

Key issues in online learning

Online learning is increasingly accepted as not only a viable option for students, but as a key element of education innovation and reform. For many people, however, questions remain about what types of online programs exist, how many students are taking online courses, and how quality is assured. This section addresses a series of questions with information that draws upon published reports but relies heavily on *Keeping Pace* research and data, which are provided in the program and state profiles sections that follow.

Different types of online programs have different characteristics and attributes that define the ways that students learn

In order to understand the different types of online courses and programs, one must first understand the attributes that define online learning. A set of the defining dimensions of online programs, represented in Figure 4, describes whether the program is supplemental or full-time; the breadth of its geographic reach; the organizational type and operational control; and location and type of instruction. Some of these attributes may be combined or operate along a continuum (e.g., location and type of instruction).

THE DEFINING DIMENSIONS OF ONLINE PROGRAMS

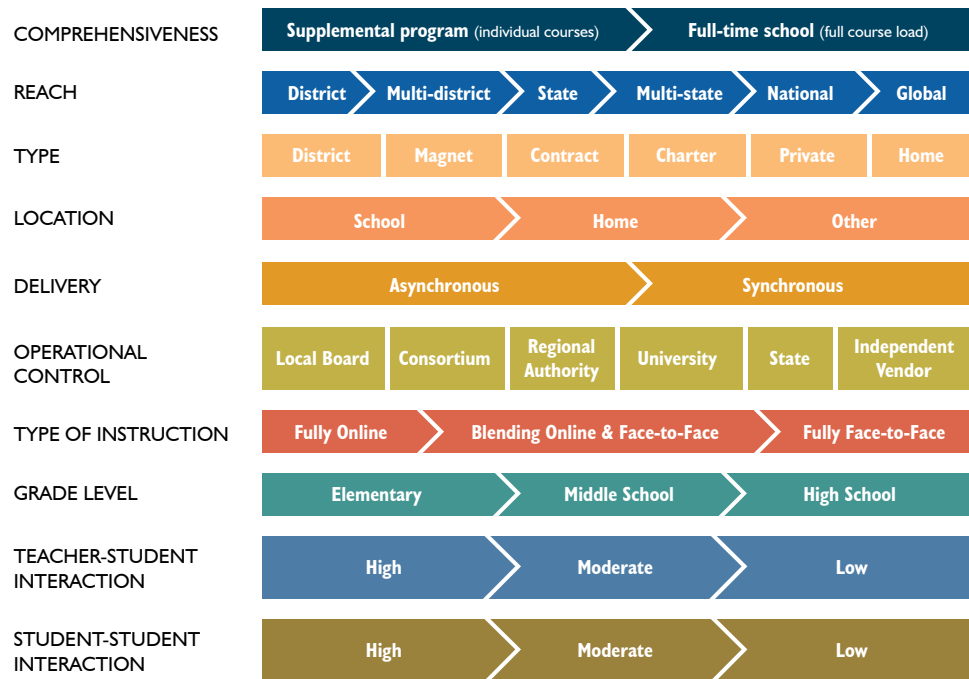


Figure 4: Defining dimensions of online programs. Figure adapted from Gregg Vanourek, *A Primer on Virtual Charter Schools: Mapping the Electronic Frontier, Issue Brief for National Association of Charter School Authorizers, August 2006.*

Within this list of dimensions, the most important from a policy perspective include whether the program is full-time (in which students take all of their courses from the online school) or supplemental (in which students are enrolled in another school and take a course or two from the online provider). This distinction has innumerable ramifications for policy (e.g., the way in which the program is funded). For online learning practitioners, the most important may be the level of teacher-student interaction.

The myriad online program attributes can be combined into a few major categories of online schools

Keeping Pace places online programs into the following categories: state virtual schools; multi-district full-time schools; single-district programs; consortium programs; and programs run by post-secondary institutions (Table 2). Note that these categories share some common attributes, but the programs within each category are not exactly the same. For example, most state virtual schools are supplemental, but a few have full-time students. Also, note that the categories are not based on a single defining dimension; instead, each has one or two dominant dimensions that define the category.

| Category | Organization type/ governance | Full-time/ supplemental | Funding source | Geographic reach | Examples |
|----------------------|-------------------------------|-------------------------|-------------------------------------|------------------|--|
| State virtual school | State education agency | Supplemental | State appropriation, course fees | Statewide | Florida Virtual School, Michigan Virtual School, Idaho Digital Learning Academy |
| Multi-district | Charter | Full-time | Public education funding formula | Statewide | Oregon Connections Academy, Insight School of Washington, Georgia Virtual Academy, Minnesota Virtual High School |
| Single-district | District | Either or both | District funds | Single-district | Riverside (CA), Broward (FL), Plano (TX), Los Angeles |
| Consortium | Variable | Supplemental | Course fees, consortium member fees | Statewide | Virtual High School, Wisconsin eSchool Network |
| Post-secondary | University or college | Either or both | Course fees | National | University of Nebraska Independent Study HS, Brigham Young University – Independent Study |

Table 2: Categories of online programs and their usual attributes; note that exceptions exist for each category.

