnership with COAS is one element of the ways in which it works creatively with other schools. YHT offers dual enrollment courses in partnership with a nearby public community college, and also has an agreement with a private college to provide extra Judaic courses that students can choose to enroll in (they must pay tuition in this latter case).

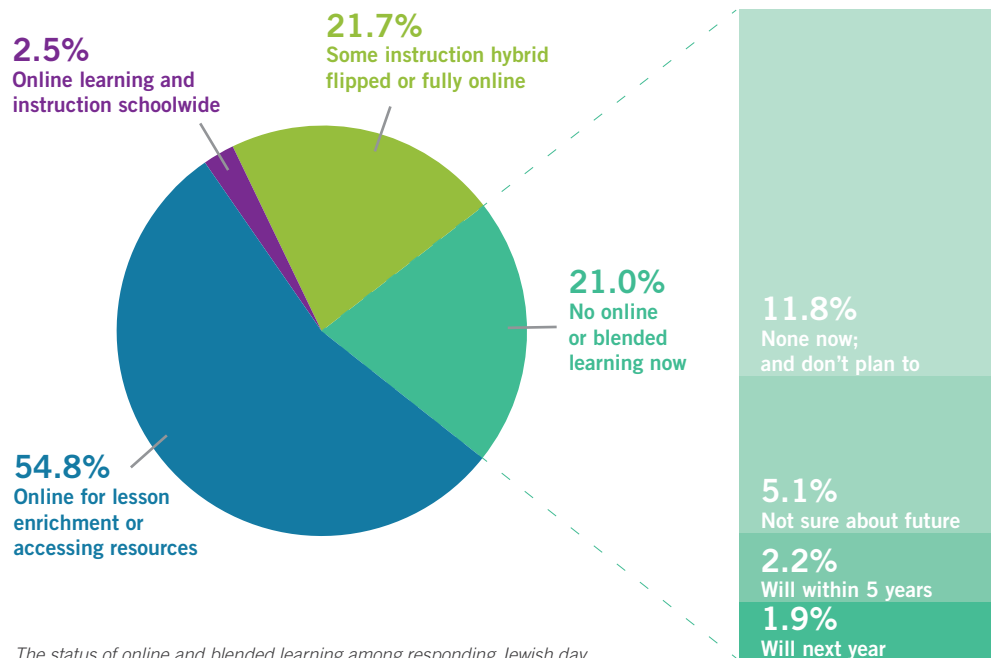
The partnership with the City of Angels Independent School is new. In previous years, Yeshiva High Tech had offered a variety of online courses from several different providers, but found that none were successful.

For YHT, this arrangement is new and unusual. The school principal explored a similar arrangement with other nearby public schools and was not successful until she found COAS. For COAS, this specific situation with a Jewish day school is unique, but the overall arrangement is not highly unusual, as the school works with students in a variety of settings, and has similar partnerships with other private nonprofit organizations and public agencies that are supporting children and teenagers, such as students who are homeless. ■

The study found that 79% of responding schools report using online or blended learning, and that this is a substantial increase from the 2012 report. A closer look, however, shows that much of what is being reported as online or blended learning is in fact the use of educational technology in classrooms that in many cases would not be considered blended learning. More than half (55%) of responding schools report that some or all of their online and blended learning “occurs in the more traditional supplemental model (i.e., instruction is primarily face-to-face, with online resources, projects, discussions and online lessons used for enrichment or supplement).” In this case the term “supplemental” is *not* referring to students taking a single online course to supplement their face-to-face education, but instead is referring to the use of online materials in a traditional classroom setting. It appears that much of the usage of online materials falls into this category. The fact that one-third of all reporting schools say that they “use only materials that are available and free,” and one-third of schools report that their own teachers are the only online “content providers” further reinforces this point. (Presumably there is significant overlap between these two categories.) Only about a quarter of all schools report that they are using at least some hybrid, flipped, or online instruction; of this total a very small percentage (2.5%) is using online learning “school wide.” Just over 20% of schools report that they are not using any online or blended learning, and about half of these have no plans to incorporate online or blended learning.

FIGURE 12

Current digital learning activity



The status of online and blended learning among responding Jewish day schools. Source: Online/Blended Learning State of the Field Survey, AVI CHAI Foundation, March 2015.

About 10% of schools report that they are using fully online instruction, which the study defines as “at least one class is delivered completely online with no in-classroom or face-to-face instruction, with school faculty providing onsite support in some cases.” As we are not aware of any fully online Jewish day schools in which students do not attend a physical school, this usage of online courses in a physical school appears to be the extent of online learning within this segment.

The study focuses mostly on whether Jewish day schools are providing online and blended learning at any level and with any number of their students, but also reports broadly on the portion of students and faculty who are engaging in various types of online and blended learning. Schools are placed into one of three categories based on the percentage of students who are engaged in online or blended learning: schools with “most” students engaged are those with more than 50% of students involved; “moderate” is between 10% and 50% of students, and “very few” is under 10%. Of the 10% of schools that report using online learning, half have more than 50% of their students accessing online courses.

TABLE 5

Jewish day school online or blended students

The percentage of students taking part in online or blended learning

Model of online / blended learning	Most (> half)	Moderate (10% –50%)	Very few (< half)
Traditional / supplemental	40.8%	18.6%	7.1%
Flipped classroom	14.0%	5.0%	1.9%
Rotation	11.0%	6.0%	1.8%
Hybrid / instructional split	9.0%	3.1%	0%
Fully online	4.2%	3.1%	2.0%

Source: Online/Blended Learning State of the Field Survey, AVI CHAI Foundation, March 2015



Bay Area BlendEd Consortium

The Bay Area BlendEd Consortium is made up of a group of five independent schools in the San Francisco Bay Area working collaboratively to offer 11 courses to juniors and seniors in their schools. The first courses were offered in fall 2014 after an extensive planning period that involved the Heads of School and a consortium coordinator appointed by each school. Most of the initial Consortium courses are electives that tap into the unique learning resources available in the Bay Area, such as Bay Area Ecology, Literature of the Golden Gate, and Field Study Photography & Bay Area History. In these and other courses, field study activities are held at pertinent sites throughout the region, with most courses holding between three and five field activities or other face-to-face sessions. Aside from these meetings, the courses are online. The courses are developed and taught by teachers from each school through the Canvas Learning Management System, and the schools integrate the courses into their registration processes in order to encourage a mix of students from all member schools in each course. Students receive credit for Consortium courses on their home school transcripts. In school year 2014–15, the Consortium had 84 course enrollments, mostly in the spring semester. All courses are offered during the regular spring and fall semesters to fit existing schools' schedules, and all courses are approved by the University of California. ■

The AVI CHAI report, and other evidence from Jewish day schools, suggests that these schools are using online and blended learning at lower rates than public schools. In addition, given that respondents are reporting supplemental classroom use of technology under the broad category of blended learning, the number of Jewish day schools not using technology at all (21%) seems substantially higher than the number of public schools not using technology.

To further support Jewish schools, The AVI CHAI Foundation is funding The Virtual High School to establish the Online Judaic Studies Consortium. Working with VHS, Jewish day schools will develop and share online Judaic studies courses. The initial courses are being developed in the fall 2015 semester for offering in spring 2016. In addition, they support the Lookstein Virtual Jewish Academy, which offers online Jewish studies courses for middle and high school students.

Independent schools

Christa McAuliffe School of Arts and Sciences

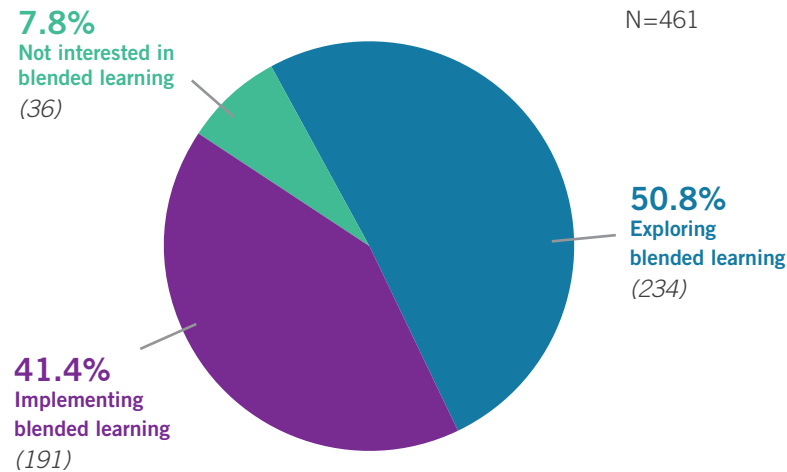


The Christa McAuliffe School of Arts and Sciences (CMASAS), founded in 2009, honors the life of Christa McAuliffe, teacher and astronaut, “by educating the next generation of leaders, scientists, philosophers, artists, and others to be fully-prepared for the dynamic world of the 21st Century.” The school serves students grade K through 12, and is entirely online so it attracts students from across the United States and other countries. Courses are open enrollment and self-paced, with synchronous and asynchronous elements. Students may enroll full-time or take single courses. The school provides opportunities for regional gatherings, and a global adventure program in which students may participate as well. ■

Independent schools—those not formally affiliated with a religious organization or other overarching entity—make up another segment of private schools. The OESIS Group, which runs symposia for independent schools interested in online and blended learning, has conducted surveys to find out schools’ interest and activities in digital learning. The *OESIS Learning Innovation Report on U.S. Independent Schools 2014–2015* surveyed 461 independent schools, with heads of school and other senior administrators responding to one survey, and teachers responding to a second. In its surveys, OESIS defined blended learning using the characteristics of the Christensen Institute description, which includes some element of student control over time, place, path, or place of instruction. To the extent that respondents understood the directive to use this definition of blended learning, the survey responses should not include schools that are using digital content or tools solely to supplement traditional methods of classroom instruction. Based on this definition, 41% of respondents reported that they are using blended learning; 51% say they are “exploring” blended learning, and 8% say they are not interested.

FIGURE 13

Independent schools interest in blended learning



Source: OESIS Group

Just over 18% of all responding schools have 51% or more of their teachers using blended learning, and 12% of the total have more than three in four teachers using blended learning. This is higher than the number of Jewish day schools with at least half of their teachers using blended learning, although differences in methodologies make direct comparison imperfect. The main drivers of the use of blended learning with existing independent school classroom teachers are accessing content that is better than standard textbooks, and personalizing learning. Schools' use of online learning is being driven primarily by the desire to offer courses that are otherwise unavailable or for which costs are "difficult to justify" given small class sizes.

Independent schools interest in online supplemental courses has driven the growth of several consortia that are providing these courses. These include the Hybrid Learning Consortium, the Malone Schools Online Network, the Global Online Academy, the Online School for Girls, and extensive involvement by independent schools in the Virtual High School Collaborative, which works primarily with public schools. In addition to these consortia, which operate nationwide or across large geographic areas, several regional consortia function as well. These include the Bay Area BlendEd Consortium in the San Francisco Bay Area, the Eight Schools Association in New England, VizNet in the southeastern U.S., and MSAISnet in the mid-South.

In addition to the survey responses regarding the use of blended learning, the OESIS survey also asked about various uses of educational technology. Similar to Jewish day schools, much of the technology being used tends to reinforce traditional instructional methods based on teachers lecturing. The use of learning management systems and, especially, adaptive content is significantly lower than the use of technologies such as social networks, blogs, and wikis.

TABLE 6

Independent schools technology use

Predominant technology usage in independent schools tends to reinforce traditional instructional methods with new communication channels, with relatively low levels of adoption of technologies that can significantly change instruction, such as adaptive learning systems

Attitudes about	Currently in use	Planning to use	Interested	Not planning	Not familiar
Learning management systems	53%	13%	13%	8%	13%
Adaptive learning systems like Aleks and Knewton	15%	9%	21%	18%	37%
Student response systems like iClicker	44%	11%	19%	17%	9%
Plagiarism detection software like Turnitin.com	50%	6%	14%	23%	7%
Social networking internal or external	63%	6%	10%	18%	3%
External content capture like blogs and wikis	73%	8%	12%	5%	2%
Internal content capture for lecture capture	37%	11%	22%	11%	19%
Communication technology like chat and web / video conferencing	63%	14%	15%	6%	2%

n=461 Schools

Online private schools

In addition to the private schools discussed above, most of which have a physical school, several entirely online private schools operate as well. These include the private schools operated by K12 Inc. and Connections Academy, as well as several smaller online private schools that are not affiliated with a national organization such as the Laurel Springs School.

Private school suppliers

Suppliers of online courses and services to private schools fall into two categories. Many of the same vendors of online course and services that supply public schools work with private schools as well; these include the Virtual High School, K12 Inc., and many other learning management system and content companies. In addition, some suppliers specialize in working with private schools, particularly in faith-based schools. Faith-based suppliers include Sevenstar, Alpha Omega Academy,

Edified Online, CSK12 and other suppliers that focus on delivering supplemental online courses. In some cases the courses include religious content, which is not part of the courses supplied to public schools. Specialized suppliers represent a small but growing portion of the private school online learning supply chain.

Private school students taking public online courses

An emerging area in online learning involves students in private schools taking publicly funded online courses. A state virtual school may offer these courses, or they may be provided by a school district's online program, or via course choice programs.

In many cases state policy allows for students who are not in the public school system to take these individual online courses. In some instances, private school students and home school students pay for the online courses; this is most common with courses offered by state virtual schools, for example. In states that allow students to enroll in a single online course from a public school, as in Minnesota, some of the online students may be attending private schools.



Sevenstar

Since its beginning in 2006, Sevenstar has delivered online courses for students in grades 6–12 to over 20,000 students in Christian Schools. Sevenstar offers over 90 online classes plus 100 dual credit courses from partner Christian colleges and universities. Its mission is “to provide outstanding online Christian education that instructs the mind and heart of each student.”

Sevenstar offers three instructional products:

- Schools can create a customized online learning program, including the opportunity for juniors and seniors to earn college credit through regionally accredited colleges and universities.
- Parents or schools can purchase supplemental courses individually.
- Students who want to attend Sevenstar full time to earn a high school diploma can enroll in the Academy.

Sevenstar courses are adapted from several suppliers, including some that serve public schools primarily such as Florida Virtual and Fuel Education. Sevenstar has integrated a Christian worldview into each of these courses. ■

TABLE 7

Private enrollment in publicly funded online courses

We investigated 24 states' policies relative to private school students access to publicly funded online courses, and the conditions under which that is allowed

State	Can a private school enroll a private school student in a supplemental online course offered through a public school, district online program, state virtual school or other state funded online program?	If yes, is the private school offered those supplemental online courses for their students under the same financial circumstances as public schools?
Alabama	Yes	No
Alaska	Yes	Yes
Arizona	Yes	No
Arkansas	No	No
Colorado	Yes	No
Florida	Yes	Yes
Georgia	Yes	Yes
Idaho	Yes	Yes
Illinois	Yes	Yes
Indiana	Yes	No
Iowa	Yes	Yes
Michigan	Yes	Partial
Minnesota	Yes	No
Montana	No	Yes
Nevada	Yes	No
New Hampshire	Yes	Yes
New Mexico	Yes	Yes
North Carolina	Yes	No
North Dakota	Yes	Yes
Ohio	Yes	Partial
South Carolina	Yes	Yes
Utah	Yes	Yes
Virginia	Yes	No
Wisconsin	Yes	Yes

The situation with more significant implications involves a private entity—a private school or another type of private organization—organizing students who become online students of a public school, and are supported by the private entity that provides assistance in the form of onsite teachers or mentors, computers, Internet access, or a physical learning space. Although the most common cases appear to be religious schools, other examples include sports organizations such as traveling hockey teams, organizations supporting homeless youth, and so forth.

For example, Yeshiva High Tech is a small Jewish day high school in Los Angeles that has partnered with the City of Angels Independent School, which is an independent study school that is part of the Los Angeles Unified School District.

The key components of this situation—which *Keeping Pace* researchers have found elsewhere—include the following:

- The private school entity typically provides some education to the students.
- The private school entity organizes students and has a partnership with a public school.
- The private school entity supports the students in their general academic studies. It may provide a physical learning space, computers, Internet access, and perhaps mentors who support students in addition to their online teachers.
- The public school has a direct relationship with the students. The students access online courses provided by the public schools, they learn from online public school teachers, they mix with other public school students in the online course, and they take state assessments.

These types of private-public partnerships have been formed in the past in South Carolina, California, Wisconsin, and elsewhere. They sometimes have had only some of the above elements, and in some cases they have been short-lived because they appear to have been ad-hoc arrangements, or have attracted controversy. In Kansas, a state audit found that “in the 2013–14 school year, the Andover school district agreed to allow Wichita area Catholic school students to take courses through its virtual school...About 4,000 elementary school students from private schools enrolled in a reading, writing, or math course to supplement their regular coursework;” this was equivalent to 486 FTE students. In addition, about 600 middle and high school students from private schools took online courses through the eCADEMY as well, mostly in elective courses not offered by the private schools.

The Kansas state auditors wrote that they felt that the arrangement between the public school district and the private schools took advantage of a “loophole” in the virtual school law, and that it was not the intent of the state legislature to fund private school students in this way. It’s not clear, however, that the private-public partnership was the main problem. Instead, the auditors main concern was that the “students did not receive instruction from virtual school teachers. Rather, their private school teachers provide all of their instruction.” The public school was providing fairly low-cost online content to the private school students, and generating state funding for those students.

This situation is unusual but not unique. In 2004 the Ohio Department of Education ended a collaboration between an online community school (similar to a charter school in other states) and a Jewish day school located in Cleveland Heights. The state legislature subsequently added language to a law passed the following year that restricted such collaborations.

In both Ohio and Kansas, state policymakers felt that the arrangement between the public school and private entity was violating the intent of education laws. But it's not necessarily the case that all such arrangements would run afoul of state laws. Advocates for the benefits of such arrangements between private entities and public schools believe that several conditions must apply in order for the situation to meet the letter and intent of education laws. Most importantly, it must be clear to students and parents that they are taking courses from a public online school, and that the online courses are available to the students even if they do not pay the private entity. In addition, the public school teachers must have direct access to the students in order to instruct them; the private entity must not mediate the communications between teachers and students.

Education savings accounts: the Nevada example

Another way in which students attending private schools may access public online courses is through state voucher systems and education savings accounts. In 2015 Nevada passed the nation's most far-reaching education savings account law; it will go into effect in January 2016 as the first such law that applies to nearly all students in the state. Education savings accounts in other states, including Florida and Arizona, have been limited to certain students, for example students with certain disabilities. In Nevada, the only requirement is that students have been enrolled in a public school for at least 100 days. After that point, families may opt out of public schools and use their children's state education funding for a variety of educational options, including private schools and online courses. Initially, families believed that they could meet the 100 day requirement by enrolling their children in online courses provided by public schools, but subsequently the Nevada State Treasurer clarified that "a private school or "home school" student may not participate in a program of distance education (online class) to satisfy the 100 school day requirement."

The way in which the law allows for the funds to be used for private and religious schools has received the most attention, and is the law's most controversial element. It will undoubtedly be compared to school voucher laws, but Nevada's bill has the potential to have a greater impact than voucher laws, in large part because it allows for unbundling of education services in ways that most voucher laws do not. It is precisely this unbundling that could lead to students choosing online courses.

