

Greg Abbott’s Educating Texans Plan:

High-Quality Digital Learning

Technology

Recommendation: Create a technology grant program in order to expand access to technologies that are necessary to improve access to high-quality digital learning at campuses rated D or F.

Texas Virtual School Network

Recommendation: Improve student access to courses provided through the Texas Virtual School Network in order to propel Texas to the top tier among the states for digital learning.

Recommendation: Provide online tutoring services for students preparing for mandatory end-of-course exams to increase passage rates on state assessments.

Innovation Grants

Recommendation: Create “innovation grants” to encourage school districts to develop or implement blended online education models that have proven effective in the classroom.

Professional Development

Recommendation: Fund professional development for teachers at schools wishing to implement individualized, blended learning classes so that they can effectively engage students in a digital learning environment.

Greg Abbott’s Educating Texans Plan: *High-Quality Digital Learning*

Digital learning has the potential to drastically improve student outcomes by enabling schools—located anywhere in Texas—to provide their students with a wide variety of highly personalized learning tools and courses that can help students advance farther, and further, help students catch up if they have fallen behind. Digital learning will also help students learn at a pace appropriate for them, and give students greater options to choose courses and platforms that will fit best with their unique learning style.

Many students—especially those in rural areas—stand to benefit from online courses because they give students the option to take courses that are not available in the schools that students currently attend. These courses can include rigorous, college preparatory, dual enrollment, and advanced placement courses. Students may also access a broad array of foreign languages, electives, and career and industry course options. Other students—those who are at risk of dropping out—may benefit from online courses because of the scheduling flexibility these courses provide.

Digital learning can offer students the ability to work at their own pace, provide students and teachers with real-time information on student performance, and free up teachers’ time so their focus can be on meeting each student’s individual needs. Digital learning will propel a transition toward an education system based on personalized education plans that focus on the individual needs of each student rather than seat-time requirements.

Utilizing technology, students can enroll in courses and work on them via a device from any place with an Internet connection. Teachers and administrators can now incorporate more digital learning models into traditional brick-and-mortar instruction as supplemental learning tools, or students may pursue online education independently at their own pace. According to the Committee for Economic Development:

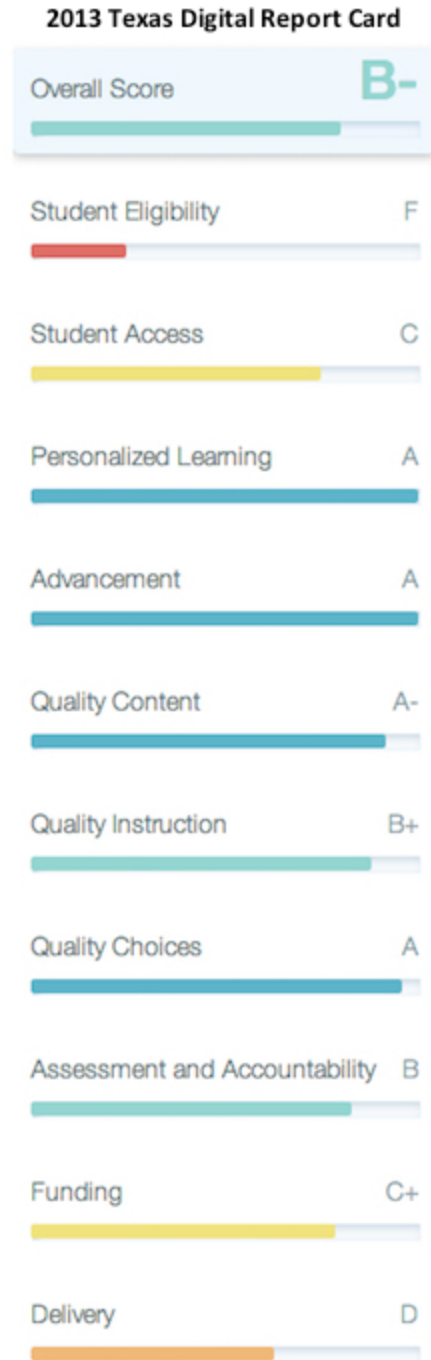
Today’s students are often called “digital-age learners”—reflecting their technological savvy and free-agent approach to learning . . . and are much more self-reliant, exercising their internet-based skills to aggregate data and information.¹

¹ Committee for Economic Development, Texas Association of School Administrators, Fort Worth Chamber of Commerce, “Digital Learning: Meeting the Challenges and Embracing the Opportunities for Teachers”.

As stated by the Public Education Visioning Institute and Texas Association of School Administrators (TASA), “[t]he virtual social-network connected and tech-savvy generation will not tolerate the one-size-fits-all mass production structures that limit learning to particular times and places and conventions.”² Learning may occur anytime, anyplace, simply with access to the Internet. The challenge for Texas is to continue to implement online and blended learning (online learning paired with traditional in-class learning) models in a transparent and accountable way (see the Digital Report Card).³ Parents must be permitted to view the online instruction and content that their children are receiving. Parental access and transparency is key to individualized online learning.

