2010 Progress Report on the Long-Range Plan for Technology, 2006-2020

A report to the 82nd Texas Legislature

Submitted by
The Texas Education Agency

2010 Progress Report
on the Long-Range Plan for Technology,
2006-2020

**Presented to the 82nd Texas Legislature
from the Texas Education Agency
Submitted to the Governor, Lieutenant Governor,
Speaker of the House of Representatives,
and Members of the Eighty-second Texas Legislature**

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December 2010

The Honorable Rick Perry, Governor of Texas
The Honorable David Dewhurst, Lieutenant Governor of Texas
The Honorable Joe Straus, Speaker of the House of Representatives
Members of the 82nd Texas Legislature

Over twenty years ago, the first *Long-Range Plan for Technology, 1988-2000* was adopted. The recommendations made in this and subsequent plans have set the course for educational technology in Texas schools and have served as models across the nation. The *Texas Long-Range Plan* always has been visionary and has withstood a multitude of changes in technologies through the years. The latest plan, adopted in 2006, is the *Long-Range Plan for Technology, 2006-2020*. It supports an engaging, relevant, and future-focused system of education for young Texas learners, preparing each student for success and productivity as a lifetime learner, a world-class communicator, a competitive and creative knowledge worker, and an eng aged and c ontributing member of our emerging digital society. The *Long-Range Plan for Technology, 2006-2020*, made recommendations for the various stakeholders targeting the areas of Teaching and Learning; Educator Preparation and Development; Leadership, Administration and Instructional Support; and Infrastructure for Technology.

The Texas Education Code, Section 32.001, requires the State Board of Education to develop a long-range plan for technology, and i t requires a bi ennial report to the Governor and Leg islature on t he progress of the plan. This progress report documents the State's progress and ac complishments in meeting recommendations from September 2008 through August 2010. Identified in the report are the various activities initiated by Texas public schools, regional education service centers, and the Texas Education Agency to work toward the goals outlined in the plan.

More than ever, students, educators, and parents have many new learning opportunities made possible as a result of digital technology. The vision of the state's *Long-Range Plan* is obtainable in more ways than ever imagined through the use of digital content, new mobile technology devices, online and blended learning, professional learning communities, and the extension of learning into the home and into the broader community. Texas classrooms are being transformed with new instructional practices for teachers and new learning environments for students.

I hope you will find the efforts described in this report as positively impacting our schools and preparing our students with the 21st Century skills that are needed t o succeed and t hrive in our increasingly connected society.

Sincerely,

Robert Scott

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Executive Summary

In 2001, Marc Prensky published seminal research titled "Digital Natives, Digital Immigrants," identifying needed c hanges in public education in order to successfully instruct the 21st Century student: the digital native. In an oft-quoted passage, a hi gh school student states, "Every time I go to school I have to power down" (p. 3). In the decade since that report was published, research indicates students are increasingly taking learning into their own hands. The results from the Speak Up 2009 Survey, collected and anal yzed by the national education nonprofit group Project Tomorrow, indicate that students have become self-directed learners who are using technology and web applications to access content, acquire knowledge, and develop their own content. The results reported from this survey suggest that students are increasingly connecting with each other and with experts in their fields of interest. Speak Up analysts find that "our nation's students are…creating their own future" through their fearless use of technologies and tools (*Speak Up 2009*, "Creating Our Future," p. 3).

Clearly, technology use is ubiquitous. Integral to our lives and our students' lives, technology is a tool that can be used to make teaching and learning more efficient and effective. Research supports an obs ervable reality: students are engaged in technology and participate in a vast array of interactive media. They are well-equipped to learn through digital content and online resources. Through statewide implementation of digital content, the Texas Virtual School Network (TxVSN), Project Share and Texas Education on iTunes U, and other programs developed as a result of the state's educational technology legislation and

initiatives, Texas is addressing the importance and need for providing an app ropriate instructional environment for public and charter school students. It is critical that students learn to use technological tools productively, as instruments to advance thinking and knowledge. Texas is focused on ens uring that students are not just engaged learners; they are also empowered learners ("Shifting Ground," Lehman, December 2009).Texas is striving to ensure that students of all ages are exposed to new and exciting learning opportunities, and that Texas students have the experiences that keep them "powered up" at school – and "powered up" for the future.