It's not entirely clear how the law will play out for individual courses and providers. Arizona has a fairly broad ESA law, but only about 1% of eligible students are taking part in that state's version of ESAs—so it's entirely possible that the law will not lead to a significant increase in the number of students taking online courses in Nevada. In addition, the law is the subject of a lawsuit challenging whether it meets constitutional requirements. Still, with the growth of course access apparently stalling in other states, it's worth watching to see if ESAs may be another path taken by students in Nevada, and by course choice advocates in other states.

University online high schools

Another option for students is a state or private university operated online high school. Online high schools offered by state universities often have long-established programs with roots in correspondence courses that have evolved into online delivery. Private university online high schools tend to have started more recently with an online format as the foundation of the schools.

Regardless of type of university sponsoring the program, most university online high schools have the following similar characteristics:

- Accredited high schools that directly grant high school diplomas
- Enroll students directly in the online high school programs without school or district involvement
- Provide both full-time and supplemental online course options
- Students pay tuition for courses—the university receives no state funding for student enrollments
- Target gifted and high-performing students and do not offer credit recovery programs

University online high schools are not publicly funded, and the schools have an application process and requirements for acceptance. School districts do not enroll students in these schools and rarely have involvement beyond accepting courses credit or diplomas as they would from any transfer student. This is true for both public and private universities operating online high schools. All of the schools studied award diplomas and are regionally or nationally accredited, or both. Once a student completes a course at a university online high school, it is the responsibility of the student or the university to transmit the appropriate grade information to the student's home school district. There are, however, isolated examples where university online high schools work more closely with schools and districts. The University of Nebraska High School, for example, accepts enrollments directly from Nebraska school districts for supplemental online courses. Two online high schools, the Texas Tech University Independent School District and the University of Texas High School, are independent school districts in the state of Texas.

A majority of university-sponsored online high schools are open enrollment so students can start taking a course at any time during the year. When they enroll, they are assigned to work with a specific teacher in a specific online course. Accordingly, university-sponsored online programs usually report course enrollments by school year (SY) or fiscal year (FY) rather than by semesters.

TABLE 8

University based online high schools

University	Physical location	Total unique students served	Total course enrollments	Average courses per student	Total full-time online students
University of Missouri Online High School	Columbia, Missouri	2,512	5,768	2.30	770
National University Virtual High School	La Jolla, California	4,926	7,008	1.42	140
Stanford University Online High School	Stanford, California	665	1,761	2.65	286
University of Mississippi High School	University, Mississippi	343	926	2.70	68
University of Nebraska Online high school	Lincoln, Nebraska	2,945	9,657	3.28	
TOTALS		11,391	25,120	2.21	1,264

Mizzou K–12 Online

The University of Missouri's high school has been providing students with educational opportunities for over 100 years. In 2010, MU's College of Education founded Mizzou K–12 Online to blend proven pedagogical teaching techniques with technological innovation in an online learning environment. In 2012 the two joined forces to expand online educational opportunities for K–12 Students. They offer over 230 Flexible and Scheduled format courses, including core courses, elective courses, world languages, and Advanced Placement. Students may enroll part-time or apply for diploma program options.

MU High School's online students in the class of 2013 averaged a composite score of 25 on the college prep exam, more than three points above the Missouri state average, 21.6. MU High School students who took online high school classes scored an average of 27.0 in reading, 25.5 in English, 23.4 in math, and 23.5 in science. Across all subject areas tested, MU High School students who reported their results scored significantly higher on AP exams than the National Average. Reported results of MU High School students total average for 2013 was 3.78 while the national average was 2.89. ■

Students enrolling in university online high schools are often high-performing students. Enrollments in the core subject areas of math, science, English language arts and social studies made up 72% of total course enrollments in SY 2014–15, a significantly higher percentage than in public schools. Electives and world languages both tallied about 14% of course enrollments by subject area. Other reasons students decide to enroll in university high schools are similar most online programs, including, for example, student athletes, actors and performers who need the flexibility these online high schools offer. While most of the university online high school students are located in the U.S., a high percentage do not live in the state in which the university is located, and a fair number are international students.

TABLE 9

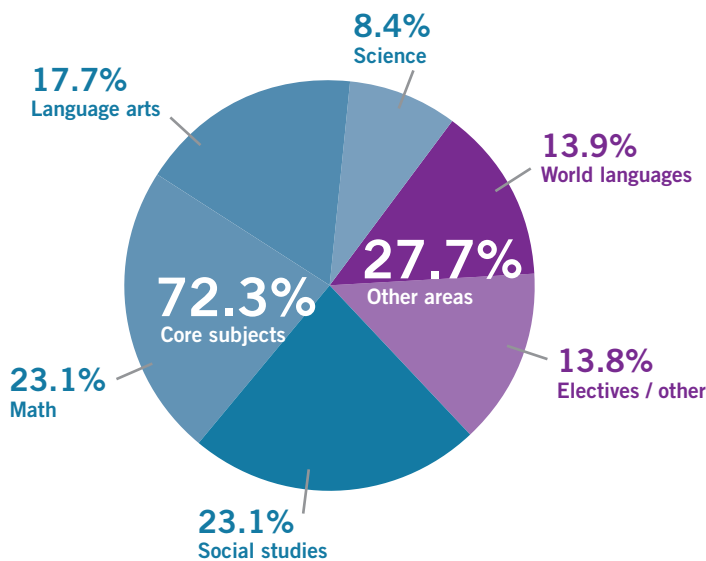
University based online high schools subject areas

University program	Math	Language arts	Science	Social studies	World languages	Electives
Missouri Online High School	801	1,033	480	958	369	1,468
National University Virtual High School	1,890	927	260	1,989	1,414	436
Stanford University Online High School	509	344	369	154	187	57
University of Mississippi High School	159	272	116	266	58	55
TOTAL	3,359	2,576	1,225	3,367	2,028	2,016
AVERAGE	840	644	306	842	507	504

FIGURE 14

University high school subject areas

Core and advanced subjects dominate university online high school enrollments



University of Nebraska High School



University of Nebraska High School (UNHS) has been in operation as a mission of the University of Nebraska since 1929, providing mail correspondence courses. It evolved into an online instructional model in 2000. UNHS served 2,945 students during the SY 2014–15, only 554 of whom were Nebraska residents. UNHS uses an open enrollment model where students have between 5 and 52 weeks to complete a course.

Students work one on one with the curriculum and the online teacher. Online faculty evaluate student work, maintain regular communication, and guide students through their projects. Students work through course units sequentially and can only submit one assignment per day. Students cannot progress without the required interaction with the instructor, including feedback and grading by the instructor.

Some students are full-time, working on their high school diploma with UNHS, and others take one or two courses to supplement their work in another high school. UNHS offers nine Advanced Placement (AP) courses and students can complete an AP International Diploma through College Board. UNHS also partners with the University of Nebraska at Omaha to provide students with college credit opportunities for psychology, sociology, AP Comparative Government & Politics, AP U.S. History, AP Environmental Science, and AP Calculus. UNHS provides a full-time online option for high school students around the world. It is accredited by the state of Nebraska and AdvancEd, and all core and AP courses are NCAA approved. All teachers are Nebraska certificated teachers.

UNHS is not funded through the school finance formula for Nebraska public schools; it is completely self-funded through tuition. Tuition for a one-semester course is \$200 plus an administrative fee of \$50. Books and materials are an additional cost. Nebraska residents receive a 25% discount on tuition. ■

The teachers used by universities to teach high school and middle school supplemental and full-time online learning programs was about equally split between the university's existing faculty and K–12 teachers from within schools in that state. The online teachers for the private university online high schools were almost entirely university faculty in that institution.

Although some of the large university online high school enrollments are in state schools (the Indiana University High School enrolls about 1,950 students each year), private universities have significant programs as well. The Stanford University Online High School (OHS), an independent school for gifted students in grades 7–12, was founded in 2006 with a gift from the Malone Family Foundation. OHS expanded to include middle school grades in 2009. It is regionally accredited by the Western Association of Schools and Colleges and is approved as an online provider by the University of California. The George Washington University Online High School (GWUOHS) is an accredited online private high school.

All of the GWUOHS teachers are faculty of George Washington University, and the school uses online courses and technology supplied through a partnership with K12 Inc.

National University Virtual High School (NUVHS) is an affiliate of the National University in California. Students can earn dual high school and college credits by taking National University online courses, Advanced Placement and college prep courses, or repeat classes to improve a students' GPA. All online teachers are California-credentialed. NUVHS is open enrollment, with registration accepted throughout the year.

Johns Hopkins University Center for Talented Youth runs a tuition-based online preparatory school, CTYOnline. The school has an international emphasis serving pre-K–12 students from more than 60 countries, with all courses taught by CTY faculty. CTYOnline courses are offered in three different formats; individually paced courses in which students can enroll at any time during the year and progress at their own pace; session-based courses which have specific start and end dates; and flexi-paced courses, where students start the course on a set date, and develop a schedule with their instructors to complete the course within the next nine months.

Digital learning for homeschooled students

About 1.8 million students are homeschooled, meaning that they are school-age children, in a grade equivalent to at least kindergarten and not higher than 12th grade, and receive instruction at home instead of at a public or private school either all or most of the time. According to the National Center for Education Statistics, the most common reasons that parents cite for homeschooling their children are concerns about school environments, a desire to provide religious or moral instruction, and dissatisfaction with academics at other schools. In addition, slightly more than a third of parents cite “other reasons” for their choice that may include family time, finances, travel, and distance.

State definitions and regulations pertaining to homeschooled students vary. Some states require that students be registered with the state or the local school district in some way, while other states have few regulations, and know much less about their homeschooled student population. But an important distinction is that once a student enters a public school as a full-time student, he is no longer a homeschooled student, as these categories are mutually exclusive. This distinction has been confused in many states with full-time online schools, as some people believe that homeschooled students entering public, full-time online schools remain homeschooled students. In almost all cases, this is not an accurate representation of the situation, because upon entering the public school, the student is considered a public school student. This is not necessarily true of homeschool students who take a small number of online courses from a public school, as students can be considered part-time homeschooled and part-time public school students.

Online learning and homeschooling intersect in several related ways that can be placed into four categories:

- Homeschooled students and families use online materials, including online courses. Some of these are free, and families pay for others. This movement to online materials simply parallels the transfer of the majority of information and content in education and other fields from being paper-based, to digital, to online. Where a homeschooled student in the 1980s used a math book that her parents bought, the 2015 homeschooled student is likely to be using online math videos to study. Companies provide extensive online instructional curriculum to homeschooled students and families, with some being customized for particular religions. These materials range from simple text converted to PDF documents or ebooks, to courses developed for delivery in learning management systems. Many parents find that as their children get older, they increasingly have to turn to outside sources for instructional assistance. Although parents may have been comfortable teaching fifth grade math with a simple guide, they often find that they need assistance to help their children with advanced math and science courses.
- Homeschooled students in some states are able to take supplemental online courses from a state virtual school or from a course access program. In some cases, these courses are free to homeschooled students, and in other cases the family must pay. In the latter case the situation is not very different than the family paying for online courses from a private provider, although in some instances the cost may be subsidized by the state. These students are generally still considered homeschooled students even if they are taking an online course through a public program.
- Homeschooled students may enroll in their local public school part-time to take online courses that they can access primarily or entirely from home. In some cases they are enrolling in the local school in order to access courses from the state virtual school or course access provider. These students are usually considered to be part-time public school students and part-time homeschooled students.
- Finally, homeschooled students may enroll in a public, full-time, online school. This is where confusion is often created, because by enrolling in the public online school the student is switching from being homeschooled to being in the public school system. The student is required to take state assessments (although parents may opt out as is increasingly common), communicate with online teachers, and meet scheduling requirements for start dates, homework assignment, and so forth. Full-time online schools often start with 20% or more of their students being formerly homeschooled students, which accounts for part of the confusion.

3 WHO ARE THE SUPPLIERS OF ONLINE LEARNING COURSES?



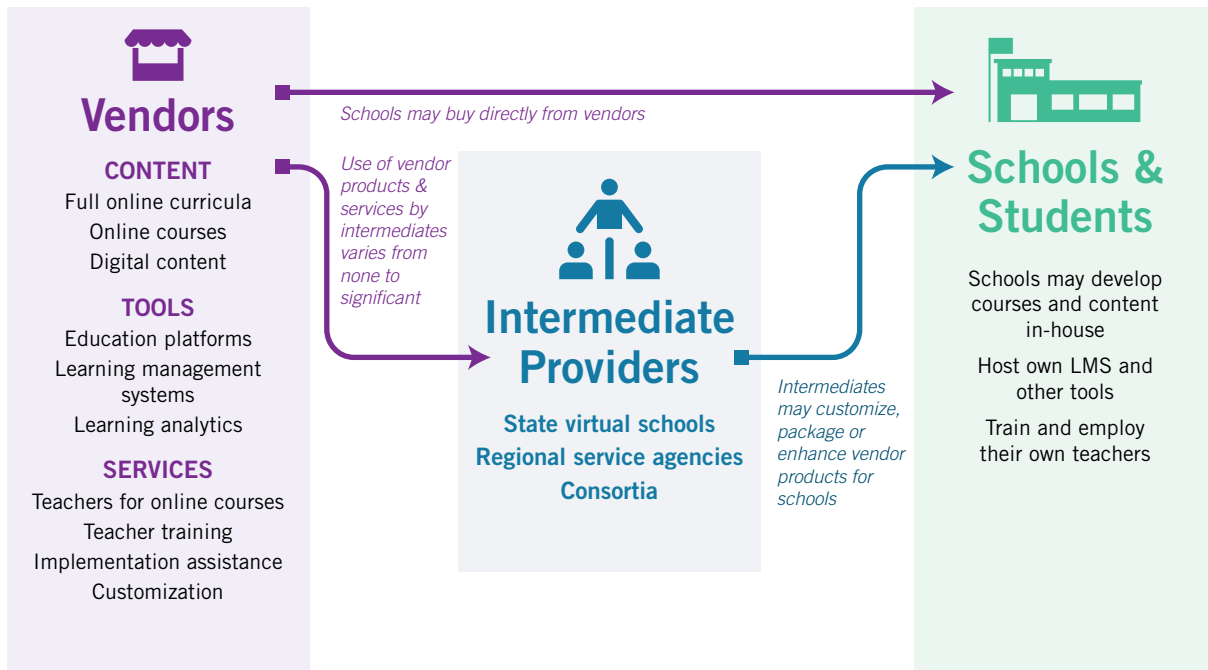
SCHOOLS USE ONLINE COURSES, CONTENT, TOOLS AND SERVICES FROM A CONTINUUM OF SUPPLIERS. **Suppliers** are operational entities that deliver online courses, content, instruction, technology tools and other online learning related products and services to schools. They may be companies, governmental agencies, or nonprofits. Suppliers can be very large corporations—publishers like Pearson, Houghton Mifflin Harcourt or McGraw-Hill—that offer a very wide variety of digital learning products and services, or smaller suppliers so specialized that their products might, for example, be limited to online speech therapy, health and physical education or driver's education. Some suppliers specialize in specific instructional content like credit recovery programs, foreign languages or mathematics. Others furnish products and services needed to support and manage an online learning program, such as course delivery and management platforms, assessment systems, and learning analytics.

In many states, intermediate providers are one of the first resources schools use to access online courses. **Intermediate** suppliers are usually organizations within a state that have been established to provide a full-service, coordinated offering of online courses and associated support services directly to schools. Intermediates redistribute courses and other products from vendors, develop their own courses, create and provide support and professional development services, and deliver them to schools using commercially available learning management systems and other educational platforms. This unified offering provides a valuable service to schools, relieving them from having to, on their own directly manage, integrate and support a variety of products and services from a multiplicity of vendors and other providers. Intermediates are most often some form of governmental or government controlled entity, such as a state virtual school, regional services agency, or perhaps a consortium or membership organization specifically established to cooperatively provide online services to a group of schools or its members.

Vendors are companies or organizations in the business of developing and delivering a broad range of products and services to the education industry. In particular, for the general focus of this report, vendors provide online courses, surrounded by related digital content, tools and support services. Vendors are usually national or worldwide in scope and directly serve schools at the local, regional and state level, as well as work through intermediate distributors and product and service aggregators. Some even maintain a full-time staff of teachers as part of a services offering of online teacher-led courses. Some vendors also deliver online learning directly to students.

To help clarify the roles and interplay among the various levels of suppliers and buyers (schools and students) of digital learning products, it is useful to think of it as a “supply chain,” analogous to commercial products industry supply chains (see Figure 15, next page). Schools and districts often work directly with vendors for a “turnkey” solution, an offering delivered by a supplier that comprises everything a school needs to for an entire online program. Schools may choose to work through intermediates. The regional focus of most intermediates allows them to build close relationships with schools and districts, and intermediates usually have a thorough understanding of state rules, funding and other local issues that might impact online learning. Geographic proximity to schools allows intermediates to provide face-to-face services that vendors may not be able to easily provide. Depending on state policy, schools have the flexibility to use whatever supplier they please. However, selection of a supplier may be influenced to some extent by funding sources for online courses, a state approval process for suppliers, or the availability of a state virtual school or other intermediate suppliers. Schools and districts are increasingly developing their own online courses, as well as amassing the technology infrastructure to deliver them, but outside of larger school districts, most rely on suppliers for the majority of their online courses and support services.

FIGURE 15
Online learning products and services supply chain



Vendors and intermediates work together in many ways. Intermediates may license vendor products and services and, in turn, use those online courses, instruction and technology to package a full services offering to schools. Vendor courses can often be customized and enhanced by intermediate suppliers. For example, Florida Virtual School, the country’s largest state virtual school, partners with Pearson’s Connections Academy to provide full-time online options for students in Florida. Some state virtual schools supply select courses to virtual charter schools.

A rapidly expanding number of digital learning suppliers is chasing the hot digital learning products growth curve. The different shapes and forms of suppliers are as varied as the enormous range of products and services they provide. The good news is that there is very little a school needs that isn’t available from one, and usually several suppliers. The bad news is, that it is becoming harder and harder for schools to sort out and make sense of the huge fabric of offerings. The role of intermediates as well as state agency involvement helps to organize and provide order for schools.

Intermediates

Most intermediates focus on supplying online learning and related services to schools within their states, or a major region with the state. Intermediates may be state virtual schools, regional service agencies, or a consortium of schools or districts. It varies by state, but most often one type of intermediate is dominant. A state virtual school is often the dominant intermediate provider, as in Florida, North Carolina and Michigan. Or it might be regional education agencies or Boards of Cooperative Education Services (BOCES), like Indiana and New York. Intermediates are usually public education entities or closely controlled nonprofits, directly related to the state education or other governmental agency. Historically, intermediates were some of the earliest suppliers of online options to schools, from state virtual schools like Florida Virtual School (1997), or a member-based consortium like The Virtual High School (1996).

Intermediates provide comprehensive services to deliver a fully supported online program to schools. They:

- Maintain an operational entity with a staff engaged in the integration of online learning products and services which they, in turn, deliver to schools on a turnkey basis,
- Coordinate with schools (usually through site coordinators in each school) to directly enroll students and monitor course activity,
- Employ and train highly qualified online teachers, usually state certified,
- Provide technology necessary to deliver online courses and perform critical administrative functions, and
- Train and work with school and district staff to manage and administer all aspects of the online learning program.