- State virtual schools are authorized and funded by the state legislature, state education agency, or governor's office. They are usually supplemental and typically funded via state appropriation.
- Full-time, multi-district online schools operate in 24 states plus D.C. and are usually, although not always, charter schools (states with statewide online schools that are not charters include Washington, Oklahoma, and Colorado.) They draw students across district lines, and often across entire states. Because they are drawing students from a wide geographic area, they usually do not have a formal face-to-face component. They are funded based on the public education funding formula, which may be different for online students, or for students in charter schools, than for students in other non-charter physical schools. The funding follows the student and the online programs' overall funding is closely linked to the number of students they attract.
- Single-district programs are run by one district and primarily serve students within that district. They tend to be supplemental, although some include full-time students. They often blend online and face-to-face components in part because they are drawing students from a narrow geographic area, and in some states because funding requires that students be physically present to be counted. Although they are indirectly funded by the same method as school districts, their funding may not be directly tied to the number of students taking courses.
- Consortium online programs may be run by a group of school districts, by a non-profit organization that works with schools, or by another intermediate education agency. They are usually funded by member schools or by course fees, and are usually supplemental.
- Many post-secondary online programs are connected to independent or alternative study schools that were created by a college or university before online courses were available; therefore they date back to correspondence courses. These programs are sometimes, but not always, tied to dual-credit for students enrolled in a traditional high school.

What's in a name?

Confusion, perhaps, if the name is related to online learning. Many programs with similar names are in fact quite different from one another, and some programs of similar types have very different names.

- The terms "online learning," "virtual learning," and "elearning" are interchangeable. Similarly, other terms including cyberschools and electronic courses do not have generally understood meanings. All of these terms refer to some sort of Internet- or computer-based instruction, but two courses that are both called "online" may in fact be very different in terms of production values, level of teacher involvement, instructional technology, and other factors.
- State virtual schools often go by the naming convention of <state name> Virtual School; e.g. Michigan Virtual School, Kentucky Virtual School, and Illinois Virtual School. However, this is not always the case:
 - In some states the school that uses this naming convention is not a state virtual school; for example the New Jersey Virtual School and Minnesota Virtual High School are not state virtual schools.
 - In some cases the state virtual school uses a different naming convention; for example the Idaho Digital Learning Academy, Colorado Online Learning, and Virtual Virginia are all state virtual schools.
- Schools affiliated with K12 Inc. typically go by the name <state name> Virtual Academy; for example the Georgia Virtual Academy, Arkansas Virtual Academy, and Arizona Virtual Academy are all K12 Inc. schools. However, the Indiana Virtual Academy and the newly created Montana Virtual Academy are not affiliated with K12 Inc.
- Most Connections Academy schools are <state name> Connections Academy, and most Insight Schools have "Insight" in their names. Schools affiliated with Advanced Academics typically are named for the region or community served.

None of these naming conventions is right or wrong, or better or worse; but they sometimes create confusion among observers who believe that there's more—or less—in a name than is intended.

The exact number of students taking online courses is estimated at slightly above one million based on surveys by the Sloan Consortium; this number is consistent with *Keeping Pace* findings

The best estimates put the number of students taking online courses at slightly above one million, or roughly 2% of the overall K-12 student population. However, the number of students taking online courses is difficult to pin down for three reasons.

First, there is no agreed-upon definition of an online course. Therefore, any estimate has to define the types of courses and enrollments that are being included in the count.

Second, different types of programs count students differently. Supplemental programs typically count course enrollments (one student taking one semester-long course), while full-time schools typically count student enrollments (one student enrolled full time). Different types of programs are often reported together, leading to confusion about the metric being used. If a supplemental program reports the same number of unique students as a full-time school, the total number of online courses is much higher in the full-time school.

Third, most states are not counting or reporting online students in any formal way. There are far more states with no counting and reporting than states that have a count of online students. Within the states that do provide a count, the first challenge in this list (no commonly agreed-upon definitions) comes into play.