Further, online courses offered for credit in public schools must adhere to State Board of Education (SBOE) curriculum standard requirements in the same way as traditional courses.

Texas public school students deserve access to high-quality online courses anywhere and at anytime. This is a long-term objective toward which some progress has already been made. The proposals described here are intended to build on that progress and lay the foundation for continued growth of the state’s online and blended learning options.



² “Creating a New Vision for Public Education in Texas,” Public Education Visioning Institute and Texas Association of School Administrators, May 2008. <http://www.tasanet.org/cms/lib07/TX01923126/Centricity/Domain/111/workinprogress.pdf>

³ <http://reportcard.digitallearningnow.com/#grade0>

Technology

Digital learning goes beyond delivering high-quality content and instruction. It familiarizes students with computers, tablets, and other devices that are essential components of the modern workplace. This type of exposure can help ensure that students are well prepared for jobs in all sectors of the economy. Almost every part of Texas' economy relies on technology in one form or another: from the energy sector to manufacturing, from retail to engineering, from farms to factories, technology plays a central role.

Development of the Eagle Ford Shale utilizes technologies that were not conceivable just a decade ago. A San Antonio-based company, for example, has "created software that lets customers track wells, pipelines and other oil field equipment by smart phones, iPads and computers, as well as control oil and gas production remotely."⁴ These developments illustrate that jobs traditionally viewed as "high-tech" are not the only ones that require technical skills. Being comfortable using technology in the workplace is a precondition for jobs in almost any sector of the economy. A recent news article underscores this point:

Even while operating at full bore, Athena Manufacturing in North Austin is quiet and pristine, defying the traditional crash-and-bang stereotype of metal machining and fabrication. It is what much of Austin's manufacturing looks and sounds like today. Advanced machinery producing precision products. A computer monitor at virtually every workstation. And a workforce with an increasingly advanced set of technical skills.⁵

Toyota's manufacturing facility in San Antonio has a similar need for skilled workers according to the vehicle manufacturer's Director of Government Relations, Mario Lozoya, who stresses that "[t]oday's advanced manufacturing requires that a skilled tradesperson knows multiple skills in this space."⁶ Despite this reliance on technology, it is well documented that both Texas and the nation are facing a shortage of students and workers in the STEM fields (science, technology, engineering, and mathematics). Regarding the availability of skilled workers for the Toyota plant in San Antonio, Lozoya points out that the "kind of skilled person [we need] is not found in San Antonio ... We have to go outside of Texas to find them."⁷

In fact, many experts and employers have made this problem abundantly clear. According to Tom Luce, the founding chief executive of the National Math and Science Initiative:

⁴ <http://fuelfix.com/blog/2013/10/13/wellaware-technology-remotely-monitors-eagle-ford-wells-pipelines/>

⁵ "Worker Shortages Drive Calls for High School Curriculum Change," *Austin American-Statesman*, February 16, 2013.

⁶ "Worker Shortages Drive Calls for High School Curriculum Change," *Austin American-Statesman*, February 16, 2013.

⁷ "Worker Shortages Drive Calls for High School Curriculum Change," *Austin American-Statesman*, February 16, 2013.

This is more than just about the shortage of engineers and scientists, although that is also true. We are falling behind the world in highly skilled manufacturing jobs, all of which require workers to be STEM capable. We have about 3.5 million unfilled jobs in this country at a time of high unemployment because we don't have enough skilled workers. If you want to be an automobile mechanic today, you've got to be computer literate.⁸

Texas Higher Education Commissioner Raymund Paredes, addressing lawmakers at a recent hearing, described the extent of the shortage of skilled workers in Texas:

You've heard about shortages of welders. You've heard about shortages of truck drivers and construction workers. We also have a shortage of engineers. We have a shortage of basic scientists, particularly in the physical fields, chemistry and physics ... We have shortages in high skilled fields across the board.⁹

One way to address this shortage is to foster an environment within the public school system in which students are able to utilize technology in the course of their studies. Steve Zipkes, founding principal of Manor New Technology High School notes:

The students we have today are not the students we had five years ago... And yet, most schools are still teaching in the same way they have for the last 50 years. Students can get an answer faster than we can give them one. And it will even be more up to date ... what we've got to do is create an environment where they want to be at school and at the same time embrace that outside blended learning.¹⁰

Because of the integral role that technology plays across multiple sectors of the state's economy, it is critical that the private sector be involved in bringing high-quality digital learning to every student and every classroom in the state. Students, teachers, and administrators all need access to high-speed broadband Internet and high-tech devices.

With access to broadband, students can learn in a technology-rich environment, which includes digital learning, videoconferencing, and distance learning. Teachers can attend professional development seminars online and find curriculum resources. Administrators can conduct business online, and access and upload data about their schools. Broadband access with appropriate levels of bandwidth and a device on which to view content gives students all over the state access to the same information and allows them to familiarize themselves with technology in an academic setting.