Multiple intermediates could be operating in a single state simultaneously. For example, Florida has one of the largest state virtual schools, Florida Virtual School (FLVS), as well as full-time online schools through vendor partnerships with FLVS, district programs that provide courses to other districts across the state, and consortia that provide courses to member districts. Michigan also has a large state virtual school, and schools also have access to online learning through a statewide consortium and at least one regional service agency program.

Although vendors are major suppliers of online learning to schools, intermediates play a critical role not only in delivering online courses, but addressing school needs and state requests that may be too specialized or too small a market for most vendors to support. Because intermediates have a state rather than national focus, intermediates are often called upon to meet specific needs identified by the state. For example, Virtual Arkansas, the state virtual school, responded to the governor's request to make online Computer Science available at no cost to any student in the state. Michigan Virtual School was tasked with developing and maintaining the Michigan Online Course Catalog to provide course access to supplemental online courses for students statewide.

State virtual schools

State virtual schools (SVS) are an important part of the online learning landscape, serving over 460,000 students who took more than 815,000 supplemental online courses in 24 states in SY 2014–15. As a group, they are one of the largest and most recognized intermediate suppliers to schools, delivering online courses, instruction, technology infrastructure and other online learning related services to schools and districts across the states in which they operate.

State virtual schools are operational intermediate supplier organizations that provide online learning programs to schools statewide. State virtual schools were created by legislation or by state level agencies, usually funded in part or entirely by a state appropriation or grant. State virtual schools are not actually “schools” in the traditional sense. They supply online courses and related services to schools. With the exception of state virtual schools in states with course access policies, students are usually enrolled with district approval. Even then the school or district plays an integral role in counseling and enrolling students in the state virtual school.

State virtual schools can be administered by a state education agency but can also be separate nonprofit organizations, charter schools, higher education institutions and even regional service agencies contracted by the state education agency to operate the state virtual school.

Georgia Virtual School, VirtualSC, Virtual Virginia and other state virtual schools are part of their state departments of education. Examples of different types of organizational structure include:

- Idaho Digital Learning is not part of the state department of education, but rather a separate governmental entity created by legislation with a Board of Directors responsible for oversight.
- Montana Digital Academy and Alaska Learning Network are both administered by the state university systems.
- Michigan Virtual School receives legislative funding, but is a separate nonprofit organization with a Board of Directors providing oversight.
- Illinois Virtual School is administered through the Peoria County Regional Office of Education, which was awarded the Illinois State Board of Education (ISBE) contract to manage and operate the state virtual school.
- New Hampshire’s state virtual school, Virtual Learning Academy Charter School, was created through charter school rules.

State virtual school courses and services are provided to schools at no cost, or for nominal fees to help cover costs. State virtual schools sometimes receive federal or private foundation grants.

State virtual schools have similar characteristics; they provide teacher-led online courses, have dedicated staff, enroll students, hire and train teachers, and maintain technology infrastructure to deliver and support online courses. They may also create their own online course content, license content from vendors, use open educational resources, or combine content from various sources.

TABLE 10

State virtual schools

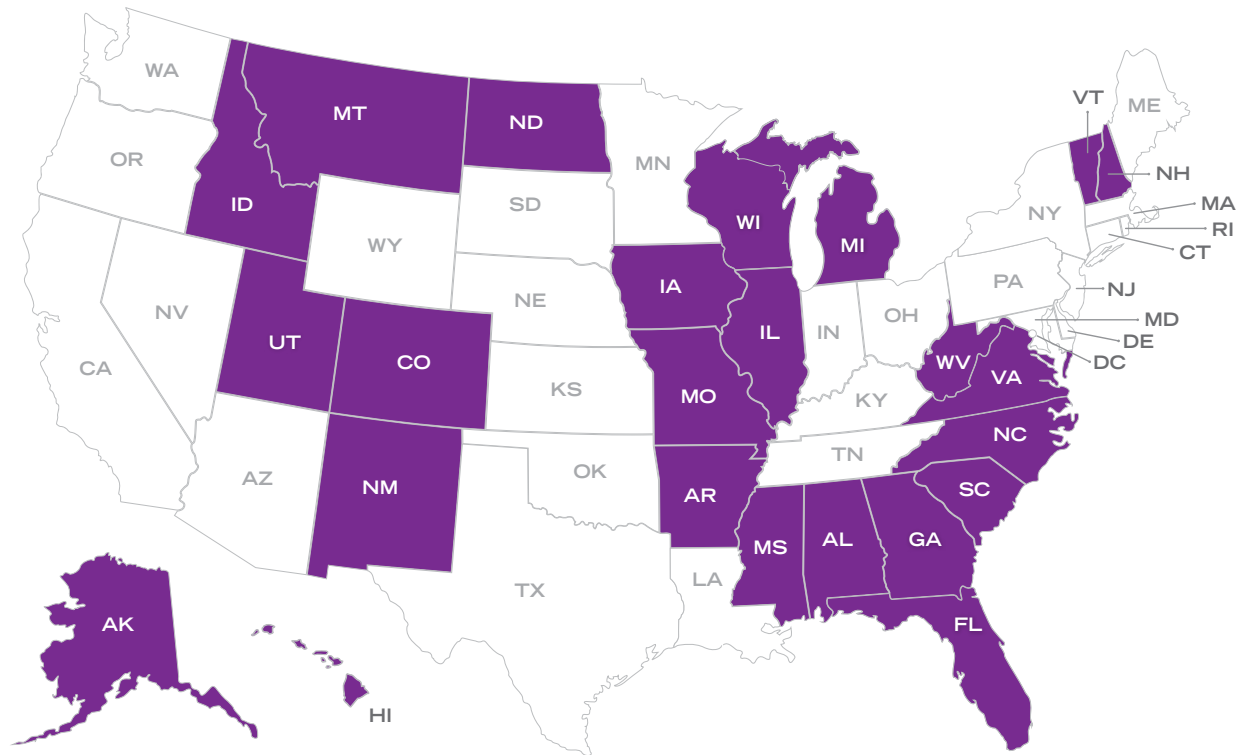
State	Main office city	State virtual school	Year opened	Staff FT/PT	Operating budget \$(000)	Grades served	No. of schools served
Alabama	Montgomery	ACCESS Alabama	2004	41	18,800	7–12	403
Alaska	Juneau	Alaska Learning Network	2011	4	625	9–12	76
Arkansas	Plumerville	Virtual Arkansas	2013	10	4,254	K–12	258
Colorado	Monument	Colorado Online Learning	2002	4	867	6–12	73
Florida	Orlando	Florida Virtual School	1997	447	177,745	K–12	2,650
Georgia	Atlanta	Georgia Virtual School	2005	39	3,200	6–12	595
Hawaii	Honolulu	Hawaii Virtual Learning Network	2007			7–12	
Idaho	Boise	Idaho Digital Learning Academy	2001	67	8,167	5–12	285
Illinois	Edwards	Illinois Virtual School	2003	8	2,065	5–12	230
Iowa	Des Moines	Iowa Learning Online	2004	8	1,250	9–12	166
Michigan	Lansing	Michigan Virtual School	2001	59	8,400	6–12	512
Mississippi	Jackson	Mississippi Virtual Public School	2006	24	500	9–12	132
Missouri	Jefferson City	Missouri Virtual Instructional Program	2007	6	390	K–12	
Montana	Missoula	Montana Digital Academy	2010	6	2,232	6–12	179
New Hampshire	Exeter	Virtual Learning Academy Charter School	2007	39	6,569	6–12	396
New Mexico	Santa Fe	IDEAL – New Mexico	2008	7	870	6–12	68
North Carolina	Raleigh	North Carolina Virtual Public School	2007	31	22,683	6–12	940
North Dakota	Fargo	North Dakota Center Distance Learning	1996	–	6,230	6–12	282
South Carolina	Columbia	Virtual South Carolina	2006	16	5,091	6–12	447
Utah	Salt Lake City	Utah Electronic High School	2004	3	998	6–12	234
Vermont	Bennington	Vermont Virtual Learning Cooperative	2010	4	398	7–12	67
Virginia	Richmond	Virtual Virginia	2002		4,300	6–12	
West Virginia	Charleston	West Virginia Virtual School	2000	2		6–12	720
Wisconsin	Tomahawk	Wisconsin Virtual School	2000	5	1,710	6–12	239

State virtual schools by the numbers

Not long ago, state virtual schools were the largest suppliers of supplemental online courses to schools and districts. Online courses now come from various suppliers, but state virtual schools are still one of the largest providers in the states in which they operate. Their success has often been viewed in terms of the total number of online course enrollments. In this edition of *Keeping Pace* we report on state virtual school metrics that go beyond course enrollments and give a more complete picture of this key supplier.

FIGURE 16

States with state virtual schools



■ States with state virtual schools

□ States without state virtual schools

* Texas (Texas' TxVSN) and South Dakota (SD Virtual School), previously were states designated as having state virtual schools in *Keeping Pace*.

TABLE 11

State virtual schools course enrollments over the last three years

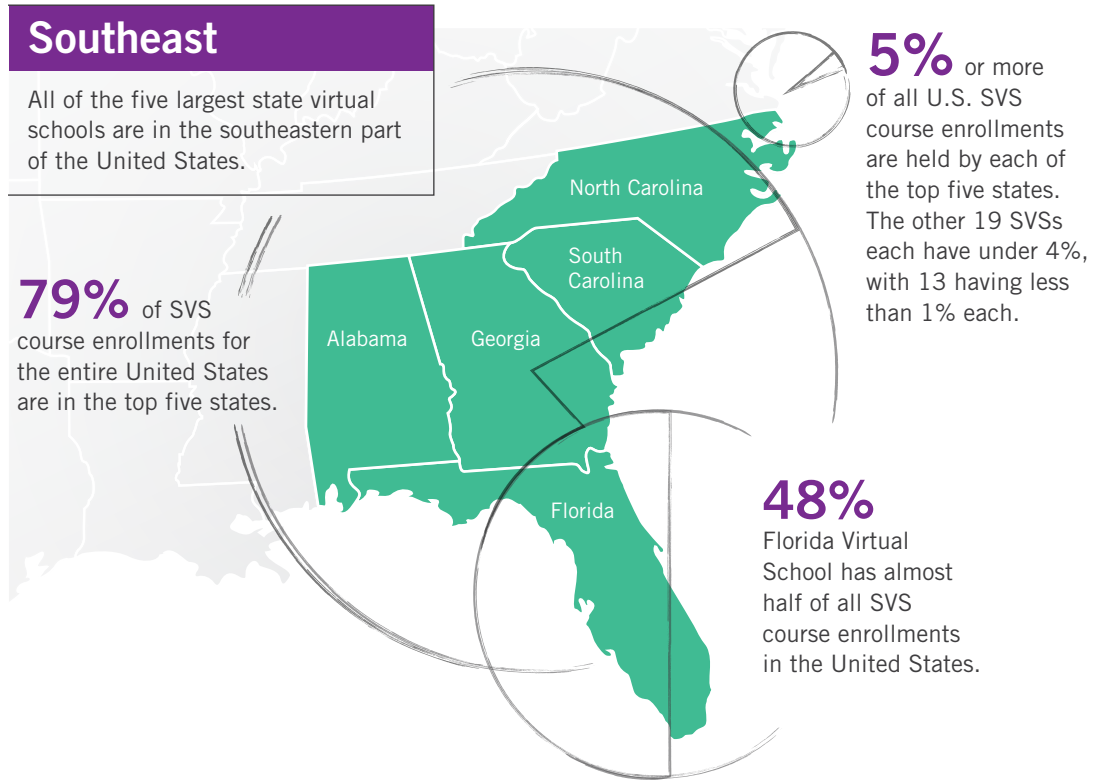
State	State virtual school	2012–2013	2013–2014	2014–2015
Alabama	ACCESS Alabama	51,910	51,809	41,578
Alaska	Alaska Learning Network	334	608	921
Arkansas	Virtual Arkansas	2,000	3,734	29,728
Colorado	Colorado Online Learning	1,007	914	705
Florida	Florida Virtual School	410,962	377,508	394,712
Georgia	Georgia Virtual School	25,877	33,041	52,290
Hawaii	Hawaii Virtual Learning Network	1,834	1,514	1,358
Idaho	Idaho Digital Learning Academy	19,036	20,820	22,954
Illinois	Illinois Virtual School	2,994	3,097	4,681
Iowa	Iowa Learning Online	1,240	1,201	1,294
Michigan	Michigan Virtual School	20,812	21,944	23,716
Mississippi	Mississippi Virtual Public School	3,121	2,360	2,262
Missouri	Missouri Virtual Instructional Program	1,623	1,992	623
Montana	Montana Digital Academy	7,993	6,785	7,111
New Hampshire	Virtual Learning Academy Charter School	17,626	22,731	22,731*
New Mexico	IDEAL – New Mexico	2,697	2,823	2,199
North Carolina	North Carolina Virtual Public School	94,716	104,799	111,634
North Dakota	North Dakota Center Distance Learning	3,200	6,100	5,414
South Carolina	Virtual South Carolina	16,818	24,491	40,363
Utah	Utah Electronic High School	10,308	4,741	6,965
Vermont	Vermont Virtual Learning Cooperative	940	2,707	1,693
Virginia	Virtual Virginia	13,026	19,433	24,611
West Virginia	West Virginia Virtual School	6,039	11,270	10,428
Wisconsin	Wisconsin Virtual School	5,036	5,357	5,511
TOTAL semester equivalent course enrollments served		721,149	731,779	815,482

* 2013–2014 number, 2014–2015 data not available at time of printing

FIGURE 17

The five largest state virtual schools

Based on semester course enrollments delivered in 2014–2015



In terms of course enrollments, most state virtual schools showed continued growth in SY 2014–15. The state virtual schools in Georgia, South Carolina, and Illinois all saw double-digit growth of over 50% in the 2014–15 SY. In Colorado, Mississippi, Hawaii and Missouri state virtual school enrollments have dropped in each of the last two years, and these all have comparatively small enrollment totals. The two largest state virtual schools saw modest growth. Florida Virtual School had a 5% increase in SY 2014–15 after its first ever decrease in the 2013–14 SY, while North Carolina Virtual Public School had a 7% increase in course enrollments.

Table 12 shows the number of students taking online courses in state virtual schools, ranging from 200,844 students in Florida Virtual School during the 2014–15 SY to as few 400-600 students in some of the smaller programs. Based on 75% of the state virtual schools studied, students each took, on the average, 1.77 online courses in the SY 2014–15.

TABLE 12

Number of students taking online courses from state virtual schools

State	Virtual School Name	Students who took courses in 2014–15 ¹	Total course enrollments	Average courses per student ⁴
Alabama	ACCESS Alabama	23,557 ²	41,578	
Alaska	Alaska Learning Network	554	921	1.66
Arkansas	Virtual Arkansas	16,843 ²	29,728	
Colorado	Colorado Online Learning	655	705	1.08
Florida	Florida Virtual School	200,844	394,712	1.97
Georgia	Georgia Virtual School	36,603	52,290	1.43
Hawaii	Hawaii Virtual Learning Network	769 ²	1,358	
Idaho	Idaho Digital Learning Academy	16,396	22,954	1.40
Illinois	Illinois Virtual School	3,145	4,681	1.49
Iowa	Iowa Learning Online	899	1,294	1.44
Michigan	Michigan Virtual School	14,381	23,716	1.65
Mississippi	Mississippi Virtual Public School	1,282 ²	2,262	
Missouri	Missouri Virtual Instructional Program	414	623	1.50
Montana	Montana Digital Academy	3,819	7,111	1.86
New Hampshire	Virtual Learning Academy Charter School	12,879 ²	22,731 ³	
New Mexico	IDEAL – New Mexico	1,667	2,199	1.32
North Carolina	North Carolina Virtual Public School	71,932	111,634	1.55
North Dakota	North Dakota Center Distance Learning	1,789	5,414	3.03
South Carolina	Virtual South Carolina	27,226	40,363	1.48
Utah	Utah Electronic High School	3,946 ²	6,965	
Vermont	Vermont Virtual Learning Cooperative	940	1,693	1.80
Virginia	Virtual Virginia	12,070	24,611	2.04
West Virginia	West Virginia Virtual School	5,908 ²	10,428	
Wisconsin	Wisconsin Virtual School	3,508	5,511	1.57
TOTALS		462,026	815,482	

¹ Number of students who took one or more online courses from a state virtual school (students are not double counted if they took more than one course)

² Exact count unavailable. Estimated number of students calculated based on weighted average of reporting SVSs (based on a sample of 86% of SVS data)

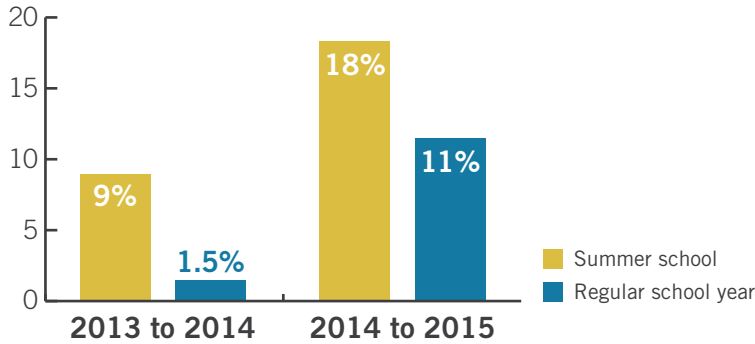
³ 2013–2014 course enrollment numbers for 2014–2015 data not available by time of printing.

⁴ Average number of semester equivalent courses taken by students across all terms, such as fall/spring semesters, summer school, and including non-standard open enrollment periods in some cases

FIGURE 18

Growth in summer school course enrollments

Year over year growth outpaces regular school year



Year-over-year growth in enrollments from the summer compared to enrollment growth of regular school year

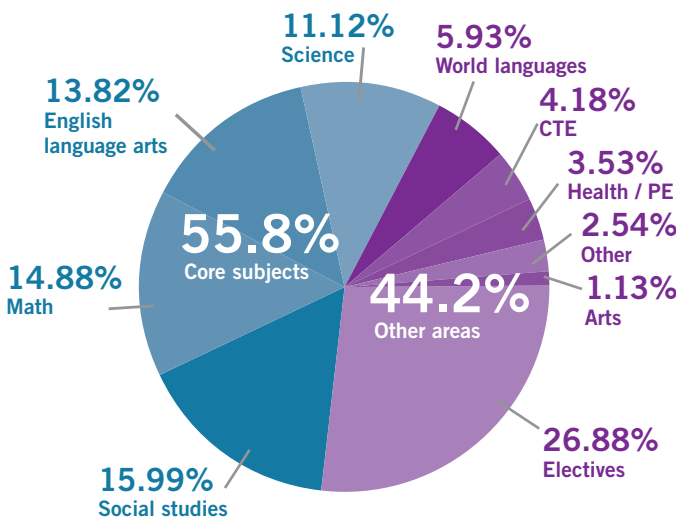
Summer of 2013 and 2014 compared to SY 2013–14 and SY 2014–15

Summer school enrollments are growing at a significantly faster rate than overall annual online learning with an 8.8% increase between summer 2013 and 2014 and even more dramatic 18.34% increase between summer 2014 and 2015. One reason for this increase is budget considerations, with local schools and districts reducing summer school options for students and relying more on online learning to address summer school needs. Online summer school courses also give students and families more schedule flexibility.