Given the lack of hard data based on common metrics, the best estimate available is based on a survey of school administrators nationwide. The Sloan Consortium surveyed school administrators around the country during the 2005-06 and 2007-08 school years. Based on these surveys, Sloan estimates the number of K-12 students engaged in online and blended courses in 2007-08 to be 1,030,000, an increase of 47% since 2005-06. The estimate is based on extrapolating the roughly 66,000 online students identified in the study to the overall K-12 student population.¹

The Sloan surveys are an invaluable contribution to the online learning picture, as they are the only national surveys focused exclusively on online learning that attempt to reach most school districts in the country. Their limitation is in the extrapolation that is necessary from the relatively small percent and number of districts that responded, together with a possible survey bias in that administrators who are using online courses in their district may be more inclined to respond than administrators who are not. The Sloan numbers are the best available, but they should be considered a rough estimate.

¹ K-12 Online Learning: A 2008 Follow-up of the Survey of U.S. School District Administrators; retrieved August 20, 2009. http://www.sloan-c.org/publications/survey/pdf/k-12_online_learning_2008.pdf

While the exact number of students taking online courses is unknown, it is undoubtedly increasing rapidly

Even with the lack of comprehensive online student data discussed above, we can say with near certainty that the number of students taking online courses is growing rapidly. The Sloan study referenced above suggests growth of 47% over two years. A review of states with online programs, state virtual schools, and educational management organizations suggests growth rates that are in line with the Sloan estimates. Table 3 shows the number of enrollments and growth rates of a sample of states, state virtual schools, district programs, national education management companies, and other types of programs. Each of these online providers represents a window into the activity that is occurring nationwide. The rows in the table represent different types of organizations and are meant to illustrate the breadth and growth of various program structures; they are not meant to be compared one to another.

| State/organization | Type | Full-time or supplemental | 2007-08 enrollment | 2008-09 enrollment | Annual increase |
|--------------------------------|-------|---------------------------|--------------------|--------------------|-----------------|
| Florida Virtual School | SVS | Supplemental | 120,000 | 154,125 | 25% |
| Idaho Digital Learning Academy | SVS | Supplemental | 6,619 | 9,646 | 46% |
| Alabama ACCESS | SVS | Supplemental | 18,955 | 28,014 | 48% |
| Michigan Virtual School | SVS | Supplemental | 11,000 | 16,000 | 45% |
| Minnesota | State | Both | 23,722 (06-07) | 28,332 (07-08) | 19% |
| Colorado | State | Full-time | 9,238 | 11,641 | 26% |
| Ohio | State | Full-time | 24,011 | 27,037 | 13% |
| Arizona | State | Both | 15,000 (05-06) | 23,000 (07-08) | 24% annualized |
| Connections Academy | EMO | Full-time | 13,000 | 20,000 | 54% |
| K12 Inc. | EMO | Full-time | 39,500 | 56,000 | 42% |

Table 3: Student numbers and growth rates. SVS is state virtual school; EMO is education management organization; and “State” represents total online student numbers in the state. Enrollment is given in course enrollments (one student taking one semester-long online course) for supplemental providers, and student enrollments (one student taking a full course load) for full-time providers. One full-time equivalent student takes about 10 to 12 semester courses in a year.

To be sure, some states and programs are not growing at these rates, or at all. Total enrollment in Washington State full-time online programs, for example, appears flat, and about a third of state virtual schools did not experience significant growth. On the other hand, there are new programs being created every year as well, so a significant amount of growth is from new programs, not just growth in existing programs, and some of these are in states without previous online learning activity.

State virtual schools are an important component of the online learning landscape; many, but not all, are growing

A review of state virtual schools' size and growth rates provides a snapshot of activity in one segment of online learning activity (Figure 5). Notably, the larger state virtual schools—those with more than 10,000 annual course enrollments—tend to be the ones growing the fastest. This suggests that some state virtual schools are receiving much more support (in funding and policies) than others, and that the discrepancy in size between the larger and smaller state virtual schools will increase over time.

Size of the state virtual school relates to at least two factors in addition to the level of funding: the size of the state, and how long the school has been in operation. State virtual schools from states with relatively small student populations, such as Idaho and South Dakota, have relatively high penetration rates. Idaho's Digital Learning Academy, for example, has one course enrollment for every 6.3 high school students in the state; only Alabama (one course enrollment per 5.9 students) and Florida (one per four students) are higher.² Number of years in operation is a factor as well, as Florida Virtual School has been in operation since 1997 and many other state virtual schools were started after 2000. However, while the number of years in operation and the size of the state student population are factors in the size of the state virtual school, they are much smaller factors than the level of funding available to the school in determining the school's size.