Recognizing the need for a consistent, systemic approach to implementing educational technology throughout Texas, the Texas Education Code, Section 32.001, requires the State Board of Education (SBOE) to develop a long-range plan for technology. Texas led the nation with the first *Long-Range Plan for Technology, 1988-2000*, adopted by the SBOE in November 1988. Subsequent plans were adopted in 1996 and in 2006. This *Progress Report on the Long-Range Plan for Technology 2006-2020*, provides an updat e on the state's progress in addressing the needs of education in Texas and in planting the seeds for a secure future. This is an education system in which:

- Students can expect higher performance and deeper engagement in academic, real world endeavors by accessing digital tools and resources available 24 hour s a da y, 7 days a week (24/7) appropriate to individual strengths, needs and learning styles. Students know they will be pr epared to thrive in a 21st Century workforce with changing economic implications.
- Parents can expect not only to participate more directly in their children's education but also to improve their own knowledge as parents and c itizens. Communications increase as parents have 24/7 access to learning resources and student information such as achievement, attendance, and discipline.

- Educators can expect to access and use information on dem and in order to individualize instruction. The use of digital tools and r esources and 24/7 professional development opportunities transform the educators' role in the educational process. Increased communication will enhance collaboration between school, home, and community.

- Community and school board members can expect more effective and e fficient use of fiscal resources and human capital. Increased communication and par ticipation in the educational decision-making process is enhanced through the use of anytime, anywhere digital tools and resources.

The agency's strategic plan for 2011-2015, supports the recommendations in the state's *Long-Range Plan for Technology, 2006-2020*. Through the agency's strategic plan, the breadth of services that the TEA and LEAs offer is being considered "in light of tightening budgets and new technology." For instance, the TxVSN is explored as a cost-effective means of providing high-quality education to all students. As another example, a new statewide system for delivering high-quality professional development to educators is available. Project Share uses Web 2.0 technology to provide educators and adm inistrators with professional learning communities, engaging and interactive professional development, and tools for creating and s haring effective instructional practices.

The *National Educational Technology Plan,* scheduled to be released in fall 2010, also provides context and vision for how information and communication technologies can help transform American education. The plan provides a s et of goals to inform educational technology plans as well as recommendations to inspire research, development, and innovation. Many of the recommendations within this national plan are already being implemented in Texas because of foresighted legislation and the implementation of the state's vision for educational technology, adopted through the *Long-Range Plan for Technology*.

The *Long-Range Plan* has been updat ed several times since it first was introduced in 1988. The updates reflect the state's progress in implementing educational technology and the changes in technology, culture, and society that impact education. Amid the progress and many changes, however, one guiding principle has remained constant: the state's blueprint for technology in education continues to manifest the belief that technology, applied to the practice of education, can be an effective tool to facilitate positive changes, and that technology can be used as a means of achieving the vision of an educ ation system hallmarked by excellence and equity. This report on the *Long-Range Plan for Technology, 2006-2020,* covers the progress and i mpact of educational technology programs and initiatives from the period of September 2008 to August 2010.

This report is divided into two major sections. The first section covers the four key areas of the *Long-Range Plan*: Teaching and Learning; Educator Preparation and D evelopment; Leadership, Administration, and Instructional Support; and Infrastructure. The second section is a summary of the services provided by the twenty regional education service centers in meeting the recommendations of the *Long-Range Plan*.

This report testifies to the resourcefulness of Texas educators and other stakeholders as they continue to leverage resources and programs for their students. They embrace innovative methods of instruction that enhance and expand the learning environment of Texas students, even in the face of a challenging national economy. This *2010 Progress Report on the Long-Range Plan for Technology, 2006-2020*, demonstrates how educational technology resources and funding are assisting Texas public school districts and open-enrollment charters as they empower students to succeed as lifetime learners, world-class communicators, competitive and c reative knowledge workers: as engaged, productive, and contributing members of this 21st Century society.

Teaching and Learning

Through the strategic implementation of key legislation, grant funding, and educational technology programs, substantial progress has been made in the last biennium in the area of Teaching and Learning. Students and teachers statewide have been significantly impacted and classrooms are increasingly infusing technology into their curriculum to most effectively reach today's learners. Providing students with more advanced technologies, educational technology programs and pr actices, and well-trained teachers enable schools to use innovative teaching strategies designed to engage students and promote critical thinking, problem solving, creativity, and c ollege and c areer readiness.