FIGURE 19

Course enrollments by subject area

State virtual schools



Nineteen of the twenty-four state virtual schools reported detailed course enrollment

Course enrollments by subject.

Collectively, the core subjects of math, science, language arts and social studies combine for about 56% of course enrollments. Electives, however, made up the largest single category, accounting for 27% of all course enrollments. Only 2.5% of enrollments were reported in categories that did not logically fit into the more standard course designations. Some virtual schools varied from the norm. Utah, for example, reported that over 75% of their enrollments were in elective courses.

FLORIDA VIRTUAL SCHOOL

Students outperform state average in end-of-course exams

Florida Virtual School (FLVS) is both the oldest statewide Internet-based high school and certainly the largest. FLVS students bested the state average in End-of-Course (EOC) exams taken by Florida students in spring of 2015. The benchmark tests measure how well students have mastered course material. As the state requires more EOC assessments, students in FLVS Part-Time and FLVS Full-Time programs continue to surpass the average set by students in traditional schools.

FLVS students performed higher than the state average on the Biology 1 EOC assessment by 4%. They also outperformed the state average by 16% on the Civics EOC assessment and 10% on the U.S. History EOC assessment. ■

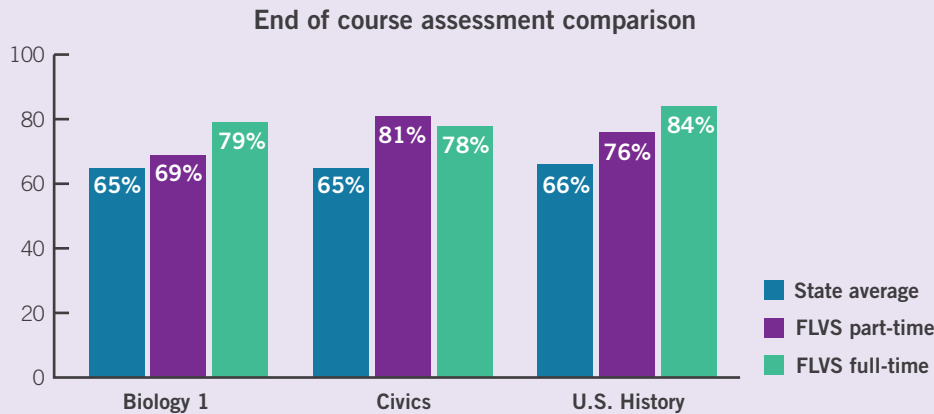


FIGURE 20

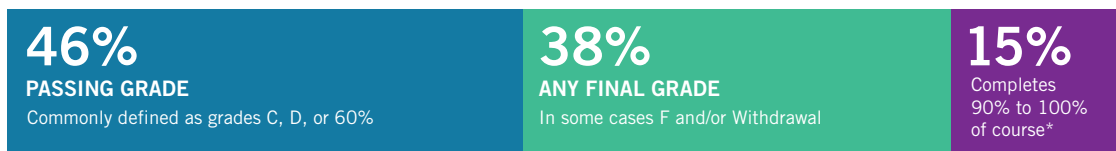
State virtual school course enrollments by grade level



Course enrollments by grade level. State virtual schools began providing supplemental courses primarily at the high school level. Serving middle school grades has been a more recent development, and as such the rate of growth in these lower grades is faster than the traditional high school segment. All but three of the 24 state virtual schools now serve grades 6-12 or 7-12 with two offering courses for grades 5-12. Among the state virtual schools reporting course enrollments by grades were some of the largest and oldest, including Florida Virtual School, North Carolina Virtual Public School, Georgia Virtual School and Idaho Digital Learning. Florida Virtual reported 7,577 enrollments in K-5, practically the entire K-5 enrollment among state virtual schools.

FIGURE 21

State virtual schools course completion criteria



*Completes 90% to 100% of the course included students that completed approximately 90% of the material but did not necessarily receive a grade, to counting a completion as long as the student was still in the course when the course was marked closed.

**Based on information from over 70% of state virtual schools

Completion rates. Most state virtual schools defined course completion based on a passing grade, most commonly defined as grades C, D, or 60% or higher. Florida Virtual School, which is funded on course completions, not enrollments, defines a completion as a student that successfully completes a virtual school course with a D or higher. Some define course completion as any final grade issued, including an F and even Withdrawal. A small percentage of state virtual schools accept a student completing 90–100% of a course as a completion and did not require that a grade to be issued. Another allows for a completion as long as the student was still in the course when the course was marked closed.

Sources of online courses. State virtual schools get their online courses from a wide range of sources. Some state virtual schools, like Missouri Online Virtual Program and West Virginia Virtual, rely largely on vendor supplied courses and services, often including vendor-provided online teachers. Others like Florida Virtual School, Alabama’s ACCESS, Idaho Digital Learning, and Georgia Virtual School largely develop their own original course content. Illinois Virtual School, Montana Digital Academy and some others combine original development with vendor courses to complete a course catalog.



NORTH CAROLINA VIRTUAL PUBLIC SCHOOL Occupational Course of Study

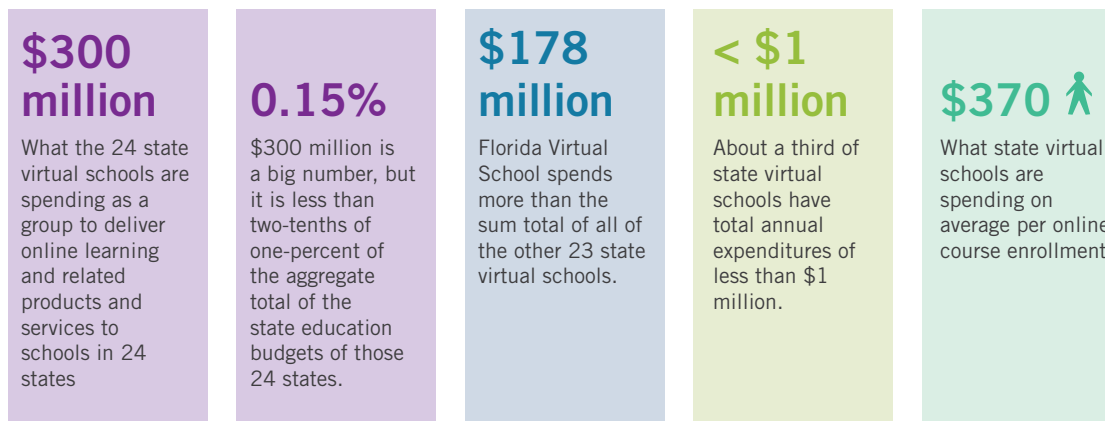
The North Carolina Virtual Public School (NCVPS) Occupational Course of Study (OCS) program is a collaborative effort between the NCVPS online teacher and the face-to-face OCS teacher on the school campus. NCVPS OCS courses require a co-teaching experience where the face-to-face teacher is driving the instructional decisions while working daily with the online teacher to best use the online content provided by NCVPS. The NCVPS online teacher helps the classroom teacher individualize and differentiate instruction for each student, while the teacher delivers real-time instruction. The classroom teacher uses the online content, her/his own resources, and collaborates with the online teacher to determine the best way to teach the content to the student. The online OCS teacher is available to the student outside of campus time if needed, although most contact is scheduled through the classroom teacher who is present during the student interaction. OCS course enrollments have grown from 1,000 during the program’s first semester (2010) to over 14,500 course enrollments by the Spring 2015. ■

What does it cost to run state virtual schools?

From the beginning state virtual schools have been primarily funded at the state level, through direct legislative action or via a major state agency like the state department of education. In many cases 100% of all funding necessary to operate and deliver courses and services is provided via state level funding. In some cases however, state funding provides for a portion of costs, and the SVS is required to recover remaining costs through course fees to schools, sometimes augmented with grants and other revenues. In a very few instances, there is no state level funding and all revenues must come from course fees, grants and other sources.

FIGURE 22

State virtual school budgets



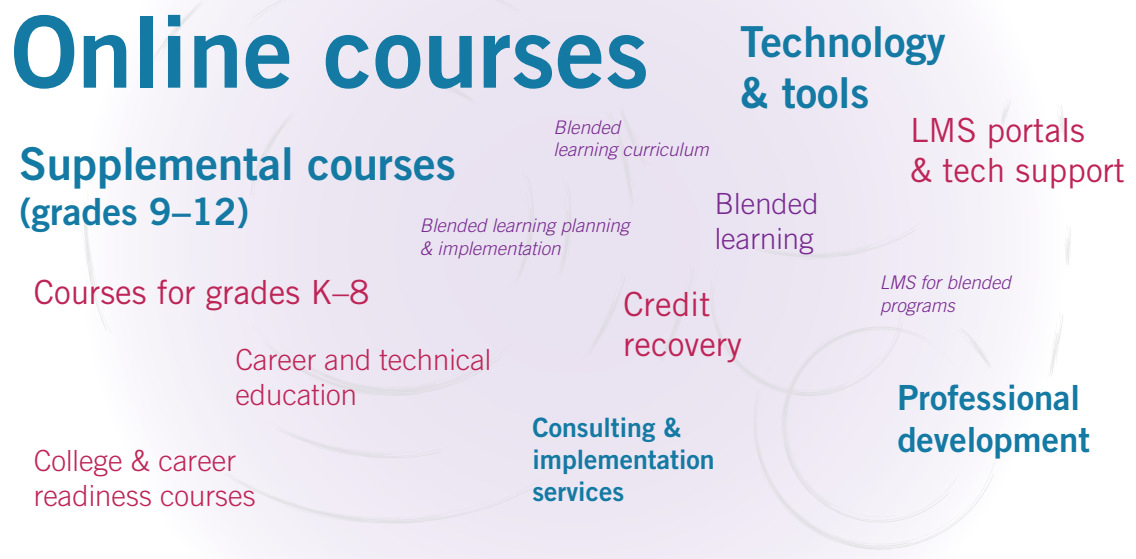
Since almost all online courses delivered by state virtual schools are teacher-led, the primary factor in determining budget requirements, and largest single portion of the budget, is teacher compensation. Virtual schools that have large numbers of enrollments typically employ full-time teachers for all or most of their teaching needs. In these cases, it is typical that teachers are paid in a similar way and on similar scales as teachers in the schools in their state. Part-time or adjunct teachers—a significant percentage of teachers for state virtual schools—are typically paid on a per enrollment basis, generally ranging from about \$140 to over \$200 per enrollment based on factors such as experience and type of course.

The evolution of state virtual school services

Since around 1997, state virtual schools have been some of the early pioneers in providing online learning options to K–12 schools to supplement a student’s learning in the traditional school setting. Over the past decade plus, state virtual schools have significantly expanded the types of services and range of products offered, while maintaining the traditional role of supplemental online course supplier. Innovative state virtual schools are now introducing and managing change in the delivery online learning services.

FIGURE 23

State virtual school programs and services



No single state virtual school offers the full array of the services depicted in figure 23, but many offer a majority of the products and services illustrated here. Supplemental online courses are still at the heart of the state virtual school mission, but many state virtual schools have evolved to provide other value-added services. They work with districts to provide access to online curriculum, technology infrastructure and teacher training to expand blended learning opportunities in the classroom. Many have expanded offerings in college and career readiness courses and tools, addressing state and local concerns over preparing students for life after high school. Although not depicted in figure 23, there are two state virtual schools—New Hampshire’s Virtual Learning Academy Charter School and Florida Virtual School—that enroll full-time online students, grant diplomas, and perform the other duties performed by traditional schools.

State virtual schools fill other value-added roles in their states. They build and maintain expertise in online learning within a state that becomes an asset to policymakers, state agencies, districts and other stakeholders. They may reduce costs by providing online services, such as statewide online and professional development to replace inefficient face-to-face meetings and reduce travel expenses.

The expansion of state virtual school services is reflected in growth and program development trends.

Blended learning services is one of the fastest growing service components of state virtual schools. State virtual schools are supporting schools by offering access to online courses, use of learning management system (LMS) access, professional development for blended learning instruction, technology support and even planning and consulting services. Approaches vary by state virtual school. Some examples include:

IDAHO DIGITAL LEARNING

Blended learning consortium

In 2009, Idaho Digital Learning (IDL) launched a statewide blended learning consortium to offer online courses and content, training, planning services, and technology to support Idaho school districts interested in implementing a blended learning approach. IDL now provides consortium members access to 28 complete online courses, more than 60 “content only” courses, and over 30 courses developed by and shared among consortium members. Members are also able to access IDL’s digital content repository of learning objects, and have access to IDL content development specialists to support the creation of original multimedia interactive learning objects. Consortium members receive nine hours of onsite professional development, online training, learning management system access, and tech support. IDL has three Blended Specialists that travel across Idaho to provide onsite teacher training and consulting services to help districts develop plans to support blended learning.

Technology support is an important aspect of the services consortium members receive. IDL has moved to Agilix’ Brainhoney for use in the consortium due to ease of use and device capabilities. Members are also able to have a school portal, developed by IDL, that provides schools with an easy way to access courses from both IDL and vendors, and integrate IDL online courses with district programs. Districts retain control over courses and programs accessed through the portal.

There are now 30 districts in the blended learning consortium, including 30 high schools, nine middle and three elementary schools. Annual member fees are determined by the number of students and the number of teachers accessing online courses through the LMS. IDL has established several indicators of success; the number of courses developed, number of teachers trained and using the IDL courses in the classroom, consortium member and enrollment growth. The consortium is working toward gathering data pertaining to student growth and motivation. ■

- Innovative Digital Education and Learning–New Mexico (IDEAL–NM) offers free access to a statewide learning management system to all public school districts and state charter schools, including 77 complete online courses. Training for administering the learning management system and teaching in a blended learning environment are also free to districts and charter schools. As of August 2015, 106 schools, districts and charter schools operate independent domains within the LMS, creating branded web portals to access all of the courses offered by IDEAL–NM at no cost. Districts can also create content for their own blended and/or online programs in the LMS. The portals had about 113,000 individual K–12 users in SY 2014–15.
- Georgia Virtual Schools (GaVS) makes more than 70 courses available to the public as open educational resources. Districts can access these courses, plus assessments, at no cost, and the Georgia Office of Technology Services hosts a customized learning management system that districts can use for a low per student fee.

- The Alabama Connecting Classrooms, Educators, and Students Statewide (ACCESS) Franchise Model is an agreement between the school districts and the Alabama State Department of Education to use select ACCESS online courses in a hosted LMS at no cost. Support includes access to teacher professional development and LMS training, a distance learning specialist, help desk support and two campus visits during the first year for consultation and recommendations.
- The Michigan Virtual School's MyBlend offers districts a combination of blended learning services; hosted online courses, teacher training for blended learning instruction, and coaching and consulting for administrators on the implementation of blended learning.
- Virtual Arkansas makes a limited number of its online courses available for schools to use in the classroom in a hosted LMS at no cost. It also has a six-person "Team Digital" field staff that consults with districts to plan and implement blended learning. Team Digital members also conduct much of the face-to-face teacher training and other campus functions for Virtual Arkansas.

College and career readiness has a renewed focus in many states. College and career readiness programs have been in place in traditional schools for many years, but now state virtual schools are taking a role in providing online courses for college-bound students and those interested in Career and Technical Education (CTE). Online college readiness tools include math remediation, ACT test preparation and college planning tools that better prepare college bound students.

Virtual Arkansas offers a significant number of online Career Technical Education (CTE) courses. CTE requires a campus-based lab with mentor/facilitator for these classes because of the hands-on requirements, and all courses must be approved by the state Department of Workforce Development. The program also offers dual or concurrent enrollment in partnership with two Arkansas state universities with about 2,200 course enrollments in SY 2014–15.

- Idaho Digital Learning's iPATH (Individualized Professional Advancement Through High School) is a statewide early college high school program that provides the coursework required to earn college credit, industry certification or an associates degree while still enrolled in high school. In combination with partner institutions and organizations, students can graduate with a high school diploma and a certification or associates degree.
- The Virtual Learning Academy Charter School in New Hampshire has a college and career readiness focus that includes annual assessment of college readiness skills. Its Learning Through College program gives students the option of completing one or more college courses, completing the first year of an associate's degree program, or completing an entire associate's degree program while in high school.

MONTANA DIGITAL ACADEMY

Leading the way to better math skills

In 2013 Montana Digital Academy launched EdReady Montana, an online college and career readiness program that assesses student skills in mathematics and provides personalized intervention assistance to students as they prepare for commonly used placement exams such as AccuPlacer, Compass, SAT, and ACT. This is a free online program for all students in Montana, from middle school to higher education, who want to brush up on their general math skills, become better prepared for college math, or practice math skills needed for their desired career path. Under the management of the MTDA, with financial support from the Dennis and Phyllis Washington Foundation, the program has grown to serve over 18,000 student accounts as of September 2015.

After an initial pilot and introduction in higher education, usage data shows a significant increase in Montana middle and high school users as well as the adult basic learning centers throughout the state. ■

EdReady MT enrollments by organization type



Supporting state online learning goals has long been a role played by state virtual schools. State-directed program development has established state virtual schools as a resource for state agencies and legislatures, as well as schools and districts. For example, as part of a statewide initiative to make computer science available in every high school, the Arkansas Governor requested that Virtual Arkansas make online Computer Science available free to all schools in the state. The ITC Idaho Technology Council awarded Idaho Digital Learning the role to develop Code.org computer coding courses for the state. Statewide online Professional Development (PD) for all teachers and administrative staff is another area where state virtual schools have been asked to create and/or manage online services that reach beyond their traditional role. Michigan Virtual University has operated the LearnPort online professional development portal since 2003. Illinois Virtual School (IVS) manages the online delivery of statewide professional development as part of its contract with the Illinois State Board of Education. IVS has hosted professional development opportunities for all educators statewide since January 2011.



MICHIGAN VIRTUAL UNIVERSITY

Building expertise to support a state's online learning goals

Michigan Virtual University is fairly unique in that it was strategically incorporated as a 501(c)(3) nonprofit corporation rather than as a Michigan school or as part of a state education agency. From its inception, its mission to change K–12 education through digital learning was viewed as most likely to be achieved by positioning it outside of the traditional system and its bureaucracies. By running the Michigan Virtual School (MVS), as well as offering online professional development for all K–12 educators, staff, and administrators in the state through Michigan LearnPort and conducting digital learning research through its Michigan Virtual Learning Research Institute, MVU/MVS has become a state-recognized expert in the K–12 online learning environment.

Having developed this expertise, MVU provides services and counsel to Michigan's educational community. For example, MVU provides supplemental online courses for K–12 students, but also provides professional development to school staff on how to provide onsite support to online students. It also provides training to expand schools' capacity to create their own online learning courses as well as how to move toward increased levels of blended learning in the classroom. In higher education, MVU works with Michigan teacher preparation programs to shape pre-service teacher coursework and field experiences so that newly-minted teachers have the skills, attitudes, and dispositions to serve within this growing field. As one final example, MVU also offers support to the Michigan Legislature, Governor's office and the Michigan Department of Education. These bodies call upon MVU to provide input on online learning policies as well as to provide annual updates as to the state of K–12 online learning in Michigan. ■

Regional service agencies

Regional service agencies play an intermediate supplier role in many states. Forty-five states have some level of education agency between the district and state level. Regional service agencies go by many names; intermediate school districts, Boards of Cooperative Educational Services (BOCES), intermediate units, educational service centers, Cooperative Education Service Agencies (CESA), county offices and others. Many offer online learning services ranging from online courses and professional development to technology tools and instructional design support.