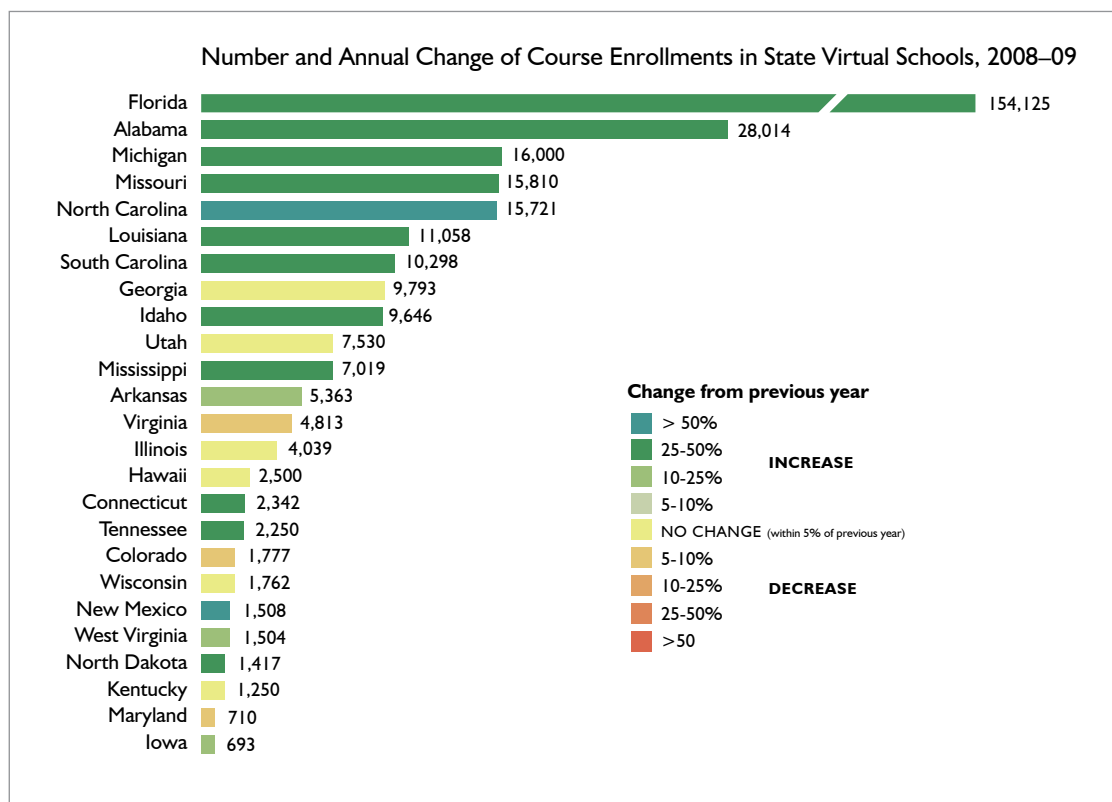


Figure 5: Size and annual percent change in number of course enrollments in state virtual schools.

² These numbers do not suggest that one in six Idaho students is taking an online course from the Idaho Digital Learning Academy, because the number of unique students is significantly lower than the number of course enrollments. Also, the calculation uses the number of high school students in the state, and some state virtual schools serve middle school students as well as high school students. For comparative purposes, however, the calculations demonstrate that the best way to evaluate size of state virtual schools may be in comparison to the state's student population.

Full-time online schools are growing and spreading into new states

About half of all states have significant full-time online schools. In 24 states these are schools that operate across multiple districts, while in a couple of states full-time online schools are limited to large districts. *Keeping Pace* estimates the number of full-time online students at about 175,000. States with the largest numbers of full-time online students include Arizona, Ohio, Minnesota, Colorado, Washington, California, and Pennsylvania.

The number of students taking online courses in a state is directly proportional to a combination of policy (whether students have the right to choose an online course) and funding (whether online programs are well-funded or funding follows students who choose online courses or schools)

The states with the most online learning activity and options are those that have funded a state virtual school well and/or have created a regulatory environment in which students are free to choose online courses and schools, and to have funding flow to the online option.

The state virtual schools that are growing rapidly are funded at a level that allows growth and/or because they have communicated the value of their offerings to school districts around their state which are then paying for online courses; or because, in the case of Florida Virtual School, students are given the option to choose online courses and are doing so. In most states there is a correlation between the growth rate of the state virtual school and the course fee that districts pay for the online course; state virtual schools with low (or no) course fees have much higher growth rates than state virtual schools with relatively high course fees paid by districts.