⁸ <http://www.texasribune.org/2012/07/05/texans-sound-stem-education-and-why-it-matters/>

⁹ <http://www.texasribune.org/2012/07/05/texans-sound-stem-education-and-why-it-matters/>

¹⁰ <http://www.texasribune.org/2012/07/05/texans-sound-stem-education-and-why-it-matters/>

One component of ensuring that every student has access to high-quality digital learning is developing adequate broadband access and capacity in every school. Cost, bandwidth availability, and geography can all hinder schools' attempts to ensure sufficient bandwidth for their students' needs, particularly as more students participate in virtual learning. Currently, several areas in Texas are unserved or underserved.¹¹ Despite the insufficiency, many Texas students require the Internet for school: 44 percent explore research for their school work online, 39 percent email with teachers, and 24 percent have enrolled in classes online.¹² These numbers would no doubt be higher if online access was greater and if online learning was used more often.

As is evidenced by the results of the Texas School Technology and Readiness (STaR) Chart, developed by the Instructional Materials and Educational Technology Division at the Texas Education Agency (TEA), the fact that a district or campus has Internet access and connectivity does not necessarily mean that its technology infrastructure is capable of delivering high-quality digital programming.¹³ The State is attempting to quantify the scope of the problem. House Bill 1926 (83R, 2013) directs the Texas Commissioner of Education to conduct a study to assess the network capabilities of each school district. The TEA is in the process of coordinating this study, which will give the state a clear picture of which districts are in need of additional access or bandwidth. The results will be available in December 2015.

Each school district will have differing needs and will require a unique solution to bring high-quality digital learning to its classrooms, but the state and the private sector must continue to be prepared to work together to make that vision a reality.

School districts in Texas have already had a lot of success engaging the private sector in this way to bring high-quality digital learning options to students. For example, Plano ISD and Texas Instruments (TI) have recently entered into a partnership through which "[s]tudents will have access to TI's latest developmental products and benefit from having TI staff onsite."¹⁴ The partnership is part of a broader strategy Plano ISD is implementing to "use corporate partnerships to create mutually enriching learning relationships and help prepare students for the global workforce."¹⁵ Along similar lines, Google has partnered with Austin ISD and UT-Austin to deliver a computer science principles course aligned with the Texas College and Career Readiness Standards. Announcing the partnership, Harrison Keller, Vice Provost for Higher Education Policy and Research at UT Austin, stated that:

¹¹ *Unserved*: areas where at least 90 percent of households in an area composed of one or more contiguous Census Blocks lack access to facilities-based, terrestrial broadband service, either fixed or mobile, at the minimum broadband transmission speed (below 768 Kbps download/200 Kbps upload). *Underserved*: areas that only have access to low quality broadband service (between 768/200 Kbps and 3 Mbps/768 Kbps) and may have some households without access. One or more factors must be met: (1) 50 percent or less of households have access to the minimum broadband speed; (2) no provider offers service speeds of at least 3 Mbps; or (3) 40 percent or less of the households choose to subscribe to a broadband service. See: <http://www.gao.gov/assets/670/662711.pdf> See also: http://www.connectedtx.org/sites/default/files/connected-nation/Texas/ctx_planning_report_final_web.pdf

¹² http://www.connectedtx.org/sites/default/files/connected-nation/Texas/ctx_planning_report_final_web.pdf

¹³ <http://starchart.epsilen.com/docs/TxCSC.pdf>

¹⁴ <http://www.pisd.edu/news/archive/2012-13/plano.isd.academy.high.school.shtml>

¹⁵ <http://www.pisd.edu/news/archive/2012-13/plano.isd.academy.high.school.shtml>

UT Austin is enthusiastic about partnering with Austin ISD, Google and other school districts, community colleges, universities and additional partners across the state to expand access to high-quality educational opportunities that are engaging for students and their teachers and directly aligned with what students need to be competitive in other college-level courses.¹⁶

In a similar vein, Moody High School in Corpus Christi is entering into a partnership with Verizon through the corporation's STEM Explorer Program through which students engage in laboratory work, technology instruction, and off-campus field trips as part of a work plan designed to encourage them to pursue science, engineering, or technology related courses in high school and college. Announcing the collaboration, a Verizon spokesperson pointed out that "we believe in the transformative power of our technology and its role in improving outcomes and preparing students for success in the 21st century. We are excited to ... inspire more youth to pursue STEM-related careers."¹⁷

Pflugerville ISD has a long-standing partnership with Dell Inc. through which a variety of Dell devices are used in classrooms, and its technological innovations are used to develop individualized learning plans. According to Pflugerville ISD's Technology Director:

Dell's portfolio of computing solutions provides our students and teachers with tools they need to explore STEM subjects and also give our IT department the high-performance, reliability and infrastructure compatibility we need to easily deploy and maintain the devices.¹⁸

These are just a few of the many examples of private corporations partnering with schools to provide technology and assistance with the goal of improving educational opportunities, particularly in STEM subjects.

Recommendation: Create a technology grant program in order to expand access to technologies that are necessary to improve access to high-quality digital learning at campuses rated D or F.