Regional service agencies (RSA) are particularly active in online learning in states that do not have state virtual schools and where local control dominates. In New York state, for example, BOCES work closely with school districts to help deliver online courses and services. The Wayne Finger Lakes BOCES' AccelerateU provides online courses for students statewide, as well as professional development for online teachers. AccelerateU employs its own part-time online teachers, hosts its own LMS, and uses content from several vendors.

Indiana Online Academy

Indiana has several tuition and fee-based programs that offer supplemental online courses to students statewide. The Indiana Online Academy (IOA), a program of the Central Indiana Educational Service Center, is the largest online supplier in the state, delivering 18,896 course enrollments to students in 166 public, private and charter schools across Indiana from summer 2014 through spring 2015. Indiana has no state virtual school.

IOA is self-funded and receives no legislative financial support. However, Indiana public schools receive reimbursement from the state for summer school courses. IOA course enrollments jumped to 17,619 in summer 2015, from 13,852 in summer 2014. Courses cost \$275 for public school students and \$295 for private and homeschooled students. IOA contracts with 39 teachers who facilitate courses throughout the school year and 238 teachers who facilitate summer school courses.

Indiana Online Academy develops its own courses using subject matter experts and its technology staff. They have designed a three-phase course development process based on the eight standards of the Quality Matters Rubric. Once developed the courses are evaluated by area content teachers using the rubric as a guide. One of their main priorities has been to address Section 508 accessibility standards for all students. Using tools provided by its LMS supplier and other software products, they are working toward ensuring accessibility for all students. ■



The Wayne Finger Lakes BOCES is one of 29 BOCES that make up the New York Distance Learning Consortium (NYDLC). The Greater Southern Tier (GST) BOCES is another NYDLC member that provides vendor courses and online teachers to districts within the BOCES. Districts and schools can choose to use their own online teachers of record or can purchase instruction from the GST BOCES or vendor teachers.

The Capitol Region Education Council (CREC) is one of the largest of six regional service agencies in Connecticut, and provides online courses to students statewide. The online program operates solely on revenue from course fees and receives no state funding. CREC has partnered with GenNET, a consortium of districts in Michigan managed by the Genesee Intermediate School District, to provide online courses, provider vetting and student enrollment functions. The CREC also has a partnership with The Virtual High School (VHS) as the sole distributor of VHS courses in the state. There is minimal supplemental online course activity in Connecticut outside of the CREC, with most school and district activity focused on credit recovery programs.

TABLE 13

Regional service agency program example

Regional service agency programs	State	Year online started	No. of districts	Course enrollments	Notes
Indiana Online Academy	Indiana	2005	250	18,896	Statewide program with large summer school enrollments.
MySchool@Kent	Michigan	2012	20	3,000+	More than 750 grade 9–12 students, some full-time.
Capitol Region Education Council	Connecticut	1966	78	800+	Serves students statewide through strategic supplier partnerships.
Capital Area Online Learning Association	Pennsylvania	2009	92	17,193	Districts can customize courses and have flexible teacher options.
Northern Star Online	Minnesota	2003	94	4,466	Fifteen member districts and 94 districts served statewide.
The Greater Southern Tier (GST) BOCES	New York	2005	16	852	GST is one of 29 members that make up the NY Distance Learning Consortium.
Wayne Finger Lake BOCES	New York	2003	25	300	Accelerate U is a statewide program.

Northern Star Online (NSO) is a collaborative of 15 independent school districts and four regional service agencies operated by Intermediate District 287 in Minnesota. Northern Star Online supplies 50+ state-approved courses aligned to Minnesota State Standards and enrolls more than 2,000 high school students in over 4,000 courses annually. NSO provides secondary public, private, and homeschooled students using an open enrollment approach allowing students to start a course at any time.

The Capital Area Online Learning Association (CAOLA) not only works with many districts in Pennsylvania, the RSA also works with detention centers, day treatment facilities and alternative and special education programs to help students who are struggling continue their education.

Each district has the opportunity to create and/or customize their own courses using CAOLA vendor content. Member districts also have the choice to use their own teachers for the online courses or vendor teachers, and some use a combination of both.

Instead of directly providing online learning services, some regional service agencies provide coordination and administrative services for schools and districts, assisting in online program planning and advising, contacting and vetting providers, and negotiating agreements for online courses, services and technology.

KENT INTERMEDIATE SCHOOL DISTRICT

MySchool@Kent

MySchool@Kent is part of the Kent Intermediate School District (ISD) in the Grand Rapids area of Michigan that supports 55,000 secondary students in 20 schools districts.

MySchool@Kent is a hybrid online model that serves both original credit and credit recovery students supported by both a highly qualified online instructor and a highly qualified teacher in a face-to-face setting. Students meet with onsite teachers at least twice a week. Original credit students are largely served at the campus of the county regional service agency where students have access to a variety of other career opportunities including diverse programs such as robotics, diesel mechanics and culinary arts. Most credit recovery students are served at five satellite sites that are closer to their neighborhoods and provide a different look and feel than traditional high schools. Partnerships with the local county library system, a new YMCA, a local university and local community service agencies provide the distributed locations for students and teachers to meet.

Students can enroll in an online course to supplement a campus schedule, or take all of their courses online. Full-time students remain enrolled and receive a diploma from the resident school district. This allows students to participate in all local co-curricular and extra-curricular programs in their district, and to receive support not available from the MySchool program.

Two national consulting firms helped design the MySchool program that is now staffed by a principal, four counselors, two interventionists, a teacher consultant and a social worker to support students with an active IEP. Funding for the program comes from the local districts in Kent County. Schools pay course fees on a course and day basis to ensure they are only paying for services used by each online student. Summer school operates on a similar model, but charges parents a \$120 fee per course. A scholarship fund is in place to serve as many as 20% of the summer school students. Students are free to enroll in MySchool at any time of year.

Each student is provided a laptop and a WiFi access card while enrolled in MySchool. Curriculum consists of a combination of vendor-provided core and elective courses, supplemented by locally developed content housed on a proprietary LMS created by the Kent ISD. ■

Consortia

An online learning consortium is an association of two or more schools, districts, or even regional service agencies pooling resources to expand or improve delivery of online learning options for students. It is a concept that is seeing rapid adoption across the country as districts band together to create cooperative online and digital learning programs to gain economies of scale and talent, in hopes of providing a superior program to member schools than they could accomplish individually.

They come in all shapes and sizes, with differing program models, but share the common characteristic of delivering some combination of online courses, instruction, technology tools and/or other services for the benefit of their members.

Consortia operate statewide and regionally—some even nationally. The Virtual High School (VHS), one of the largest consortia, includes members in many states and foreign countries. SUPERNet, a consortium of 17 largely rural school districts in East Texas, has a regional focus. Other consortia have members statewide and some consist strictly of neighboring districts. eLo (Expanding Learning Opportunities) is a partnership among three suburban Chicago school districts, just entering its second full year of operation. Consortia can be large, with annual course enrollments over 20,000, or as small as several hundred course enrollments, and vary in terms of the scope of what they supply their members.

TABLE 14

Online and digital learning consortia examples

Consortia	State	Year formed	Reach	No. of members	Course enrollments	Notes
The Virtual High School	Massachusetts	1996	National	612	17,237	Students from non-member schools can also enroll in VHS supplemental courses.
GenNET	Michigan	1995	Statewide	400+*	18,000*	GenNET extends the Michigan Department of Education seat-time waiver to partner districts across Michigan.
SUPERNet	Texas	1996	Statewide	17	1,198	SUPERNet serves member districts, but enrolls students statewide through the Texas Virtual School Network.
Wisconsin eSchool Network	Wisconsin	2002	Members	25	17,519	Course enrollments include the eSchool's partnership with Wisconsin Virtual School.
Hampton Roads Educational Communications (WHRO Education)	Virginia	1984	Members	19	NA	Focuses on course development for members; licenses courses to other VA districts.
Indiana Virtual Academy	Indiana	2002	Statewide	5**	3,901	Five partnership schools enroll students statewide from 75 schools.
Expanding Learning Opportunities (eLo)	Illinois	2013	Members	3	1,589	Over 1,000 of the enrollments were in courses required for graduation; Consumer Economics and Government.

* 2013–14 SY data.



THE VIRTUAL HIGH SCHOOL

A nationwide consortium

The Virtual High School's (VHS) unique structure and approach to working with member schools is often referred to as a collaborative. For the purposes of *Keeping Pace*, this nonprofit organization is most like a consortium supplier, where members share online instruction and content. In addition, members benefit from online course development, technology, teacher professional development and other online learning services provided by VHS. Although particularly strong in the Northeast (VHS partners with nearly 200 middle and high schools in Massachusetts with over 6,800 enrollments in the state), the Virtual High School is national in scope with members in 40 states and territories and an international presence with students in 33 countries. In SY 2014–15 10,525 students took online courses from VHS, totally 17,273 course enrollments.

VHS has multiple options for school partnerships. Schools with *Teaching Memberships* designate a teacher to teach a VHS course and in return the school saves on membership fees. *Student Only Membership* schools may participate in VHS in a student “seat” model, with as few as two seats, and schools enjoy discounts based on the size of their membership. *Consortium Memberships* share seats and take advantage of a volume discount option for educational service agencies, state or district programs. Students may enroll directly with VHS at a cost of \$450 per semester course. The VHS also offers a full-time program in which students may take their entire high school curriculum online through VHS, while still remaining students within their local school district.

VHS has developed over 200 original online courses, including an innovative science course, Space Station Academy, that offers students a virtual trip to the International Space Station. Students work on real-world experiments with astronauts and receive feedback and facilitation from former space explorers. Space Station Academy combines STEM disciplines to create an engaging and interactive learning experience for middle and high school students. ■

Membership models and governance vary as widely as size and geographic reach. Some consortia limit their offerings to their members, but others extend their services to schools and districts outside the consortium. The Indiana Virtual Academy (IVA) is a consortium that was formed to provide online learning for students in the school districts in Ripley County. It discounts services for partner schools and residents of Ripley County (\$190 per course), but enrolls students across the state at a cost of \$295 per course, with around 3,500 annual course enrollments in SY 2014–15. The consortium is governed by a Board of Directors that consists of a regional career center, the director of a local community foundation, and the superintendents of the four school corporations in Ripley County. SUPERNet in Texas reaches beyond its regional membership to include some of its courses in the Texas Virtual School Network catalog that allow students from across the state to enroll in SUPERNet courses. SUPERNet develops all of its course content in-house using member district teachers. Members pay an annual fee to have access to all course offerings.

Other examples of consortia models include the following:

- GenNET Online Learning, a consortium operated by the Genesee Intermediate School District in Michigan, offers districts access to online courses through its Online Learning Portal of courses from approved online course providers. GenNET is authorized by the Michigan Department of Education to extend its seat-time waiver to partner districts across Michigan. The seat-time waiver allows a district to have the state's pupil accounting rules waived to allow eligible students to take coursework online. Any school can enroll students in up to two courses via GenNET without a seat-time waiver.
- Hampton Roads Educational Telecommunications Association is a unique district membership and online course model that began as a partnership between the Norfolk and Hampton Public Schools and WHRO public television. Over the past 10 years, it has evolved into WHRO Education that provides 23 online courses correlated to Virginia's standards to 19 member districts. The courses can be licensed by Virginia schools outside the consortium membership and imported into several different learning management systems. Once licensed, schools are free to modify the content as necessary.



WISCONSIN ESCHOOL NETWORK

A unique consortium structure and services

The Wisconsin eSchool Network (WEN) is one of the largest online learning consortium, consisting of 25 partner school districts, eight of which are among the 11 largest districts in the state. WEN had 17,519 course enrollments in SY 2014–15, plus over 5,000 supporting its partnership with the Wisconsin Virtual School. It had over 800 enrollments in Advanced Placement courses. WEN was formally established as a 501(c)(3) nonprofit organization in 2012 after years as an informal consortium of districts.

WEN has created a unique member structure. *Invested Partners* are members with a larger financial investment in the formation and operation of WEN. Invested members realize greater cost savings with access to customizable courses, and unlimited enrollment and staff support. They also receive strategic planning support and a voting seat on the Board of Directors. Invested partner status is designed for large-scale adoption of online, hybrid and blended learning. *Affiliate Partners* enjoy scalable enrollment fees and access to WEN's course catalog, professional development resources, licensed teachers, and other services. With the use of local teachers this is a financial model that provides local control, identity, and savings.

WEN provides cloud-based infrastructure for all members, including a course registration and management portal, learning management system, online content owned by WEN, licensed content from multiple vendors, infrastructure that allows partners to build local digital content, and professional learning curricula. WEN employs four full-time and 12 part-time staff that work with a board comprised of Invested Partners and other educators. WEN is a partner in the Wisconsin Digital Learning Collaborative, a collaboration with Wisconsin Virtual School and the Wisconsin Department of Public Instruction to provide a single point of access to online courses, digital learning solutions, and resources for students statewide. ■

Online learning vendors

Somewhere along the line, somebody wrote the first text book here in America. Perhaps it was the “*The New England Primer*,” written in 1690, required reading by all schools in America. At some point, this or some other textbook had to be printed in volume, and sold and distributed to schools. The education vendor was born.

We use the term vendor in *Keeping Pace* as an umbrella term to refer to a fairly wide variety and complex fabric of companies and organizations that serve the K–12 education industry, particularly as it applies to digital learning.

FIGURE 24

Major education company types



The large majority of education companies in the digital learning arena are typically identified as one of the company categories in figure 24 above. Companies do not always identify themselves as a “content provider,” for example, but more often might say they are a provider of innovative online and blended learning solutions. Other than education materials, digital content, and other instructional items that are created within schools, by their own teachers and staffs, virtually all other education technology and related content and tools come from this large cadre of companies—mostly for-profit companies, but some are nonprofit.

Education Publishers. Most companies with this moniker were long time traditional textbook and education materials publishers that have expanded into offering a wide variety of digital content, tools and related products and services. A primary motivation for these publishers to enter into the digital learning products and services arena has been to sustain and expand their companies as the demand for print instructional materials declines and the demand for digital content and tools increases—the “shift to digital” movement. The largest of these publishers have products and services in virtually every category, including in a few cases owning their own schools. Most of the notable publishers are well over 100 years old—Pearson was founded in 1844.

Content Providers. Content providers, also referred to as content developers, are in the business of creating and delivering original instructional content, like a publisher. But most companies referred to as content providers—rather than publishers—started their company from the outset to create and

deliver digital content. As such most of these companies have started within the last 20 years, with a handful (e.g. PLATO/Edmentum) having roots going back over 50 years. Some focus only on content, but many surround digital content with other products and services. Often, for example, a content provider will develop its own learning platform or adaptive learning software, in which it embeds content.

Learning Platform and LMS Companies. In the early years of online learning, the systems used were usually called course management systems. This was for good reason, because their purpose was to manage course syllabi so students could launch courses and communicate with their teachers. Not to diminish these early systems, online learning could not have flourished as it did without these early pioneers. Over time, however, most of these have evolved into learning platforms that provide a wide range of features to enhance the learning experience, and hence have become known as learning management systems—and learning platforms. A divergence in product philosophy by various vendors has taken many of these products in different directions, such as adaptive learning, data analytics, social collaboration, and still others focus on parent and mentor communication.

Student Information Systems (SIS). Student information systems companies have been the backbone of the education software industry since there were computers and software. In the early days—meaning the mid-1960s—computer and software companies created a robust business across America developing custom student information and administrative software systems for schools and universities. There were no off-the-shelf applications then—for any applications. But these early systems evolved into standard products that today are applications integrating many aspects of a school's or district's information systems environment.

Professional Development companies. The professional development (PD) industry is estimated at a current annual spend rate of around \$3.9 billion in the United States. The overwhelmingly large percentage of this number is made up of internal school, district and state agency expense in developing and/or delivering its own PD, mostly labor expense. A lesser, but significant, portion of PD is provided by companies and organizations that offer PD products and training services to schools and districts. A fair amount of professional development associated with the online and digital learning products is provided directly by the companies who make digital learning products, but a growing number of focused PD companies are filling a needed gap in digital learning, particularly in the areas of new school teaching and learning models, such as blended learning and competency-based learning.

Education Management Organizations and Charter Management Organizations. Education management organizations (EMOs), and charter management organizations (CMOs) are companies and organizations that provide “whole-school operation” services to public school agencies. There are a large number of companies and organizations in this business. Some CMOs/EMOs are divisions within larger, multi-divisional companies. They manage traditional K–12 public schools on behalf of a school district (“contract schools”) or manage charter schools as the charter holder (“charter schools”) or under contract with the charter holder (“contract charters”). We include them in this group of organizations because a very significant portion of the full-time online learning activity is in charter schools, particularly those managed by CMOs. Many notable EMOs and CMOs are for-profit companies; most, however, are nonprofits. In an effort to keep state and local control, nonprofit CMOs are increasingly being created at the local level.

Idaho Gem Innovation Schools CMO



Beginning in March 2015, the J.A. and Kathryn Albertson Family is providing a four-year, multi-million dollar grant to Gem Innovation Schools, a new CMO that will operate Gem Prep Schools.

Four schools will operate under the new CMO Gem Innovation Schools: Idaho Distance Education Academy’s (I-DEA) virtual school and three bricks and mortar, blended learning Gem Prep schools. The CMO will provide management services, curriculum, leadership training to the schools, as well as business operations. By sharing administrative services, the organization can reallocate resources to directly impact student learning.

The new CMO is based on the principals of I-DEA, a highly successful, and free, virtual public charter school. Founded in 2004, I-DEA currently serves about 700 students in grades K–12. I-DEA piloted its first blended learning school, Gem Prep: Pocatello, in August 2014 with kindergarten and first grade students.

Gem Prep will blend the best of online and face-to-face learning to personalize instruction for each student. The schools in Coeur d’Alene, the Treasure Valley and Pocatello will serve as many as 2,500 K–12 students across the state by 2022. ■

3 mil+

The number of individual online course enrollments provided directly or indirectly by vendors in SY 2014–15 to schools directly and via intermediate delivery channels

2 mil+

The number of individual students who took online courses provided by vendors in SY 2014–15

Vendor products and services for online and digital learning

In some cases, the products and services provided by digital learning vendors may be evident based on the name or company type as shown above, but a significant number of these companies provide a more extensive array of products and services in order to provide comprehensive solutions to schools. A few of the very largest companies provide almost all of the products and services shown in figure 25. It is often true that the more comprehensive a solution is, covering a broad gamut of products and services, the easier it is for a school or district to implement and successfully operate online and digital learning programs, relieving it from the challenges of working with a larger number of vendors, and having to integrate multiple products into a unified student learning experience.