The flip side is that the single largest factor limiting size of individual programs that are not growing is funding. This is particularly true for state virtual schools, most of which are funded by non-sustainable sources such as state appropriations or grants (compared to education funding formulas, which are more sustainable because they are tied to public education dollars). For example, Colorado Online Learning and the Wisconsin Virtual School are among the state-led programs that have not grown in the last several years because their funding has remained at a stable level or been cut.

How is quality of online courses and schools measured?

There are two broad ways to determine quality in an online course or school; these methods mirror the ways in which quality is determined in physical schools.

The first method is through course and program *inputs*, which are made up primarily of content, teachers, and additional program elements such as student support. Up until relatively recently, standards for these elements were not specific to online learning. The only review of online content was based on state content standards, and the main metric for evaluating teaching was student-teacher ratio. In recent years, the International Association for K-12 Online Learning (iNACOL) has published standards³ for online course content, online teaching, and online

³ The iNACOL standards for content and teaching are based on standards that were previously created by the Southern Regional Education Board.

programs. These standards are specific to online programs and are far more comprehensive than the previous, limited input measures. The remaining challenge is how to create widespread usage of the online standards, and also how to create reporting so that programs' adherence to the standards can be evaluated.

The second method for determining course and program quality is via program *outcomes* including student mastery of the content, course completion and passing rates, and performance of students on state achievement tests, particularly compared to their own previous performance. This last point—comparing students against their own previous performance instead of against state averages—is particularly important because some online programs are focused on low-performing or at-risk students. Test scores for these programs will tend to be lower than state averages even if they have significantly increased achievement of students in their schools. Outcomes are based on a combination of factors including course content, quality of instruction, student support, and other variables.

Why are students choosing online courses?

In a broad sense, students are choosing online courses for the same reasons that students use iPods instead of compact disks, and watch YouTube in addition to television: these all represent more options, choices, convenience, and flexibility. According to data reported by Project Tomorrow (Figure 6), students choose online courses because they like to learn at their own pace and to take classes not offered at their local school. There are some differences between the reasons that middle school and high school students report for taking online courses. Middle school students are more likely to choose online to get extra help or because they find it easier to learn in an online class, while high school students are more likely to say that they are choosing an online course to work at their own pace.

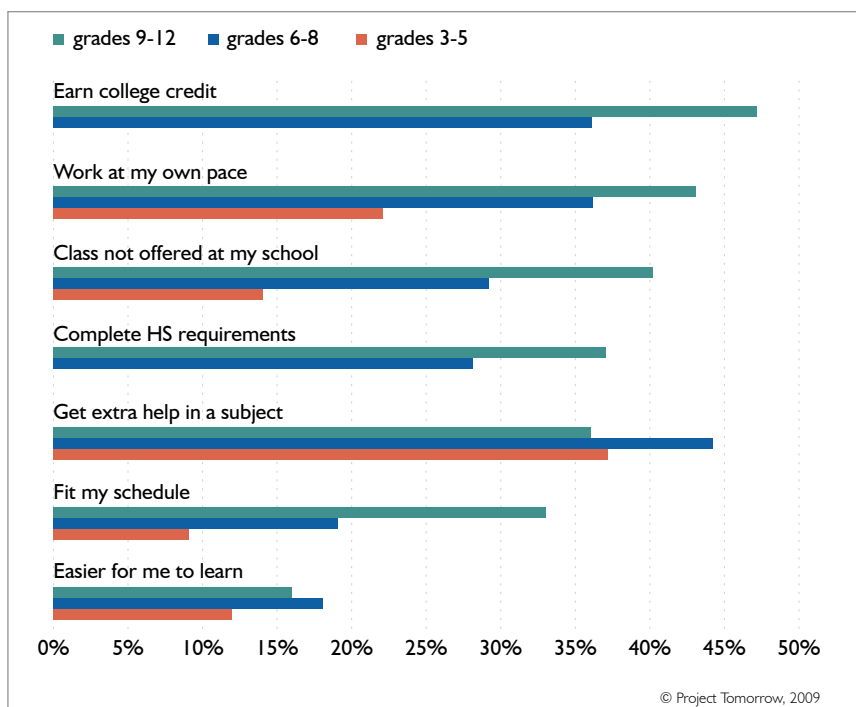


Figure 6: Students' self-reported reasons for taking online classes.⁴

⁴ Learning in the 21st Century: 2009 Trends Update; Project Tomorrow, 2009

The Project Tomorrow data are from students across the country; online programs report similar information for students taking their courses. The Virtual High School Global Consortium, for example, has been asking students why they chose an online course, and has found that the top two reasons given are because the course is not offered at the student's school, and because the student "wanted to experience an online course." At Florida Virtual School, more than a quarter of students report that they are taking their online course because they need the course to graduate on time. Full-time online schools report that their students often require the flexibility of an online environment because they work, have family care needs, or have commitments to athletics or performing arts.