One way to continue to encourage such partnerships is to create a technology grant program for campuses rated D or F. Under current law, schools receive funding for instructional materials and technological equipment (like wireless networks) through the Instructional Materials Allotment (IMA).¹⁹

The IMA was established in 2011 in recognition of the growing role of technology in public schools by combining the existing Technology Allotment with the Textbook Allotment.²⁰ The Technology Allotment was established in 1991 at the equivalent of a \$30 per-pupil allotment. At the time it was rolled into the IMA, the Technology Allotment provided approximately \$270 million each biennium for technology (equipment, staffing, software, infrastructure, and professional development).

¹⁶ <http://www.utexas.edu/news/2014/04/04/onramps-college-credit/>

¹⁷ <http://www.prweb.com/releases/2014/02/prweb11610914.htm>

¹⁸ <http://www.dell.com/learn/us/en/uscorp1/secure/2014-04-03-dell-education-customer-pisd>

¹⁹ Texas Education Code, Section 31.0211.

²⁰ Senate Bill 6 (82S1, 2011).

IMA and Technology Allotment 2008-15 (Amounts in \$ millions)

Year	Textbook/Instructional Materials Allotment	Technology Allotment	Total
2008	\$269.3	\$130.0	\$399.3
2009	\$204.5	\$129.8	\$334.3
2010	\$198.4	\$132.7	\$331.1
2011	\$273.0	\$133.9	\$406.9
2012	\$525.0	\$0	\$525.0
2013	\$225.0	\$0	\$225.0
2014	\$419.3	\$0	\$419.3
2015	\$419.3	\$0	\$419.3

Sources: Legislative Budget Board, Texas Education Agency, and Texas Computer Education Association.

However, according to the Texas Computer Education Association, actual expenditures on network hardware, while not intended, have actually declined since creation of the IMA.

The repeal of the Technology Allotment, together with the prior repeal of the Telecommunications Infrastructure Fund (TIF) 2007, which provided hundreds of millions of dollars in grants and loans to purchase equipment and improve the telecommunication infrastructure for programs such as distance learning,²¹ is slowing Texas' digital learning progress, and may have left schools without access to scalable broadband and other items necessary to deliver high-quality digital learning options to their students.

In addition to these funding issues, there are currently provisions in the Texas Utilities Code for telecommunications service discounts for educational institutions, libraries, hospitals, and telemedicine centers.²² However, these provisions are slated to expire in January 2016.²³

Once TEA's assessment of school district network capabilities is complete, the Legislature will have a clearer picture of where the most pressing and long-term needs exist to fulfill the promise of digital learning, and just how much it may cost.

²¹ Bill Analysis for House Bill 735 (80R, 2007).

²² Utilities Code Ch. 58 and 59.

²³ Legislative Budget Board, Fiscal Note for SB 773 (82R, 2011).

In the meantime, making grants available to D and F²⁴ rated public school campuses totaling \$100 million each biennium through a technology grant program would compensate for the repeal of the Technology Allotment, loss of TIF subsidies for telecommunications infrastructure, and may help offset the potential expiration of telecommunications service discounts for public schools. Note that this is only an estimate until the completed TEA study can precisely confirm what it is that schools need. This additional grant funding provided to D and F rated campuses could be used to enter into the types of public-private partnerships detailed earlier in this section. These types of partnerships must continue to be encouraged so that Texas' public education system can be elevated to number one in the nation by improving access to high-quality digital learning options through necessary upgrades to content, devices, and access.

Making additional grant funding for technology available to campuses rated D or F serves a dual purpose. First, digital learning carries a tremendous opportunity to positively impact academic outcomes. Introducing innovative approaches to learning in the state's underperforming schools is a prudent use of funds, designed to close the gap in achievement between students in underperforming schools and their peers in the state's top performing districts. Providing additional funding for technological enhancements in D and F schools also puts more technology into the hands of those students who are less likely to have access to such tools at home, thereby improving students' technological literacy and better preparing them for college and a career in today's increasingly globalized society.

Virtual Schooling

Other states have led the way in advancing digital learning. Florida, for example, founded a statewide Internet-based high school in 1997.²⁵ Enrollment is free and open to all public, private, and homeschool students in the state of Florida. Florida's system has grown to a very robust size. It served over 148,000 students enrolled in 303,329 courses taught by 1,370 teachers during the 2011-12 school year.²⁶ Florida is the only state that provides full-time online opportunities and supplemental material to all K-12 students in the state.²⁷

The following graphic illustrates the progress that other states, namely Florida, North Carolina, and New Hampshire are making in digital learning:

²⁴ Under the current accountability system, 768 campuses are rated "improvement required," which gives an approximation of the number of campuses that may be eligible for the technology grant program proposed here.