FIGURE 25
Types of vendor products and services

Instructional management & tracking

- Learning management systems (LMS)
- Learning platforms
- Adaptive learning
- Data analytics

Instructional content

- Full online & blended curricula
- Individual courses
- Lessons & exercises
- Assessments

Services

- Professional development
- Online course teachers
- Customization
- Implementation

Tools to manage student data & admin

- Student information system (SIS)
- Classroom management
- Registration



How big is the education industry?

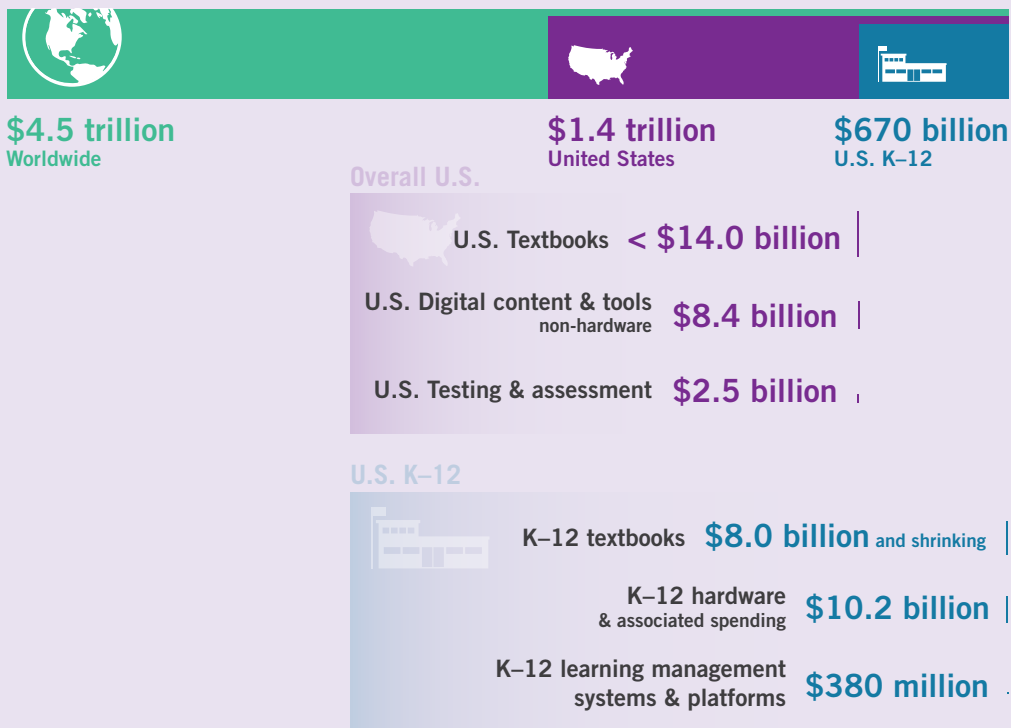
One way to understand the size of the education industry is to look at the amount of money spent or generated on an annual basis for various segments of the industry. This helps provide a perspective on just how big the education industry is and how the group of education companies serving the digital learning market fit into the overall picture.

If you add up all the annual funding and revenue going to schools, from K-12 through graduate school, plus all the revenue generated by all the for-profit and nonprofit education companies, the aggregate size of the education industry is the second largest industry on earth, second only to healthcare—also second to healthcare in the United States. So, what are the numbers? Here are some annual estimates from various sources:

Not all estimates agree on the total size of the education industry worldwide, but many estimates peg it at around \$4.5 trillion annually.

A fairly significant portion of the vendors in the online and digital learning segment fall into either the digital content or textbook segments. ■

Size of education industry



State agency oversight and support services for online learning

Government agencies in many states, but not all, play an active role in oversight and support of online learning. Roles include oversight of the supply of online learning to schools, as well as how online learning is accessed and used by schools. These state agencies often approve online courses and/or suppliers per state regulations, and/or act as a facilitator between schools and suppliers to assist students in finding and enrolling in online courses with suppliers. Many of the states with the most active oversight are those that do not have state virtual schools, Florida and Michigan being notable exceptions. This is because the state virtual schools are themselves providing administrative and regulatory leadership in their states.

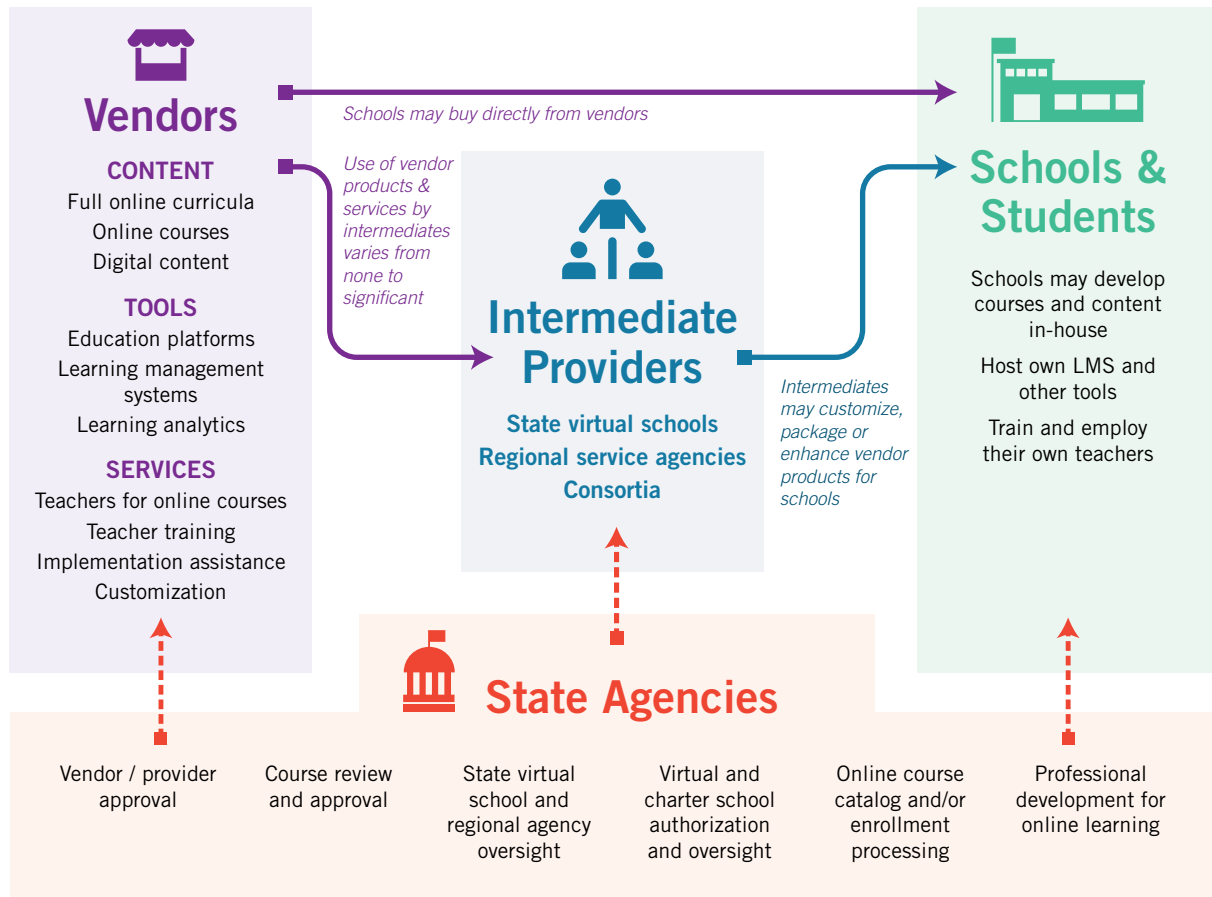
State agency involvement in online learning varies dramatically, from being actively involved in online learning to state agencies with minimal involvement. Active state agencies perform a range of functions, such as:

- Overseeing the review and approval of supplemental online courses and suppliers of online courses and full-time online school programs.
- Providing web-based catalogs where students can review and select approved online courses.
- Supporting or operating statewide professional development training programs for online learning for teachers across the state.
- Oversight of state virtual schools, virtual schools and virtual charter schools.

State agencies minimally involved, or not at all, in online learning are typically states in which school districts have a great deal of local control. In local control states online is often localized at the school, district and/or regional service agency level. Some states delegate to and rely on a state virtual school to take the lead in online learning program oversight and leadership.

FIGURE 26

State agency oversight and support



One of the major functions of actively involved state agencies is the review and approval of suppliers and/or the courses they provide. The goals of course and supplier reviews and approval include ensuring alignment with state standards, that suppliers are accredited, and that online teacher-led instruction is supplied by highly-qualified teachers certified in that state. Some state agencies require a rigorous review and approval process while others simply require suppliers to complete applications to gain approval. Approvals usually have to be renewed annually, but some as infrequently as five years.

A number of state education agencies, particularly in course access states, provide web-based catalogs or other resources where students, parents and counselors can go to review approved online courses or full-time online program providers. The process for using state agency catalogs to find, select and enroll students in online courses or full-time school is similar across states. The Texas Department of Education's TxVSN program is a good example. The process begins with the student, parent, and/or counselor browsing the TxVSN catalog to select an online course or full-time supplier. The school designated TxVSN "site coordinator" enrolls the student directly with the supplier. At the end of each semester, suppliers report student performance to the school and TxVSN. Suppliers are then paid by TxVSN for successful course completions.

State agency functions may also include oversight of a state virtual school and other virtual schools. This can include monitoring virtual school performance and enforcing enrollment caps in states that have such measures. In some cases, state agencies act as authorizers of virtual schools, although most states have multiple virtual school authorizers, including school districts and postsecondary education institutions.



MARYLAND STATE DEPARTMENT OF EDUCATION

Course review and approval process in Maryland

The State Department of Education's Virtual Learning Opportunities Program (MVLO) offers locally developed and vendor-provided online courses approved by the Maryland State Department of Education (MSDE) to all 24 local school systems. Maryland law requires the MSDE to develop standards for the evaluation and approval of online courses to ensure quality and rigor of instruction, accessibility for individuals with disabilities, and alignment with content standards.

In 2012, the MSDE released Process and Procedures for Offering Student Online Courses in Maryland Public Schools. This sets forth school system responsibilities, minimum training requirements for facilitators, an online course review process, the process for converting face-to-face courses to online courses, and MSDE/School System responsibilities in the course approval process. Online facilitators for Maryland sponsored online courses must successfully complete an MSDE-approved online three-credit course followed by a shadowing experience with a mentor facilitator.

The Code of Maryland Regulations (COMAR) defines credit-bearing online courses as those in which "80% or more of instruction is conducted online." Courses that provide less than 80% of the instruction online do not have any requirements other than those that apply to all courses in Maryland. COMAR also requires the MSDE to create online course evaluation and approval guidelines as outlined in the Process and Procedures document; it allows the MSDE to charge a vendor fee of \$1,400 per course evaluation. If an approved contractor or a school system reviews a vendor course, MSDE may charge the vendor a \$360 per course fee for the final evaluation process. MSDE's final evaluation requires that each online course comply with WCAG 2.0 Level AA standards for accessibility. ■

The following are state agency examples that illustrate some of the specifics regarding oversight and support services, with varying levels of involvement in online learning.

Texas

State-level online activity in Texas is handled through the Texas Virtual School Network (TxVSN), which provides course access options to students through two programs: a supplemental statewide course catalog of high school courses and the full-time TxVSN Online Schools (OLS) program for grades 3–12. In SY 2014–15 the TxVSN catalog served 5,697 supplemental course enrollments and the full-time TxVSN online schools served 11,713 full-time students.

Texas passed legislation effective in SY 2013–14 that gave students the option to take up to three year-long supplemental online courses through the TxVSN each year to be funded by their district or open-enrollment charter school as part of the student's normal course load; a student may enroll in additional courses but may be required to pay. A normal course load is defined as seven credit hours per instructional year. Districts and open-enrollment charter schools may deny a student's enrollment request if the district or school offers a "substantially similar" course, and have discretion to select the course provider for the course a student requests.

TxVSN course providers offer courses through the TxVSN and are responsible for instruction. Receiver districts (student's home district) participating in the TxVSN statewide course catalog approve their students' TxVSN course requests and have the ability to deny those course requests as per Texas Education Code (TEC), §26.0031, provide ongoing support to local students enrolled in TxVSN statewide catalog courses, and award credits and diplomas. Districts and open-enrollment charter schools serving as TxVSN course providers may seek a waiver from the TxVSN course review and approval process administered by the TEA, but they must certify that the district or charter has verified that each course meets 100% of all TxVSN course standards. A number of districts, including those in Houston, Katy, Plano, and Irving, have significant online programs that provide online courses for resident students. Students must be physically present at school to be eligible to generate Foundation School Program (FSP) funding.

For students in grades 9–12 enrolled in TxVSN catalog courses and the full-time TxVSN OLS program, state funding is generated when a student successfully completes a course provided through the TxVSN, which is defined as having demonstrated academic proficiency of the content for a high school course by earning a minimum passing grade of 70% or above on a 100-point scale, sufficient to earn credit for the course. A student taking one or more courses through the TxVSN catalog may count their participation in the TxVSN course toward eligibility for part-time or full-time FSP funding, presuming the student successfully completes the TxVSN course. Districts may not count more than three year-long TxVSN courses, or the equivalent, per student per school year toward FSP funding eligibility. Authorized full-time TxVSN online schools are exempt from this funding limitation. Students enrolled in a TxVSN online school are funded at one of three levels: if the student completes at least five credits, the school receives full funding; if the student completes at least three credits, the school receives partial funding; and if the student completes fewer than three credits, the school receives no funding.

Students participating in online courses or programs offered through the TxVSN are not required to be physically present at school to be eligible to generate FSP funding. For grades 3–8, students in full-time TxVSN online schools generate state FSP funding based on successful program completion and promotion to the next grade level. Students must demonstrate academic proficiency by earning a minimum passing grade of 70% or above on a 100-point scale, sufficient for promotion to the next grade level. Funding is equivalent to state funding for a student enrolled full time in a traditional classroom. If a student successfully completes their grade-level instructional program and is promoted to the next grade, the school receives full funding; if the student does not, the school receives no funding.

Florida

Florida has an active state education agency that has been responsible for implementing a long history of legislation affecting online learning. Florida was the first state in the country to legislate that all K–12 public school students have full- and part-time virtual options and that funding follows each student down to the course level.

The Florida Department of Education (FLDOE) provides technical assistance and support related to state policy and legislation for district and state virtual education options. Specifically, it is responsible for various areas of oversight and/or support services, including:

- Developed and has overseen the approval of virtual program providers for district Virtual Instruction Programs (VIP) and virtual charter schools since 2009. The FLDOE has developed a renewal process for currently approved providers beginning in SY 2015–16.
- Developed the Florida Approved Courses and Tests (FACT) initiative and established a new approval process for online course providers to expand student choice and online course options, including MOOCs, fully online courses, and blended courses. Edmentum, Inc. is the first approved course provider for SY 2015–16 for grades 6–12. Others are expected to be approved for SY 2016–17.
- Developed an online course catalog to support VIP, which launched in July 2014. The catalog includes courses offered by district virtual schools, FLVS, and providers approved by the DOE. The catalog provides a full official course description as well as a description of unique course features by the district or provider, and a method for students and teachers to provide evaluative feedback. Completion and passage rates and other features will be added to the catalog next year. As of September 2015, the catalog included over 10,000 online courses.

Additional information on Florida online course enrollments, Florida Virtual School, course access and other state policies impacting online learning appear in other sections of *Keeping Pace 2015*, and on the *Keeping Pace* website at www.kpk12.com.

Minnesota

Minnesota was among the first states to allow students to choose a single online course from among multiple providers. The Minnesota Department of Education (MDE) reviews and approves suppliers of online courses to districts and schools, and tracks enrollments for both supplemental online course enrollments and students in fully online programs.

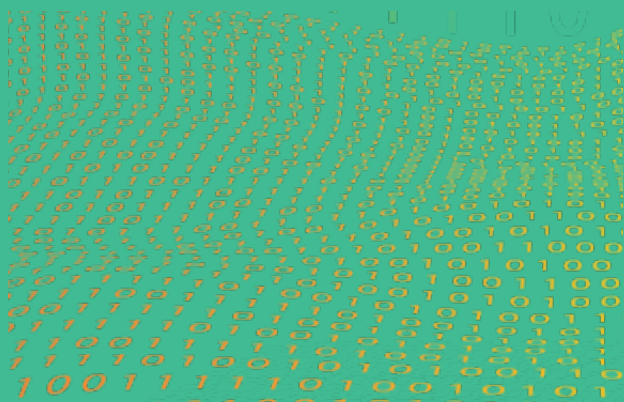
The MDE requires a comprehensive application and internal review process to approve course suppliers, to assure online provider quality and ongoing accountability, as well as eligibility for program expansion. Any school that delivered 50% or more of a student's instruction online was required to become an approved MDE provider and publish a full course listing, although district-level programs providing only supplemental courses are encouraged but not required to apply for state approval. Only approved online learning (OLL) providers generate funding. Providers submit a letter of intent, apply to the MDE, host a site visit, and must address any concerns. Approved providers participate in a three-year quality-review process that includes a reflective self-study report for renewal of MDE approval. Outcomes are posted on an ongoing basis on its website, including each provider's last / next approval year and current review status. Approved OLL providers seeking to expand their programs require one year of experience as a provider, and must outline past enrollment trends, the next year's targets, and overall growth management plans. As of September 2015 there were 32 approved online learning public school providers that represent a mix of consortia, regional service agencies, charter school programs, and district programs serving students statewide. Only approved programs are required to fill out annual reports on their program data.

State agency and local control

Although the largest state in the U.S., with over 6 million public school students, the California Department of Education (CDE) has minimal direct involvement in online learning. District and county offices lead the way in providing online course options and full-time online schools. Online learning oversight is dispersed across different offices within the CDE.

Many of the states in the Northeast U.S. support local control and state agencies play minimal roles in oversight and support of online programs. This is also true for key eastern states. New York, Connecticut, New Jersey and other states have comparatively little involvement or oversight of online learning at the state agency level, with most online courses being provided by regional service agencies and local schools and districts. The Pennsylvania state education agency tracks cyber charter school activity, but does not play a role in supplemental online learning.

4 DIGITAL LEARNING POLICY



POLICY PLAYED A MAJOR ROLE IN THE DEVELOPMENT OF K–12 ONLINE LEARNING, PARTICULARLY IN THE EARLIEST YEARS AS THE FIELD DEVELOPED IN THE LATE 1990s AND FIRST DECADE OF THE NEW MILLENNIUM. State legislatures, governors, and boards of education passed laws, enacted budgets, and created rules that supported online schools operating across entire states, funded state virtual schools, and in other ways provided for increased opportunities for students via support of online schools and courses. These changes did not occur in all states—and

significant gaps in access to online courses and schools remain—but each year saw significant activity directly related to digital learning.