District-level courses and programs are an emerging area of online education activity as districts work with, and respond to, state virtual schools and other statewide online programs

"Across the country, strong demand for online learning is pushing it from a fringe offering to a strategic imperative for districts. This is likely being driven by the growing popularity of statewide virtual charter schools, increasing acceptance of online learning for all populations of students, and its cost effectiveness during tough economic times. These factors are driving adoption and making for more educated consumers."⁵

Online learning activity data are limited for all types of online programs, but single-district programs (for students who are enrolled and have been previously enrolled in the district) are the least tracked and understood. The large number of public school districts makes it impractical to gather comprehensive data without significant effort and resources. Even for states that are gathering and reporting information about the state virtual schools or full-time online schools, in most cases the data being gathered do not extend to district-level online programs.

Despite the near absence of hard data, anecdotal and other evidence suggest that there is a tremendous amount of online learning activity at the district level, and that this activity is the dark matter of the online universe that accounts for the difference between the projections of over one million students taking online courses,⁶ and the far smaller number that can be easily identified in state virtual schools and online charter schools. Learning management systems companies such as Blackboard and Desire2Learn are selling software to school districts; content companies including Apex, Aventa, Class.com, and others are providing online courses to districts; companies such as Pearson provide both content and a learning management system (through eCollege/Project Tapestry and Fronter); and open education resource organizations such as the Monterey Institute for Technology and Education are supporting districts as well.

The *Keeping Pace* program survey and our interviews with online education practitioners suggest several themes in district-level online learning activity.

First, **there is a wide spectrum of programs at the district level**, including fully online programs, blended learning, summer school programs, credit recovery, alternative high schools, programs providing AP courses and/or other electives, and ad-hoc individual courses. These types of programs are not mutually exclusive and often overlap.

⁵ Personal communication with Gregg Levin, Vice President, KC Distance Learning, July 23, 2009

⁶ For example, the most recent federal data from the 2004-2005 school year and for the broader category of distance learning, estimate 5,670 public school districts (37%) and 9,050 public schools (10%) combined for 506,950 enrollments. The Sloan Foundation estimates that 1.03 million K-12 students are taking an online course, a 47% increase from school year 2005-06. (K-12 Online Learning: A 2008 Follow-up of the Survey of U.S. School District Administrators; retrieved August 20, 2009, http://www.sloan-c.org/publications/survey/pdf/k-12_online_learning_2008.pdf).

Second, **the diversity of programs and the lack of consistent tracking of information make it impossible to indicate exactly how much activity is occurring** and how much of this activity would fit the different definitions of online learning.

Third, **credit recovery programs appear to be the area of highest growth, although they do not necessarily make up the majority of current activity.** Nearly every vendor cites credit recovery or similar programs as their biggest growth area, although data on what percentage of the total activity this represents are not available.

There appear to be two paths by which districts enter into offering online or blended courses to students. In states with a significant number of full-time online schools and, to a lesser extent, large state virtual schools, districts often feel the need to offer their own online courses. In some states such as Michigan, much of the district-level online learning activity is via the state virtual school. In other states with a state virtual school, however, districts are choosing to offer their own online courses and programs. In states with full-time online schools, administrators are concerned that they are losing students to the online schools, and are developing online courses to retain students in their district. Regardless of the catalyst in these cases, the result is that the district moves quickly to offer online courses to resident students.