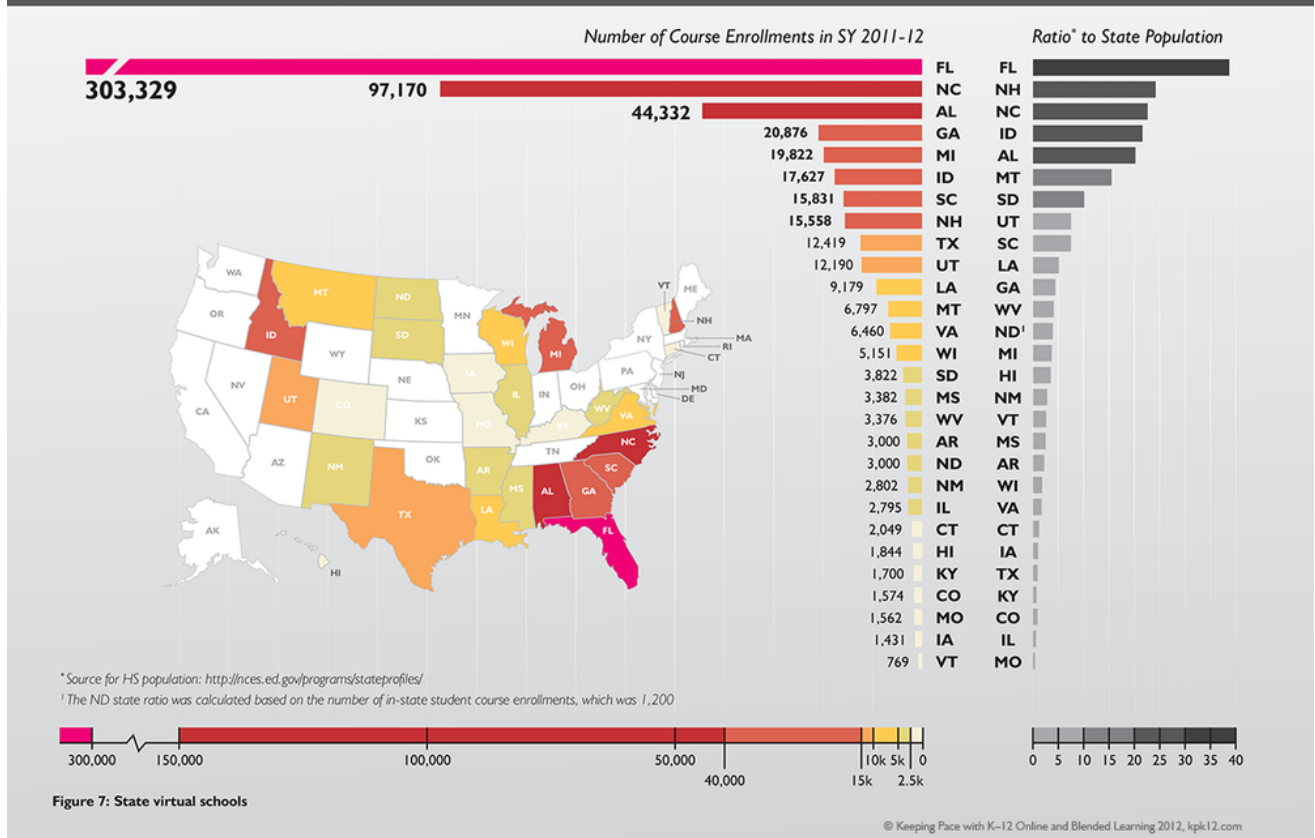
²⁵ Data available at <http://www.flvs.net/areas/aboutus/pages/quickfactsaboutflvs.aspx>

²⁶ Data available at <http://www.flvs.net/areas/aboutus/Documents/EnrollmentSummary.pdf>

²⁷ http://kpk12.com/cms/wp-content/uploads/EEG_KP2013-Ir.pdf

2012

State Virtual Schools Program Size and Ratio to State Population



Source: Evergreen Education Group²⁸

Texas should evaluate the merits of such a system to determine what does and does not work, and then emulate the best practices from Florida and other successful online school programs. One of the more interesting features of the Florida Virtual School is that teachers and students interact regularly through email, instant messaging, and telephone.²⁹ Parents and teachers are also expected to communicate frequently, and a monthly phone call between the teacher and student’s parents is required under the system. The Florida Virtual School is the “only public school in Florida where funding is tied directly to student performance,” and students must successfully complete a virtual school course in order to generate funds through the Florida Education Finance Program.³⁰

²⁸ <http://kpk12.com/cms/wp-content/uploads/KeepingPace2012.pdf>

²⁹ <https://www.flvs.net/areas/faqs/Pages/CourseFAQs.aspx>

³⁰ http://www.inacol.org/cms/wp-content/uploads/2013/04/FLVS_Final_Final_Report10-15-07.pdf

The Virtual School Network

Texas has already taken steps to expand the number of school districts, charter schools, and private providers that are able to provide instructional content. In 2007, the Texas Legislature created the Texas Virtual School Network (TxVSN). Currently, the Texas Education Code authorizes two TxVSN programs: *The Network* (a statewide catalog of available courses) and TxVSN Online Schools (fully online “virtual” schools).

The first TxVSN courses were offered in January 2009. Through the TxVSN Network (TxVSN), Texas students can take online, state quality-controlled courses that count as public school credit. Generally, each TxVSN online course is a daily, semester-long course, and taught by a Texas certified teacher.³¹ Content is delivered to the student primarily over the Internet, meaning that the student and teacher can be in different locations in the state. During the semester, there is extensive communication between the student, course teacher, and student’s Campus Online Coordinator.³²

Chapter 30A of the Texas Education Code establishes the requirements for courses offered through the TxVSN. These standards are stringent and are consistent with those in place for courses offered in the traditional classroom setting. There are also transparency requirements for these courses that may exceed the requirements imposed upon traditional courses offered in public schools and open-enrollment charters.