Policy is still an important driver of digital learning, but it is less direct now than it was in the past for two related reasons. First, as much digital learning activity has moved from state-level entities to districts and schools, there is less need for states to make policy changes to support this activity. For example, creating a state virtual school required a new law to be passed, and funding to be allocated. In contrast, in most states no policy change is required for schools to contract with a supplier to provide online courses to their students, and the funding comes mostly from existing school budgets. Second, much of the current district-level digital learning activity is occurring within a rapidly changing policy environment with dominant issues that are only tangentially related to digital learning. These include primarily the adoption of and political battles over the Common Core standards and the Common Core-aligned national assessments (PARCC and Smarter Balanced), and changing federal

accountability standards as the Obama Administration has granted many states waivers to requirements under No Child Left Behind, and Congress is considering a new bill to reauthorize the country's main education law. For many districts, these and other broad issues dominate the policy discussion, and determine the accountability frameworks under which they operate. These issues also have substantial impacts on digital learning, in some cases bolstering digital learning and in other cases hindering it. For example, the shift to Common Core and their associated online assessments has caused many districts to increase the number of computers available to students, and to bolster bandwidth in schools. The increase in computers and Internet connectivity has paved the way for some of these districts to adopt digital content for use in classrooms. But the shift to Common Core has also dominated teacher professional development and other curriculum and instruction activities, complicating efforts to shift instruction to a digital model.

FIGURE 27

Policies that impact digital learning but are not specifically about digital learning

Policy	ESEA reauthorization	Common Core State Standards	Common Core-aligned assessments	Teaching certifications	Data privacy
	Federal policy	Policy created by states with encouragement from the U.S. Department of Education	Policy created by two consortia of states with federal funding	State policy	State and federal policy
Status as of Sept 2015	Congress considering bills, outlook for passage unclear.	42 states have adopted the standards, although some are considering changes or repeal.	Several states have pulled out of the consortium they were in. As of summer 2015 only 42% of U.S. students were in states that were part of one of the consortia (analysis by Education Week).	Most states continue to have requirements for teachers to be licensed in the state, but some are allowing for improved reciprocity and other flexibility for teachers.	182 bills have been introduced in 46 states, and 28 laws have been passed in 15 states.
Impact to digital learning	ESEA, under its current version (NCLB), sets accountability frameworks under which states measure schools, with ramifications for state assessments and other measures. Many states are operating under waivers from specific NCLB requirements granted by the U.S. DOE. Provisions being considered by Congress for inclusion in reauthorization could have major impacts on accountability, flexibility, and innovation.	Common standards facilitate development and running of online courses that are used across states. Many schools have devoted substantial professional development time to the standards, limiting time available to help teachers transition to online instruction.	Assessments used in multiple states strengthen accountability measures by allowing cross-state comp demonstrates a move back toward greater state control of accountability. In addition to state decisions about using assessments, organized efforts by parents to have their children opt out of state assessments is further reducing the move towards greater assessment, and state and federal oversight of schools.	Suppliers who offer courses and teachers across multiple states have to work with state requirements that can be very time-consuming to fulfill. This ultimately reduced online course options for students.	Although most bills do not negatively impact digital learning, some contain provisions that restrict ways in which data can be shared that are difficult to implement in an online learning environment. In addition, the heightened concern around data privacy issues is raising confusion and concern within some districts, slowing online learning adoption in some cases.

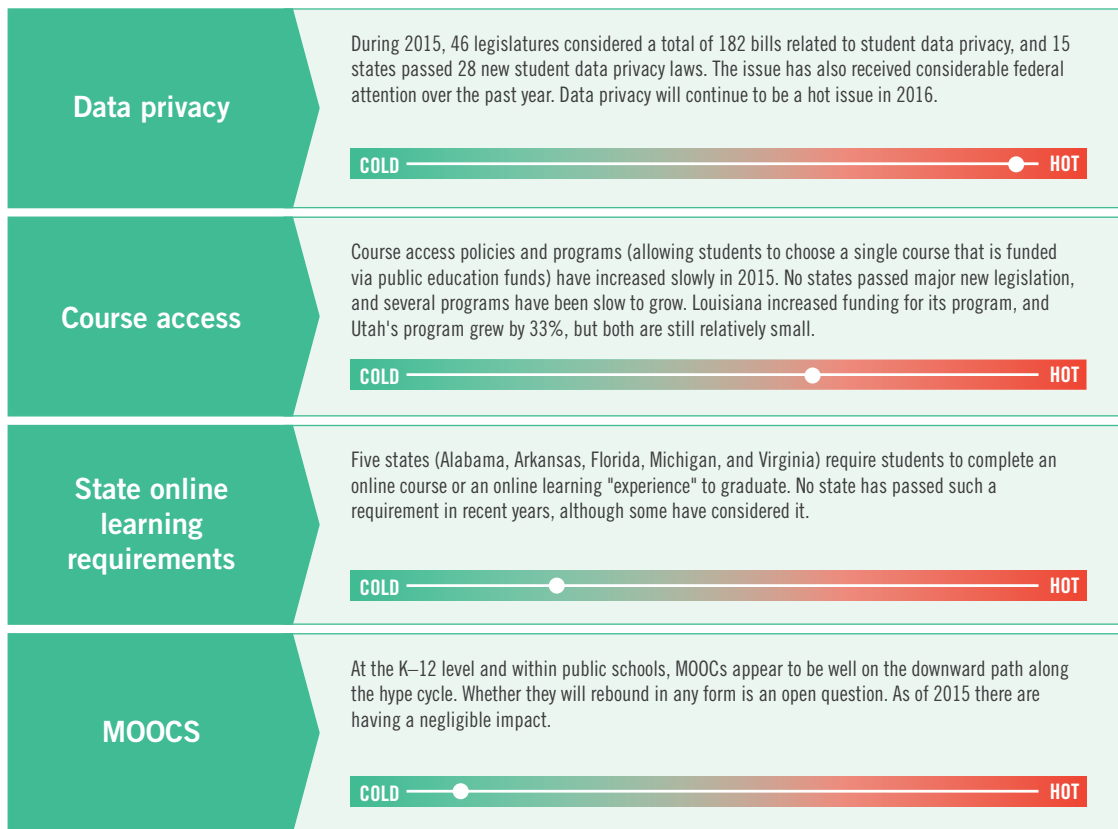
Another area in which these dynamics have played out is in accountability, which continues to be a major topic in digital learning. Several states, and many charter school authorizers, are focused on outcomes and developing appropriate accountability measures for all schools. These efforts, however, are taking place within an environment in which some states have pulled out of a national testing consortium, additional states are considering similar changes, and in many states parents are organizing movements to pull their children entirely out of state assessments. The changes that state agencies and others are trying to make relative to accountability for online schools may be overwhelmed by the shifts in accountability for all schools.

Further, to the extent that digital learning and digital learning policy are associated with education reform, the churn in education reform policies and politics may have even larger effects on digital learning. Common Core standards, Common Core-aligned assessments, testing and accountability, the growth of charter schools, and other issues associated with education reform have experienced pushback in recent years. In Washington State, for example, the single largest issue affecting education reform broadly is the court case that has found charter schools to be unconstitutional in that state. Online charter schools are not central to that case, but the finding—and how it eventually plays out—could have a large impact on the future of online learning in Washington state, even though it does not restrict district-level digital learning activity.

FIGURE 28

Digital learning policy update

What's hot and what's cold for key issues Keeping Pace has covered over recent years?



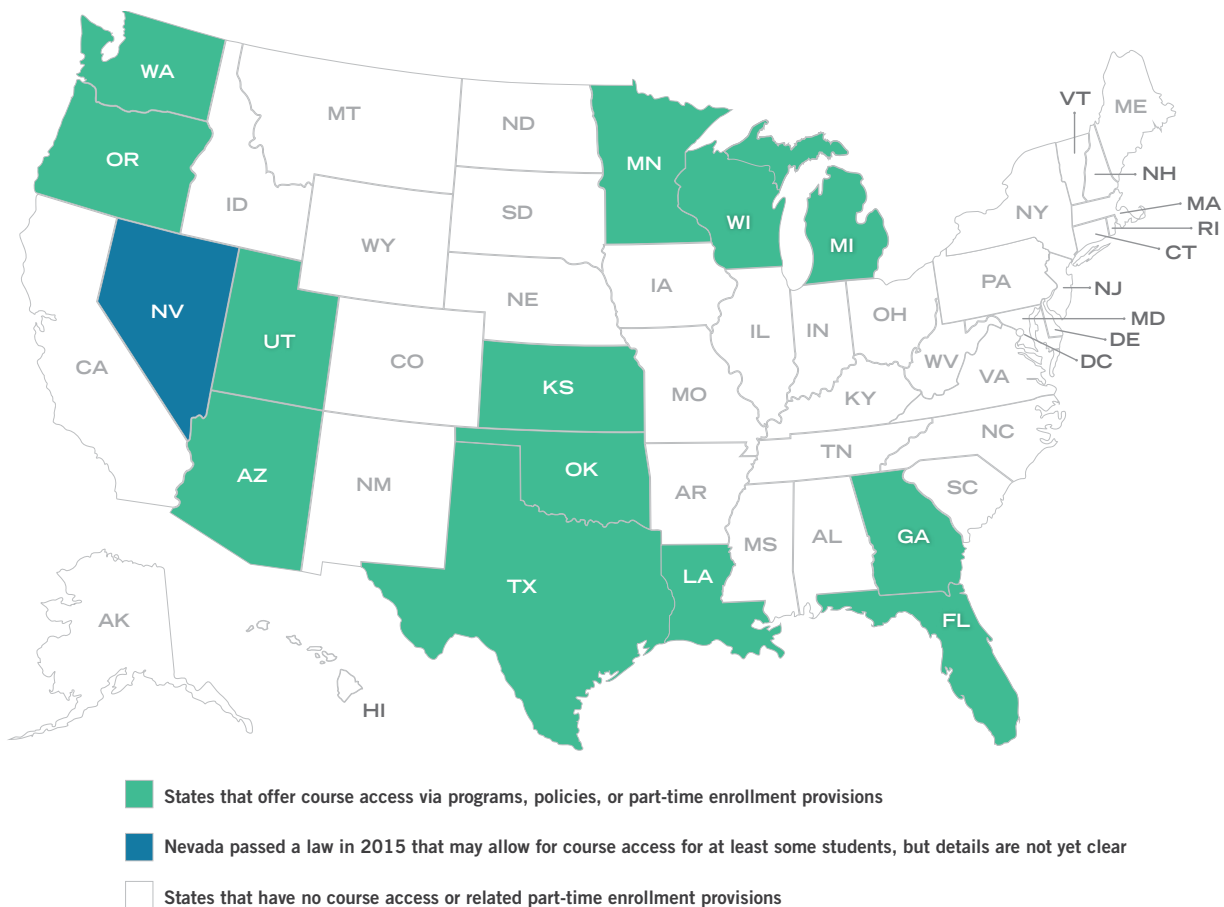
Yet, within this broader landscape many policy issues remain that help, hinder, or otherwise influence the growth of digital learning. This section explores several issues that are occurring across multiple states, with examples from specific states. It also includes some examples of policy changes that are particularly important even though they apply in only one or a very small number of states.

Course access

Course access programs and policies (sometimes called course choice), which allow students to take one or more online courses from a provider other than the student's district of enrollment and have their funding flow to the provider, continue to receive significant attention from advocates and in the media. Although no new states passed significant course access laws in 2015, and most existing programs remain small, *Keeping Pace* now includes Oregon and Washington among the states that allow course access through part-time enrollment provisions. In addition, we are watching developments in Nevada, where the new Education Savings Account law that passed in 2015—but for which final regulations have not yet been developed and interpreted—may allow for course access as well.

FIGURE 29

States with course access programs and policies



The current status of course access in a subset of states includes:

- Michigan:** Students in grades 6–12 can take up to two funded online courses per academic term selected from a statewide, curated catalog of courses. Students choose from Michigan Virtual School (the state virtual school) or from courses offered by districts, intermediate school districts, and community colleges (new this year). The legislation outlines seven reasons districts can deny student enrollment requests. Online providers set the price for an individual course, however, districts do not have to pay more than 6.67% of the state minimum foundation allowance. Unlike a previous provision in which 20% of the cost of enrollment was contingent on successful completion, this year the cost ceiling was lowered and the full cost of the course must be paid regardless of completion.
- Louisiana:** The course access program, the Supplemental Course Academy (SCA), replaced the Louisiana Virtual School that was defunded at the end of SY 2012–13. The SCA is also referred to as Course Choice. The Louisiana Supreme Court found the original Course Choice funding model unconstitutional after initial enrollments had begun in SY 2012–13. To keep the program operational during its first year, the Department of Education reallocated \$2 million in one-time funding for the SY 2013–14 pilot program. SCA / Course Choice funding is now a component of Louisiana’s public education funding, which is called the Minimum Foundation Program (MFP). All districts and charter schools receive a dedicated SCA funding stream equal to \$26 per student in grades 7–12 (about \$7.5 million in SY 2014–15), in addition to the regular public education funding formula. These funds must be spent on tuition for course offerings from state-approved course providers. In 2015 the Louisiana legislature approved an additional one-time SCA allocation of \$9 per student in grades 7–12—an increase of 35% in the base SCA—creating over \$10 million in course access funding for the 2015–16 SY. K–12 course providers receive 50% of course fees upon enrollment and 50% upon completion, or 40% upon eventual completion if the student’s time in the course is extended. Dual enrollment/postsecondary course providers receive their entire tuition up front, but are required to issue refunds to students who withdraw from courses before stated deadlines. School districts work with students to select their online, hybrid, and face-to-face course offerings. Twenty-nine K–12 providers and 27 public postsecondary campuses offer SCA course offerings as of September 2015. All course registrations require local school counselor approval to ensure that each course is academically appropriate, and logistically feasible, and keeps the student on track for an on-time graduation.
- Arizona:** Any public district or charter school may apply to become an Arizona Online Instruction (AOI) provider, able to serve any K–12 student in the state with part-time or full-time online courses. The state authorized 34 school districts and 22 charter schools for SY 2014–15. AOI served 41,860 unique students in part- and full-time programs in SY 2013–14 (the most recent year for which data are available). The state requires receiving districts to accept credits earned at a charter school or another district, but allows the receiving district to determine how the credit will be assigned (whether the credit will count as elective or core credit). Students cannot exceed 1 FTE; funding is prorated for providers based on percentage of ADM. Online programs are funded at 85% of base funding for part-time students. There is no performance-based or completion funding. The state does not track how many of the enrollments are part-time.

- **Kansas:** Students in grades K–12 may choose part- and full-time options from state approved providers, including virtual schools, charter schools, districts and service centers; 105 providers are approved for SY 2015–2016. Districts usually make inter-district agreements for students to take supplemental online courses, although a student could choose to enroll in a virtual school for one or two courses without district permission or inter-district agreement. In SY 2013–14, 4,623 students took supplemental online classes. The funding structure for virtual students was changed for SY 2015–16. Virtual students aged 18 and under (on Sept 20) are funded based on minutes enrolled. Students in attendance for at least 360 minutes (full-time) will be funded at \$5,000. Students in attendance for less than 360 minutes (part-time) will be funded at a pro-rated amount of \$4,045. Virtual students age 19 and over (on Sept 20) will be funded based on the number of credits completed from July 1–June 30. Students will be funded at \$933 for each credit earned, up to six total credits.
- **Oklahoma:** The Supplemental Online Course Program had 7,776 course enrollments in SY 2014–15. All Oklahoma students who are enrolled in an Oklahoma public school district can take supplemental online courses from approved OSOCP providers. Districts pay the full cost of supplemental online courses up to the academic equivalent of five hours of supplemental online instruction per day. The only time a district can refuse a student is if the course requested is “substantially a repeat of a course or portion of a course that the student has successfully completed”.
- **Utah:** The Statewide Online Education Program (SOEP) is among the first and best-known course access programs in the country. The program is small, although growing, serving 4,220 course enrollments (or 8,440 quarter credits) in SY 2014–15. This was an increase of 33% over SY 2013–14. Students advance based on competency. During SY 2014–15 students in grades 9–12 could enroll in up to four credits online per year; in the 2015–16 school year this increases to five credits. SOEP opened to private and homeschooled students in SY 2013, and as of August 2015 these made up 44% of student enrollments. The state maintains a list of 11 approved district and charter providers. Any LEA—charter or district—can apply to be an online provider. Providers receive 50% of course fees after the withdrawal period, and 50% when the credit is earned on time; they may also receive a reduced final payment if the student eventually completes the course. There are different funding levels for core and elective courses ranging from \$218–\$381. By 2016-17, this program will allow students to enjoy online access to all credits necessary to meet state graduation requirements, while they remain fully enrolled in a school district or charter school that offers additional services and activities supportive of their success, including graduation, counseling, IEP management, sports, extra and co-curricular activities. This will allow students to fully customize and personalize their educational experience. Students may sample from a range of options and providers while immersed in a traditional school community in which they can access the array of services associated with their boundary school or other school of choice. In the most recent Legislative session, state public institutions of higher education (including Community Colleges and Utah Colleges of Applied Technology) were integrated as providers, with the intent that this will allow SOEP to expand CTE, Vocational and Concurrent Enrollment options. Utah’s extensive course access program is facilitated by the state’s “Student Achievement Backpack” and robust system of student identifiers.

Accountability

Public schools in the United States operate under state accountability systems that have evolved over many decades and vary by state. They are meant to measure individual school performance against criteria determined by state policymakers, and to hold each school accountable for increasing student performance. However, it has become clear that a single system does not accurately measure all schools. Among the problems is that these systems do not adequately assess schools with high rates of student mobility or a high number of students who enter as over-age or under credited. Although online schools most commonly face these issues, these concerns also have ramifications for hybrid schools (those combining online and face-to-face instruction) and many traditional physical schools as well.

FIGURE 30

Accountability efforts: a national evolution by the Education Commission of the states

State school accountability systems, and their goals have evolved over the years:

Accountability 1.0 (1900–80)	<i>Accreditation</i>	➤ Initially based on inputs such as staff degrees and numbers of library books, this version evolves in the 1980's into a focus on performance.
Accountability 2.0 (1990–2001)	<i>Standards-based Accountability</i>	➤ State lawmakers set academic standards and begin state testing, sometimes with rewards and/or sanctions. Florida launches the first state school report cards, grading from A to F.
Accountability 3.0 (2001–10)	<i>No Child Left Behind</i>	➤ Federal lawmakers mandate state testing and outline incentives and consequences with an unprecedented level of detail. Parents in some states receive report cards with two sets of ratings, state and federal.
Accountability 4.0 (2010–Present)	<i>Race to the Top</i>	➤ With the renewal of NCLB stalled in congress, President Obama entices states to implement reforms, such as linking students test scores to teacher evaluations, with Race to the Top grants.
Accountability 5.0 (2013–Present)	<i>Standards, Round 2</i>	➤ States adopting standards such as the Common Core are figuring out new assessments and tweaking accountability systems to measure and report results.

The ways in which full-time online schools are held accountable vary based on how they are overseen, and by state. Online schools fall into one of several categories, and accountability structures differ based on the categories.

- Online charter schools are overseen by charter school authorizers, which may be school districts or other entities.
- District-run online schools that are not charter schools are overseen by local education agencies.
- Schools-within-a-school are held accountable as part of the larger school in which they reside.