A second common path for districts developing online courses is first providing online professional development for their teachers, before offering online courses to students. In these cases, districts recognize the value of online professional development in time and cost savings. Once teachers and administrators become more comfortable with online learning, these same schools expand to providing online courses for their students. The research from Project Tomorrow supports this notion that schools are focusing on credit recovery and professional development, stating, “our schools are limiting online classes to remediation and credit recovery for students, and primarily focusing their online learning initiatives towards professional development for teachers.”⁷

With both pathways, existing online programs often play a key role, either in spurring activity in response to competition, or in creating partnerships and opportunities for districts. Districts in states with multi-district full-time schools are concerned about losing their students and the associated funding and thus are creating their own online programs. In some cases, these district programs are being created to retain their own students; in other cases they become an active competitor for students across multiple districts. Some districts partner with statewide programs to create programs to expand upon the options already available to their students. The state of Missouri is actively promoting this approach. “MoVIP [the state virtual school in Missouri] will never be able to serve the needs of all the students in the state, so we are working to equip districts to offer their own online courses.”⁸ Missouri has purchased a state license to utilize content from the National Repository for Online Content (NROC) and is also part of a ten-state Ready To Teach grant that provides professional development opportunities for teachers on how to teach and develop online courses.⁹

Funding is often raised as a significant policy issue by districts developing online programs, especially in states that require a student to be physically at a school in order to be counted towards general state aid. However, states are beginning to take some action to address this issue.

⁷ Project Tomorrow press release; retrieved July 29, 2009, http://www.tomorrow.org/speakup/learning21Report_2009_Update.html. The full report is available at: http://www.blackboard.com/resources/k12/Bb_K12_09_TrendsUpdate.pdf

⁸ Personal communication with Curt Fuchs, Coordinator of Educational Support Services, Missouri Department of Elementary and Secondary Education, July 20, 2009

⁹ The other states are Kentucky, Alabama, Delaware, Maryland, South Carolina, Mississippi, New Hampshire, Pennsylvania, and West Virginia.

Missouri (SB291¹⁰) and Illinois (HB2448¹¹) passed legislation in 2009 that provide some allowances for schools to count students taking online courses from a location other than school.

- In Missouri, the new legislation allows school districts to obtain state funding “for resident students who are enrolled in the school district and who are taking a virtual course or full-time virtual program offered by the school district.” Upon completion of the virtual course, the school district is able to claim 94% “of the hours of attendance possible for such class delivered in the non-virtual program.”¹²
- In Illinois, the new legislation allows school districts to create “remote educational programs” that meet quality control criteria specified in the legislation. Students participating in these remote educational programs qualify for state aid in the same manner as students attending traditional courses.

Florida has taken a much stronger legislative approach and starting with the 2009-10 school year, requires each district to provide a program for full-time online students in grades K-8 and full- or part-time online students in grades 9-12.¹³ The legislation indicates that a school district has three options in providing a program:

1. Contract with the Florida Virtual School or establish a franchise of the Florida Virtual School.
2. Contract with a provider approved by the Florida Department of Education.
3. Enter into an agreement with another school district that has an approved virtual program to serve its students.

Seventeen school districts had established franchises of the Florida Virtual School as of late 2009.

In Michigan, the state superintendent has allowed school districts to request a waiver from seat-time requirements in order to provide online learning offerings to their students. Schools already can have students take up to two online courses, so the seat-time waiver is only required for students that will be taking three or more online courses. The first seat-time waiver was issued to the Traverse City Public Schools beginning with the 2007-08 school year. As of August 2009, 21 seat-time waivers had been issued by the Michigan Department of Education, including one waiver to an intermediate service provider that applied to all schools in the state.¹⁴

Traverse City partnered with the Michigan Virtual School to provide the online courses as well as conducting some blended courses with their own teachers and curriculum. They are satisfied with their program but have discovered that relatively few students were interested in taking more than two online courses at a time. During the 2008-09 school year, slightly over 10% of the high school students in the district participated in their virtual program, but only 19 students (less than 1% of the total high school population) took three or more online courses during a trimester and thus required the seat-time waiver.¹⁵

¹⁰ SB291; retrieved July 22, 2009, http://www.senate.mo.gov/09info/BTS_Web/BillText.aspx?SessionType=R&BillID=683252

¹¹ HB2448; retrieved July 20, 2009, <http://www.ilga.gov/legislation/billstatus.asp?DocNum=2448&GAID=10&GA=96&DocTypeID=HB&LegID=44612&SessionID=76>

¹² State funding calculations in Missouri are based on total hours of student attendance. The average student in Missouri attends 94% of the possible hours for non-virtual courses.