Through planning and the implementation of those plans by district, Education Service Centers, and the TEA, districts have increased access to important 21st Century resources such as online learning, digital content, and online professional development. The Texas Virtual School Network (TxVSN), digital content available through open-source and electronic textbooks, and the K-12 Databases provide safe, age-appropriate interfaces for elementary, middle, and high school students to engage in learning. Distance learning opportunities, such as the Texas Virtual School Network (TxVSN), have proven to be powerful tools for ensuring that students across the state have equitable access to quality education and i nstruction regardless of the school's wealth, size, socioeconomic status, or geographic location. Students are receiving opportunities to take

rigorous, TEKS-aligned courses for graduation credit and dual credit courses through the TxVSN. This focus on distance learning and digital content has and will continue to provide Texas students with the chance to participate in the learning environment that is rapidly becoming a s tandard in higher education and advanced work force training.

Educational technology grants focused on technology literacy and i ntegration have impacted thousands of students in Texas. Through these grants, districts are redesigning curriculum and t eaching practices to work toward 21st Century classroom goals. Reporting from grantees shows that teachers are producing interactive lessons that incorporate technology and students are excited about their learning. Many districts are also report that student achievement scores have also increased as a direct result of strategic technology use at school and at home.

This Progress Report shows how the necessary tools and r esources for administrators, teachers, librarians, and students are being provided for our 21st Century classrooms. This section of the *Progress Report on the Long-Range Plan* will highlight the impact that technology has made in Teaching and Learning from 2008-2010.

State of the State Using STaR Chart Data

Campus STaR Chart Data and Analysis for Teaching and Learning

The Texas Campus STaR Chart produces a profile of the campus' status toward reaching the goals of the *Long-Range Plan for Technology* (LRPT) and No Child Left Behind. The profile indicators place a campus at one of four levels of progress in each key area of the LRPT: Early Tech, Developing Tech, Advanced Tech, or Target Tech. The key areas include: Teaching and Lear ning; Educator Preparation and Development; Leadership, Administration and Instructional Support; and Infrastructure for Technology. Most campuses in Texas show continued improvement and ar e moving from lower levels on t he campus chart towards the Target Tech level.

During the past biennium, the data gathered through the Campus STaR Chart for Teaching and Learning shows that the majority of Texas teachers and c ampuses evaluate themselves as either Developing or Advanced Tech in Teaching and Learning.
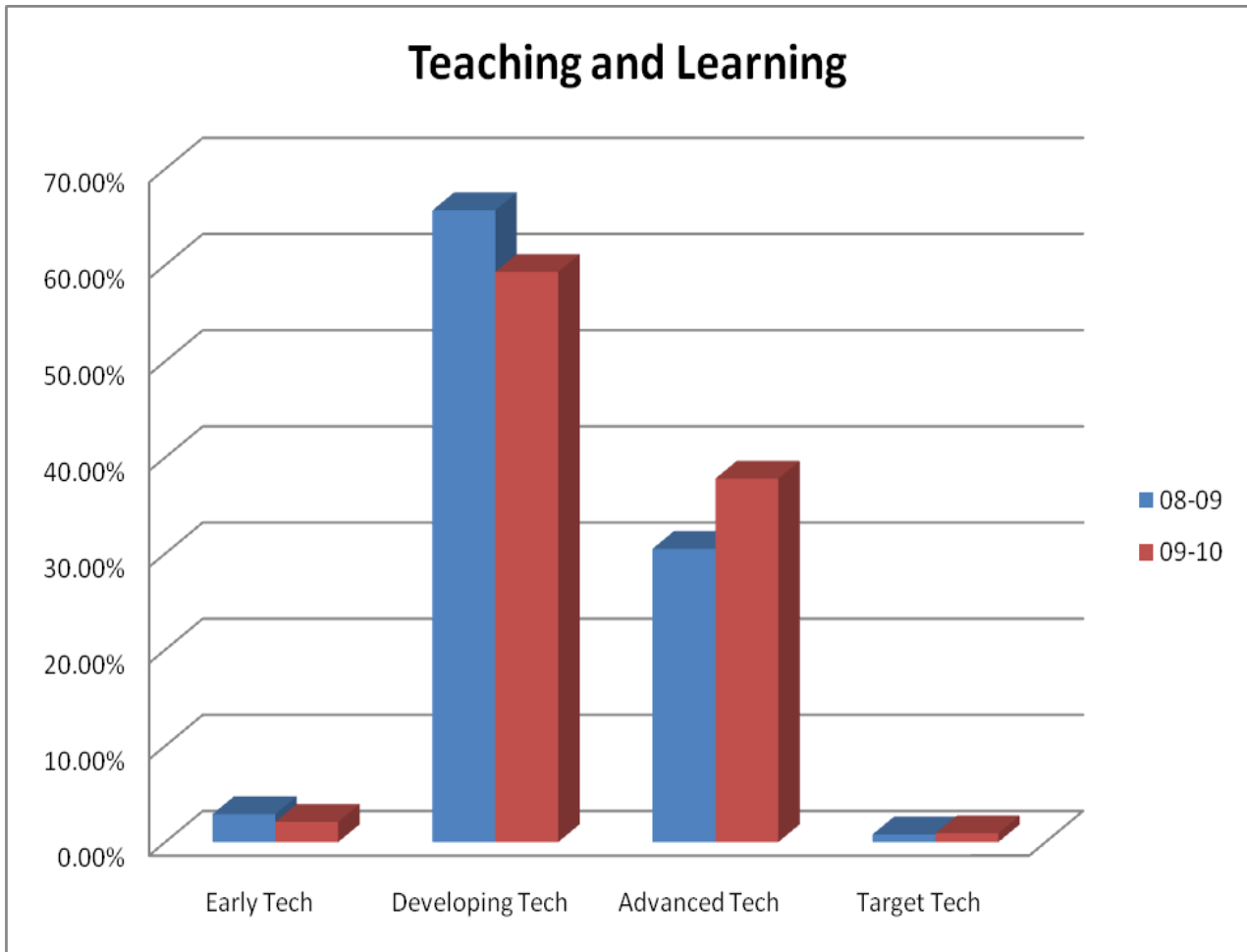
Early Tech. Early Tech means that instruction is teacher-centered and students occasionally use software applications and/or use tutorial software for skill reinforcement. Little or no technology integration occurs in the foundation subject area TEKS. Some K-8 Technology Applications TEKS are met, and high schools offer at least four Technology Applications courses. In 2008-2009, 2.95% of teachers reported themselves at the Early Tech level in Teaching and Learning. In 2009-2010, 2.1% of teachers rated themselves at Early Tech levels in Teaching and Learning. This .8% decrease indicates more campuses are reaching Developing, Advanced, or Target Tech levels.