Specifically, the statute requires all courses offered through the TxVSN to be “in a specific subject that is part of the required curriculum” as established by the Texas Legislature and the State Board of Education.³³ Courses must also “be aligned with the essential knowledge and skills” and “be the equivalent in instructional rigor and scope to a course that is provided in a traditional classroom setting.”³⁴

³¹ Texas Administrative Code §70.1005.

³² Texas Administrative Code §70.1001.

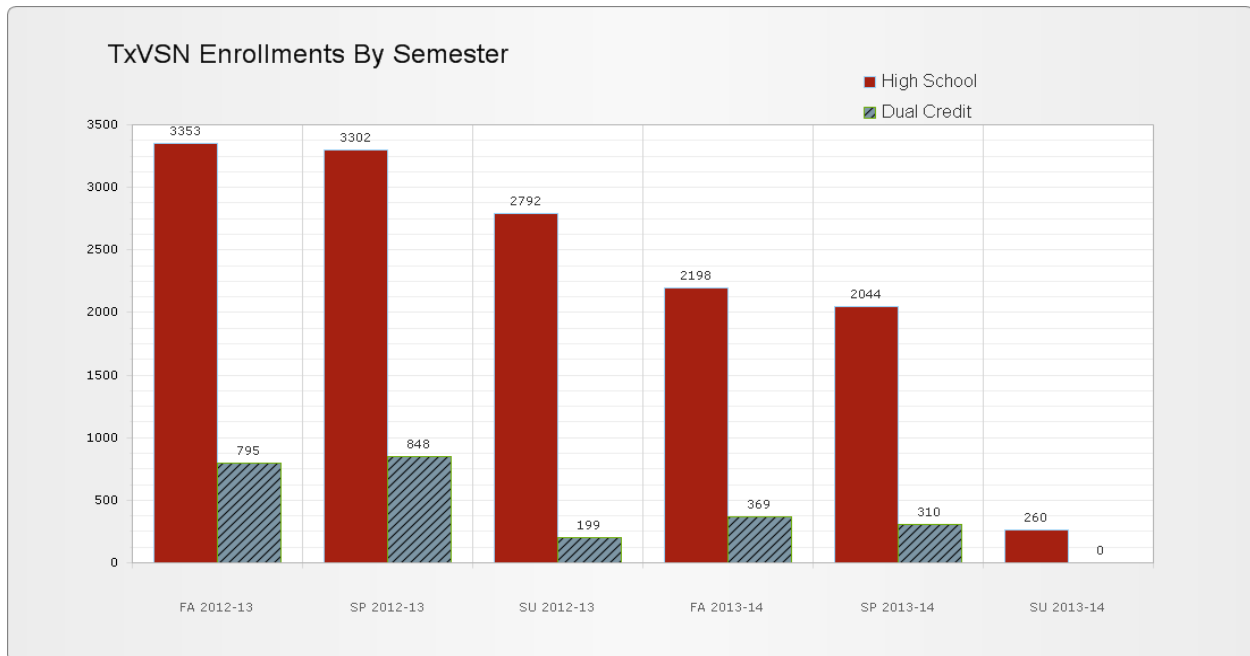
³³ Texas Education Code §30A.104(1).

³⁴ Texas Education Code §30A.104 (2) & (3).

In addition to these requirements that align online courses with traditional ones, the Texas Education Code authorizes the Education Commissioner to propagate further “quality-related criteria for electronic courses” and requires public comment to be taken regarding the criteria.³⁵ The statute also requires the TxVSN to “provide students who have completed or withdrawn from electronic courses offered through the virtual school network and their parents with a mechanism for providing comments regarding the courses.”³⁶ The comments made by students and their parents must be made publicly available in a format that “permits a person to sort the comments by teacher, electronic course, and course provider.”³⁷ As a result of this requirement, student and parent feedback, sorted by course provider and course, is easily searchable on the TxVSN website.³⁸ These transparency requirements expose courses offered through the TxVSN to more student, parent, and public scrutiny for quality.

Under the current system, any student in grades 8–12 can enroll in a course in the TxVSN course catalog through their home school district or open-enrollment charter school. Enrollment must take place during a regular enrollment period and course enrollment must be consistent with the student’s high school graduation plan. The school district or charter pays the online course provider for the cost of the course, which by law cannot exceed \$400.

While the TxVSN is a good starting point, Texas lags behind some other states in online learning course options. Even though there are more than one million high school students in Texas, the TxVSN only had 2,400 students enrolled in online courses during the spring 2013 semester:



Source: Texas Virtual School Network

³⁵ Texas Education Code §30A.103(c).

³⁶ Texas Education Code §30A.1021(a).

³⁷ Texas Education Code §30A.1021(c).