¹³ Florida statute 1002.45; retrieved August 21, 2009, http://leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=Ch1002/SEC45.HTM&Title=->2009->Ch1002->Section%2045#1002.45

¹⁴ Personal communication with Dan Schultz, Senior Development and Policy Advisor, Michigan Virtual University, August 18, 2009

¹⁵ Personal communication with Charles Kolbusz, Assistant Principal West Senior High School, Traverse City Public Schools, August 20, 2009

The total amount of activity in district level programs across the country is unknown. However, *Keeping Pace* survey data and information obtained through interviews provide a snapshot of online learning activity at the district level based on reporting from individual districts as well as organizations that work with districts (Table 4).

| Program or provider | Number of schools or districts | Semester course enrollments in 2008-09 | Unique students 2008-09 |
|---|--------------------------------|--|-------------------------|
| Traverse City Public Schools | 1 district | 441 | 363 |
| Florida Virtual Franchises | 8 districts | 12,063 | 4,627 |
| Virtual High School Global Consortium | 572 schools | 11,902 | 9,368 |
| Total of district programs responding to <i>Keeping Pace</i> survey | 16 districts | 19,000 | 12,000 |
| Aventa Learning | Unknown | 55,000 | 27,000 |
| Blendedschools.net | 162 districts | 263,000 | 77,000 |
| Apex Learning | 558 districts; 2,975 schools | 711,305 | 197,590 |

Table 4: District-level online learning activity.

This limited data represents 1.07 million enrollments from approximately 330,000 students. While this data can't be used to extrapolate to the total district level activity, it is further confirmation of the significance of district level programs in the overall K-12 online learning numbers.

University-run K-12 online programs have often been overlooked but are another component of the online learning landscape. Online programs that have emerged from previous independent study programs of post-secondary institutions tend to have relatively low levels of teacher involvement.

Post-secondary institutions offer online courses for K-12 students, and similar to district programs, data for university-run programs are not widely available. Many, but not all, of these post-secondary programs consist mostly of post-secondary courses offered to advanced high school students for college credit or in dual credit programs. Often they are organized under the university as part of the continuing education division or the portion of the university that conducts outreach to the K-12 educational community. With most of these programs, the post-secondary institution issues the credit directly through the issuing of a transcript (or in some cases issuing of high school diplomas).

Many of these online programs have their roots in correspondence courses. Today these programs offer the courses online, and they often continue to offer the same paper-based versions of the courses. Examples of these programs include:

- Oklahoma University High School (started in 1910)
- Indiana University High School (started in 1925)

- University of Nebraska Independent Study High School (started in 1929)
- Brigham Young University – Independent Study
- University of Missouri High School

Perhaps because of their roots in correspondence courses, these programs tend to offer self-paced, open enrollment courses, with students having a set time to complete a course (normally between nine and 12 months). Students may complete courses at a faster pace, and usually they can obtain an extension to complete a course for an additional fee. The number of teachers per student in each course is higher than in most K-12 online programs, and the level of teacher-student communication is lower.

Fees for these courses are typically much lower than the course fees charged by other online programs that are not funded by states' education funding formulas or state appropriations; they are also lower than the costs of delivering a course for most K-12 online programs. However, the university programs often have additional fees for items such as the initial program application, textbooks, and shipping fees. For students who do not perform well at first, a per assignment/exam fee for having the item graded a second time is typical, a practice that is likely rooted in the historical foundations of a correspondence school.

Post-secondary programs that began as correspondence schools often provide a high school diploma. The University of Missouri has both a regular and college preparatory diploma program, and Indiana University has three diploma programs—general education, college preparatory, and academic honors. Brigham Young University doesn't issue high school diplomas but does have transcript programs that represent a full high school curriculum, including a standard and college preparatory transcript program. Often these diploma programs are targeted towards learners older than 18, although regular high school students are eligible for the programs. For the University of Missouri, students who are under 18 and from the United States must either have written permission from their school district to enter the diploma program or proof that the student is in compliance with his or her state's homeschool requirements.

There are some university-based K-12 online programs that are not rooted in the correspondence school tradition. One example is Stanford University's EPGY (Education Program for Gifted Youth). EPGY's courses are targeted specifically for gifted students grades 7-12, and students must complete a competitive admission process prior to beginning the program. Courses are organized by semester (including a summer term), and extensive teacher and other support is provided. The cost of the program is typical of a high-end private school with full-time students (4 or more courses) charged \$13,000 per year. EPGY also has an open enrollment program but it requires the student's local school district to participate in the program as much of the support services are provided by the local school. Courses in the open enrollment program are limited to elementary and middle school math courses (through pre-algebra) and language art courses. Other universities with K-12 online programs for advanced students include Northwestern University and Oklahoma State University, but they are intended strictly as supplemental programs.

In recent years post-secondary institutions have become involved with state virtual schools. The Missouri Virtual Instruction Program is being run by an independent unit of the University of Missouri, and the newly created Montana Virtual Academy is housed within the University of Montana.