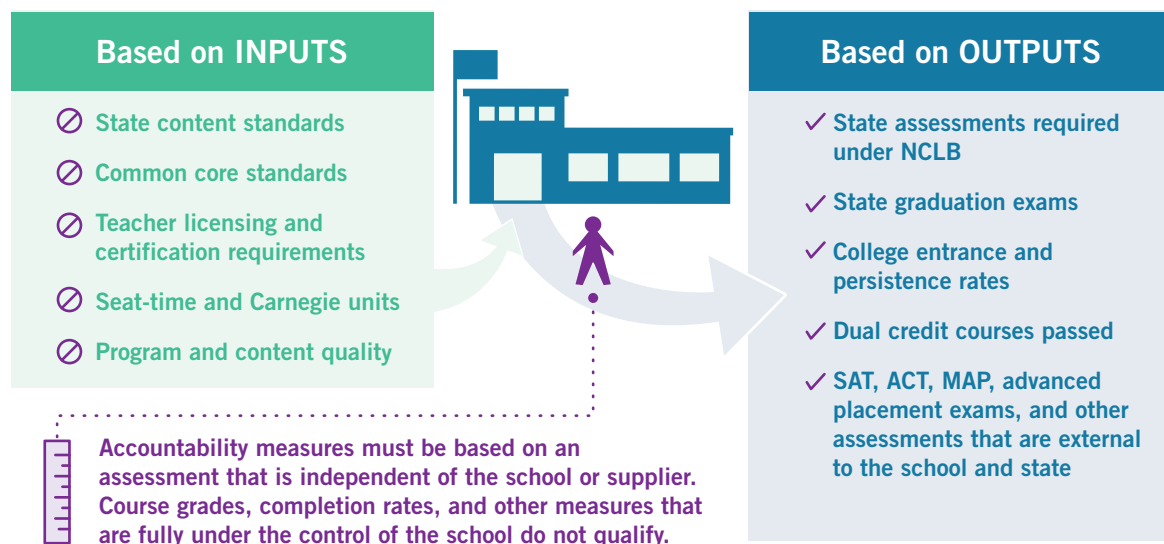
Online charter schools and district-run online schools also fall under the state accountability system and receive performance grades based on the state. Schools-within-a-school do not directly fall under the state accountability system as their results are included in the outcomes of the larger school within which they reside.

State accountability systems are meant to measure and report on how well schools are serving students, in ways that can be understood by policymakers, parents, students, and other stakeholders. These accountability systems tend not to measure schools well when certain factors are present, including when the school has a student population with a high rate of mobility, and when the school has a student population that has entered the school off track in terms of credits accumulated towards graduation. Among the shortcomings of the current graduation calculations for all schools—not just online schools—are:

- Schools receive no recognition towards graduation rate calculations for a student who is on track while at the school, but leaves prior to graduating.
- If a student starts high school elsewhere and enters the school behind on credits, the new school gets no additional recognition for helping the student catch up.
- A school's four-year graduation rate will be decreased by enrolling a student who is far behind, even if the school helps that student catch up and graduate in five or six years.

FIGURE 31

Measuring accountability



Some states are beginning to change accountability mechanisms to base them on the educational trajectory of each individual student. Arizona, for example, created a new set of accountability for its Arizona Online Instruction (AOI) schools. The changes were recommended by the Arizona Department of Education (ADE) and approved by the State Board of Education in March 2015.

The issues and changes include:

- Too many AOI schools were unrated under the former system. The ADE felt that this situation violated the intent of state education code and the conditions of the waiver the state was seeking from NCLB requirements under the federal Department of Education's flexibility rules. The changes increase the number of schools receiving a rating.
- AOI schools were required to have a 95% rate at which students participate in state testing. Despite ramifications for not reaching this level, some schools did not, and they were penalized even in situations when a student has taken the state test but is associated with a physical school. The new system counts all students as having taken the test for AOI accountability purposes even if the student took the test while associated with a physical school.
- Particular attention is on increasing the importance of student growth relative to proficiency, and also on graduation rate calculations. The ADE recognizes that virtual schools serve a mobile population with a diverse set of academic goals. The new system rewards schools for retaining under-credited students, and also rewards schools for students' growth towards graduation. It would reward schools for graduating students in five, six, and seven years.

Iowa passed a law in 2015, SF 510, that adopts a wide-ranging set of performance metrics for online schools, requires schools and the state education agency to report on them, and compels the agency to consult with iNACOL. The multiple measures include student proficiency, growth, progress towards graduation, entry and exit exams in certain subject areas, and reasons for enrolling in online schools and leaving them. Utah passed a law (SB0222S01) that directs the state board to develop a statewide digital teaching and learning program master plan that includes outcome metrics and minimum benchmarks to measure student achievement in a digital teaching and learning program.

This attention to accountability issues by a few state agencies, and also by charter school authorizers, is important to ensure that online schools operate under appropriate oversight. But as an ever-increasing portion of digital learning activity moves to traditional schools and districts, digital learning will more often be evaluated within the context of overall school accountability frameworks. This is already the case with nearly all supplemental online courses and hybrid schools, and the overarching federal framework is likely to change in the near future. ESEA may be reauthorized, and if it is not, the federal administration that follows President Obama when he leaves office in early 2017 will have to decide whether and how to continue operating federal oversight mechanisms that are now often based on waivers from the outdated previous law (NCLB).

Funding

Although funding is often perceived as an issue separate from accountability, funding and accountability are tied together in many ways. In particular, issues of student mobility are exacerbated when funding is based on a limited number of count days.

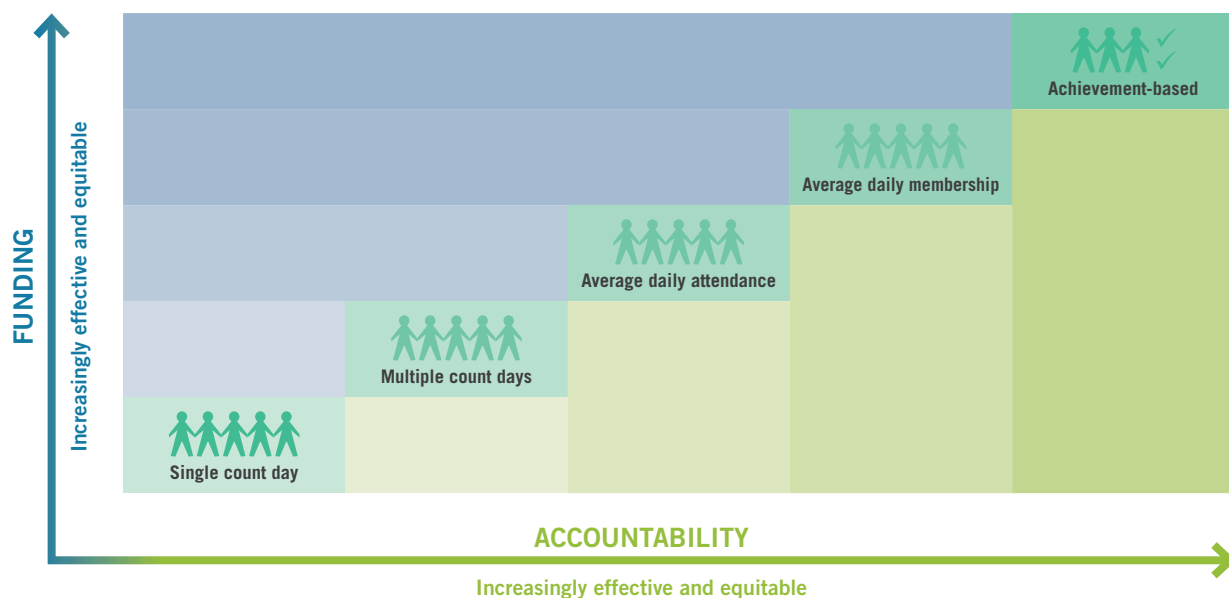
School funding methodologies vary by state. Most states broadly use one of the following funding calculation methods:

- **Single count day:** Students are counted on a single day each year.
- **Multiple count days or count period:** Students are counted on a single day or short periods during multiple times throughout the year.
- **Average daily attendance (ADA):** Students are counted based on the average actual daily attendance.
- **Average daily membership (ADM):** Students are counted based on the average actual daily enrollment.
- **Achievement-based:** Funding is based on demonstrated achievement metrics of student outcomes.

A predictable relationship exists between these funding schemes and accountability methodology. A single annual count day is the least desirable for both funding and accountability effectiveness, whereas the achievement-based model is the most effective and equitable for both funding and accountability. States would improve their funding mechanisms by moving up and to the right along the continuum, and in doing so would alleviate some of the ways in which poor funding mechanisms exacerbate student mobility issues.

FIGURE 32

Funding mechanisms influence accountability



Only a few states have achieved funding that is truly based on competency. New Hampshire's funding of the Virtual Learning Academy Charter School (VLACS) is an excellent example, because VLACS creates competencies for each course, and receives funding from the state based on students demonstrating achievement of the competencies. This is a different approach than is taken by most other states that fund based on performance, because in most cases "performance" is defined as passing a course. Only a few states, including New Hampshire (for VLACS) and Wyoming, allow funding based on a unit of learning that is smaller than a course. Having the performance funding be based on a smaller unit of learning is vital for achievement-based funding to be a viable option.

Teaching students in multiple states

Among the ways in which states attempt to ensure quality in K–12 education is by requiring that most teachers in public schools be licensed. Teacher licensing has a long history that extends over the past century. Initially schools created their own guidelines for teaching requirements, and then in the first half of the 20th century states created state-level requirements—although each state was, and remains, different. The basic requirements that teachers must meet, such as required classes or the number of hours, vary by state.

This patchwork of requirements has not been a problem for most teachers over the last century, because so few teachers taught in multiple states concurrently. Mechanisms to allow experienced teachers to gain a license in a new state (often temporarily until obtaining a permanent license) were created by many states for teachers who moved from one state to another. In addition, many states created alternative licensing mechanisms for professionals with subject-area expertise who wished to switch careers and teach in public schools.

Neither of these mechanisms is sufficient for those who are teaching online and therefore able to reach students in multiple states concurrently. These teachers, who may work for public organizations (e.g. Florida Virtual School), nonprofit organizations (e.g. The Virtual High School), or companies (e.g. Connections or Fuel Education) often must go through a laborious and time-consuming process to become licensed in each of the states in which their students reside. Although the employers may be able to assist teachers in gaining licenses in multiple states, much of the burden falls to the teachers.

Some policymakers believe that mechanisms exist for such teachers in the form of alternative teacher certifications, national certifications, or reciprocity in licensing between states. *Keeping Pace* research shows, however, that none of these is sufficient to significantly lower the barriers. Reciprocity agreements vary between states, and are often not mutual (e.g., State A accepts teachers from State B, but State B does not accept teachers from State A without additional requirements). They may also be only partial or temporary, i.e. participants may be required to complete additional coursework, assessments, or classroom experience in order to receive a full professional certificate in another state.

Alternative certification paths are also usually temporary, intended as a bridge to the regular licensing that the state requires. The national certifications such as the American Board for Certification of Teaching Success and the National Board Certification, in most cases complement and do not replace state licenses.

Policymakers who are not deeply aware of the ways in which alternative certifications and teacher reciprocity work in multiple states often believe that one or more of those options make teaching across state lines easy. But none of these approaches is in fact a viable solution

In 2015 Oklahoma enacted legislation (SB 20) that addresses this issue. The bill allows a teacher with a teaching certificate from another state to get a comparable Oklahoma teaching certificate if the individual has 5 years of successful teaching experience at an accredited school: Although it doesn't appear that the impetus was online teachers and schools—it was more likely simply meant to enable teachers to easily move from another state and teach in Oklahoma schools—the provisions appear to apply to online teachers.

Connecticut, Minnesota, Oregon, and Pennsylvania have introduced—but not passed—bills that would address teacher licensing issues. None of these is as comprehensive as the Oklahoma bill. The Connecticut and Minnesota bills apply to teachers in neighboring states only. The bills in Oregon and Pennsylvania would create or expand efforts to allow teachers to become licensed based on proficiency, which potentially (but not automatically) would be a more efficient approach than the current methods.

Data privacy

In 2015, according to the Data Quality Campaign, 15 states have passed 28 new student data privacy laws. Most other state legislatures have shown interest in the topic as well, as 46 legislatures considered a total of 182 bills. Themes related to data privacy extend well beyond online learning and into the classroom use of websites and cloud-based software.

- Ten states have passed laws related to safeguarding data collected from students based on their use of a website or application. These laws often follow elements of the Student Privacy Pledge, championed by The Software & Information Industry Association (SIIA). The pledge requires that organizations use data for authorized education purposes only, not sell student information, and not behaviorally target advertising, among other requirements.
- In addition to laws aimed at providers, other laws have given school districts new or expanded responsibilities regarding student data privacy. Nine states passed such laws in 2014, and in 2015 some of these states gave further guidance or support to help districts with these responsibilities. For example, North Dakota (via Senate Bill 2326) now requires data sharing approval by the school board and implements data governance and transparency requirements and supports including data use training. Virginia (House Bill 2350) has a new law to direct the state to develop a model data security plan for districts and to designate a chief data security officer to assist local school divisions with the development or implementation of data use and security policies.

- Many bills describe some criteria or requirements that need to be included in contracts that states or districts make with providers, but these requirements vary greatly in their level of specificity.

The bills that have been introduced vary substantially, largely because data privacy advocates have different views and goals. Some advocates are concerned about anyone collecting student information, including—perhaps especially—the government. This includes the federal government, states, and schools. These advocates are not particularly concerned about providers, but their proposals would limit data collection and usage across the board so would greatly impact digital content and tools providers. A second group of advocates is specifically concerned about private providers monetizing student data, whether by selling that data to companies that want to advertise to students, or by advertising to students themselves. They are particularly worried about companies working with schools, because the district selects the providers, and parents have little or no input in the companies that are chosen.

In addition to the activity in many states, student data privacy has received considerable federal attention in 2015, as opposed to 2014 when most of the attention and activity was at the state level. Although no new bills passed at the federal level so far this year, the topic became part of the discussion of ESEA re-authorization, other data privacy bills were introduced, and President Obama mentioned it in the State of the Union address. New bills fall into two main categories—those that create a new set of student data privacy rights/regulations outside of the Family Educational Rights and Privacy Act (FERPA), and those that amend FERPA.

Digital learning providers and advocates have been concerned about privacy issues and also about the potential of new laws to significantly hinder digital learning. With just a few exceptions such as in New York, the laws that have been passed do not appear to be particularly burdensome for providers. Still, concerns remain that existing laws may be changed, or new laws passed in 2016. Concerns are often tied to a few key issues. One is that school districts are not familiar with new data privacy requirements, and in fact may put in place requirements that go beyond those specified in the laws out of misunderstanding of those laws' mandates.

Increasing student access to online courses and schools

Students' access to online schools and courses remains linked to their state and district of residence. Although the number of places from which students have the option to take publicly funded online courses or attend public online schools continues to grow, the growth has slowed in recent years. Most existing course access programs are growing slowly, and no new states passed course access legislation in 2015 (as discussed above). Students in about 20 states are limited in their access to full-time online schools, and some states with online schools are limiting those schools' growth or hindering the ways in which they can operate. Pennsylvania, for example, in 2015 began restricting the ability of cyber charters to use learning centers, except for testing, tutoring, or special education services.

With the growth in access to statewide or state-sponsored digital learning options slowing, the availability of online courses from students' resident districts becomes increasingly important. Research from the Brookings Institute released early in 2015 sheds some light on district online course offerings. Brookings looked at the 100 largest school districts in the country, plus seven others based on their choice policies. Among other questions, the Institute evaluated the following:

- Does the district have publicly available policies allowing students to enroll in a variety of virtual courses that count towards graduation or matriculation?
- Is at least 2% of the total student population enrolled in at least one virtual course?
- Are no substantial costs borne by the student or family?

Of the 107 districts:

- 30 (28%) said yes to all three questions. In these districts, a variety of online courses are available to students, without costs borne by the student or family, and at least 2% of the students in the district are taking online courses.
- 47 (44%) said yes to two questions. Of these, all districts but one have online courses available and students do not have to pay, but the district reported less than 2% of students taking online courses.
- 19 (18%) said yes to one question. In all of these cases the responding district has online courses available, but some costs are borne by students/families. Perhaps not surprisingly, in all these districts fewer than 2% of students are taking online courses.
- 11 (10%) said no to all three questions.

These numbers suggest that nearly three-quarters of all school districts have fewer than 2% of their students taking online courses. As a point of comparison, Florida—the state with the most students taking online courses that meet the Brookings report definition—has about 10% of students taking an online course each year. As Florida is a single case, we must be cautious about ascribing too much significance to it. It provides one data point, however, that suggests that when students are given the option to take a publicly-funded online course, and are aware of the option, many more than 2% of students will take advantage of that option.

Why are the numbers so much lower in these districts than in Florida? Possible factors include the following:

- Florida has a long history of online learning, so students there are more familiar with online learning than students in most other states.
- Florida has an online learning graduation requirement, and although the requirement has only recently come into force, it has likely raised awareness of online courses.
- Perhaps students in large districts such as those in the Brookings study take online courses at lower rates than the general population of all students.
- The large districts surveyed may have courses available but not be communicating their availability, and students don't know they are an option.

It's not clear if there is an optimum percentage of students who are choosing online courses. Still, the discrepancy between the numbers in the Brookings study, and the numbers in Florida, suggest that many students still don't have access to, and knowledge of, online course opportunities.

Some states such as Florida have, in the past, created laws requiring districts to provide online learning options for their students. In some ways this is an alternative to allowing students to choose online courses or schools from outside their district. In 2015, Alabama passed S.B. 72, which requires local school boards, before the 2016–17 school year, to adopt policies that provide a virtual education option for eligible students in grades 9–12. The law specifies that a full-time student enrolled in a virtual program: (1) is counted in the average daily membership of the local school; (2) participates in state testing and accountability requirements through the local school system; and (3) upon satisfying the graduation requirements of the local board of education, will receive a diploma from the local school system. It also requires that a student enrolled in a virtual school program offered by the local school system must be treated as if attending the local school in the attendance zone in which they reside for purposes of participating in extracurricular activities.

Appendix: Methodology

Online and digital usage data and information was collected directly from state education agencies, state education statistics databases, state reports, regional education services agencies, and a sample of large and small school districts and schools.

The Evergreen Education Group research team attempts to collect statewide online learning usage data at the state agency level where possible. In many states online programs are not required to report online enrollments and associated information. Also, some states that do collect such data did not have it available in time to be analyzed and published in this report.

Data was collected directly from all 24 state virtual schools through data collection survey instruments and personal interviews with key representatives from each organization. Through surveys and personal interviews, data was also collected from several charter and virtual school management organizations

In order to show a supply-side view not available through traditional data collection techniques, interviews were held and data was collected from a variety of product and service providers, including small and large education publishers, content providers, software tools providers, and education management organizations.

Evergreen also utilized a range of secondary research from sources, including recent research from foundations, the National Center for Education Statistics (NCES), the National Alliance for Public Charter Schools, and several others.

The report primarily contains data pertaining to the 2014–15 school year, summer school 2013, 2014, and 2015. In some cases, yearly data reported were for the school, organization or company's fiscal year, which in almost all cases was from July 1, 2014 through June 30, 2015. In most cases in this report when it is written SY (school year) 2014–15, we are referring to this 12-month period, unless otherwise indicated. In some places, this report contains longitudinal data for two or three years to show key trends.

Any errors or omissions, however, are fully the responsibility of the Evergreen Education Group.

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