³⁸ <http://www.txvsn.org/custom/SurveyReports.aspx?SurveyId=1>

There are several reasons why students may not be taking advantage of courses offered through the TxVSN. For example, a school district or charter may deny a student's request to enroll in a course offered through the TxVSN if the school district or charter offers a "substantially similar course."³⁹ Secondly, a school district or charter may decline to pay for a student to take more than three online courses. As a result, if the student wants to take the course he or she may be required to pay a fee to the district.⁴⁰ In order to guarantee that digital learning is available to all students at any time, Texas must take steps to ensure that the TxVSN is robust, accessible, and transparent. The TxVSN website must also be enhanced and improved to make it easy for parents, students, and teachers to access and use, and to improve overall transparency regarding course quality and success rates. It also remains the obligation of parents and teachers to continue to work with students as necessary as they are enrolled in a course through the TxVSN to ensure their successful completion of an online course. Providers will be compensated only upon a student's successful completion of a course.

Improving Digital Learning Options in Texas

In 2013, the Legislature made some necessary improvements to Texas' online and blended learning options by expanding TxVSN network course offerings, making information about online and distance learning options more accessible, and charging the Texas Commissioner of Education with conducting a study assessing the network capabilities of each school district to provide online and blended learning options for students.⁴¹

Recommendation: Improve student access to courses provided through the Texas Virtual School Network in order to propel Texas to the top tier among the states for digital learning.

As described above, Texas Code inhibits growth of the TxVSN in two ways: school district's ability to deny a student's enrollment in an online course if the district offers a substantially similar course, and the statutory maximum of three online courses that school districts and charters are required to pay for per year, per student.

³⁹ Texas Education Code §26.0031(c)(3).

⁴⁰ Texas Education Code §30A.153(a-1).

⁴¹ HB 1926 (83R, 2013).

Provisions such as these, which prevent students from accessing online courses that meet the same state standards as the courses public schools offer, must be amended to help the TxVSN meet its full potential, and to allow students the best pathway to achieve their full potential. Specifically, students should be permitted to take any course offered through the TxVSN if the course is aligned with the TEKS, and is part of the student’s graduation plan, regardless of whether their own school offers a substantially similar course. Similarly, if a student attending a campus with a D or F rating enrolls in more than three courses offered through the TxVSN, the state should fund the additional course costs. The three-course payment limit serves to restrict student options, which is particularly problematic when a student is attending a low-performing campus.

A critical component of improving Texas’ public education system is to ensure that all students have access to the highest possible quality of education. Texas students and parents should be able to determine if enrolling in a TxVSN class would better benefit that particular student than the traditional option at the school they are attending. In addition, students in D and F rated campuses are the most in need of additional educational options, and should therefore not be restricted in their ability to select additional courses offered through the TxVSN as long as the class is part of the student’s graduation plan.

Recommendation: Provide online tutoring services for students preparing for mandatory end-of-course exams to increase passage rates on state assessments.

Online tutoring has already shown its potential to positively impact academic outcomes. In 2008, the Online Tutoring Pilot was established as a partnership between the Texas Library and Archives Commission and TEA. The goal was to help students overcome obstacles to learning and increase student achievement through an online tutoring resource. Although the pilot program ended in 2009, a number of positive results were observed during its tenure. Students who began online tutoring were positive about the experience and found the tutoring to be helpful when used for credit recovery, preparing for tests (including state standardized tests), and to accelerate students who were not being challenged in their regular classrooms.

A key piece of comprehensive online learning is making available new tools that students, parents, and teachers can use to support classroom instruction. Online instruction can take the form of a full course or targeted, individual lessons designed to help the student better understand a particular concept. The state should offer teachers and students free voluntary courses, materials, and online tools through the TxVSN for each course that requires an EOC exam for high school graduation.⁴² Specifically, TEA should create an online tutoring module for each of the state’s EOC courses, and the product should be made freely available to all Texas students.

⁴² EOC exams are: Algebra I, English I & II, Biology, US History.

While EOC exams do not generally count toward a student’s grade, passing the EOC exams is a requirement for graduation, and student performance on EOC assessments is a critical component of the state’s public school accountability system.⁴³ Providing additional opportunities through the TxVSN for students to prepare for EOC assessments will therefore help improve graduation rates and schools’ accountability ratings, both of which are essential to elevating the Texas public education system to number one in the nation.

The tutoring modules for EOC preparation should be interactive, comprehensive, and free of charge to Texas students. Assuming implementation in the 2016-17 school year, if half of all students who are required to pass EOC exams take one TxVSN course at a \$200 cost, the total would be \$7.6 million.

Innovation Grants

Recommendation: Create “innovation grants” to encourage school districts to develop or implement blended online education models that have proven effective in the classroom.

A very promising avenue for improving student success is through blended learning models. While there are many blended learning options, blended learning typically involves a student learning, at least in part, by utilizing an online or computer based instructional program while working at their own pace.⁴⁴ Many successful blended learning programs actively adjust the instruction based on student progress. For example, program rigor increases as the student progresses through concepts. In addition, the instructional programs may provide teachers with detailed information about students’ progress so that teachers can coach students and individualize each student’s instruction. Blended learning models are designed to enhance work done in the classroom and create opportunities to help provide a more individualized education for students while helping the student learn at his or her own pace.

Schools districts could benefit from financial assistance in obtaining the resources necessary to realize the full benefits of technology and digital learning. A competitive “innovation grant” could provide the seed funding that schools need in order to launch their own blended learning programs for students. This new grant funding could be used to establish new blended learning models that combine online options with the traditional classroom model.

The innovation grants would provide targeted assistance to help schools: (1) launch their own initiatives that could be part of statewide course choice, (2) develop new approaches with individualized learning, (3) convert to blended learning models, or (4) some combination, or all, of these options.

⁴³ http://ritter.tea.state.tx.us/perfreport/account/2013/20130328coe/overview_20130423.pdf

⁴⁴ Digital Learning Briefing, Clayton Christensen Institute for Disruptive Innovation.

Examples of “innovation grants” for online education projects in other states include:

- Ohio’s \$250 million “Straight A Fund,” which provides seed funding for innovative education projects submitted to the state by public and private schools.
- The New York City Public Schools iZone, which is a “dedicated Office of Innovation that would support schools in personalizing learning to accelerate college and career readiness among students.”⁴⁵

Innovation grants would be awarded on a competitive basis to school districts that would then work with the TEA innovation team to refine their proposal, establish a project timeline, goals, objectives, and accountability measures. Partnerships with private sector infrastructure (high-speed Internet and computing/web devices) providers would be encouraged in order to benefit from their expertise and technological capabilities.

The costs of providing innovation grants would be based largely on the number of grants made each year. Texas should budget \$1 million per year for the central innovation team to work with the competing districts as they develop proposals, with \$250,000 to \$650,000 per year for each grant. On this basis, the annual cost of awarding at least ten innovation grants would amount to \$8 million annually, or \$16 million over a two-year budget cycle from the General Revenue Fund (GR).

Professional Development

Recommendation: Fund professional development for teachers at schools wishing to implement individualized, blended learning classes so that they can effectively engage students in a digital learning environment.

In a blended learning environment, classroom instruction is supplemented with lectures, exercises, and tutorials that students view online and at their own pace, either in the classroom or at home. Similarly, individualized learning, a type of blended learning, is a mastery-based system of education in which students advance in their lessons once they are able to demonstrate proficiency, rather than the amount of time spent in class. Professional development plays a critical role in the successful implementation of any form of blended learning. In an individualized learning environment, for instance, educators are often expected to differentiate their lesson plans and provide varying levels of support to meet the respective needs of their students.⁴⁶ Teachers in blended learning classrooms are freed from the traditional constraints imposed by class schedules and bells, which facilitates efforts to tailor instruction and ensure that all students have a chance to succeed.⁴⁷ To meet this goal, teachers must have the tools—and more importantly—the training to effectively engage today’s learners, many of whom are technologically savvy from a young age.

⁴⁵ iZone: <http://izonenyc.org/>

⁴⁶ <http://online.wsj.com/news/articles/SB10001424052702304899704579391101344310812>

⁴⁷ Innovation in Education: Path to Personalize Learning, Dell.

Schools that enable individualized learning afford fast-paced learners the opportunity to participate in more college preparation and dual-credit options, while simultaneously helping teachers identify areas in which other students may require additional instructional support. In other words, individualized approaches benefit all students, not just those who are able to master subject matter the quickest.

The ability to assess mastery prior to progression is essential for an individualized learning model to work.⁴⁸ Some products are already available that allow teachers to hone in on individual students' needs without disrupting classroom structure. These tools maximize the academic achievements of all students, ensuring no one falls through the cracks. Providing teachers with the training to effectively utilize this technology is imperative for getting the most out of any blended learning model.

In 2011, more than two million tablets were placed in classrooms; however, less than ten percent of teachers in those classrooms received adequate training to allow them to fully integrate the new technology into curricula and lessons plans, resulting in many tablets being used for little more than Internet browsing.⁴⁹ Comprehensive professional development is key. Unless teachers are given the training to confidently navigate technology, effectively utilizing it to enhance student learning, initiatives to introduce new technology into classrooms stand to fail.⁵⁰

Teachers in a blended learning environment will have to adopt new strategies that differ from how they have taught in the past, combining teacher-led instruction with project-based learning. Accordingly, schools wishing to introduce blended learning in classrooms should be eligible for funding from the state to cover the cost of professional development for teachers to ensure they are adequately prepared to utilize individualized and blended learning approaches. There is an existing, vibrant community of professional development providers specializing in innovative teaching techniques and technology integration operating in the state today. Under this proposal, districts that avail themselves of these products will be eligible to receive funding from the state to cover the cost of professional development courses as well as incidental costs related to travel and lodging. To ensure funds are being spent on effective, high-quality instruction, districts would have to indicate in advance the program for which the funds will be spent and receive state approval. State lawmakers should appropriate \$15 million dollars for this purpose in the next biennium.

⁴⁸<http://www.competencyworks.org/2014/04/counted-or-not-doing-what-counts-in-competency-based-education/#more-6564>

⁴⁹ http://www.educationalrevision.org/educational_technology

⁵⁰ <http://www.scholastic.com/browse/article.jsp?id=3755865>