Developing Tech. Developing Tech refers to instruction that is teacher-directed and students regularly use technology on an individual basis to access electronic information and dev elop communication and presentation projects.

There is use of technology in foundation TEKS. Most Technology Applications TEKS are met K-8, and high school campuses teach at least two Technology Applications courses. In 2008-2009, 65.7% of Texas teachers reported themselves at the Developing Tech level in Teaching and Learning. In 2009-2010, 59.3% of teachers rated themselves at the Developing Tech level in Teaching and Learning. This 6.4% decrease indicates more campuses are reaching Advanced or Target Tech levels.

Advanced Tech. At the Advanced Tech level of the STaR Chart in Teaching and Lear ning, instruction is teacher-facilitated and s tudents work with peers and experts to evaluate information, analyze data and c ontent in order to problem solve. Technology is integrated into foundation area TEKS, and technology supports the development of higher-order thinking skills and enc ourage collaboration. All Technology Applications TEKS are met K-8, and high school campuses offer and teach at least four Technology Applications courses. In 2008-2009, 30.5% of Texas teachers reported themselves at the Advanced Tech level in Teaching and Lea rning. In 2009-2010, this number increased by 7.3%. During that period, 37.8% of Texas teachers rated themselves at the Advanced Tech level in Teaching and Learning.

Target Tech. At the highest level of the STaR Chart for Teaching and Learning, the Target Tech level, the teacher serves as facilitator, mentor, and c o-learner. Students have on-demand access to all appropriate digital resources and technologies to complete activities that have been seamlessly integrated into all core content areas, providing learning opportunities beyond the classroom that are not otherwise possible. All Technology Applications TEKS are met K-8; high school campuses offer all Technology Applications courses and t each at least four courses. In 2008-2009, .8% of Texas teachers reported themselves at the Target Tech level in Teaching and Lear ning. In 2009-2010, this number increased by.1%. During that period, .9% of Texas teachers rated themselves at the Target Tech level in Teaching and Learning.

Teaching and Learning

Bar chart comparing 08-09 and 09-10 percentages across Early Tech, Developing Tech, Advanced Tech, and Target Tech categories.

Technology Applications

Technology Applications

Technology Applications is specified in Texas Education Code (TEC), §28.002, with requirements for elementary, middle, and high school found in 19 Texas Administrative Code (TAC) Chapter 74. Digital technology standards are specified through Technology Applications Guidelines for Prekindergarten and Texas Essential Knowledge and Skills (TEKS) for Grades K-12, found in 19 TAC Chapter 126.

Technology Applications is the state enrichment curriculum that addresses the recommendations in the Texas *Long-Range Plan for Technology, 2006-2020* and defines the technology literacy and integration requirements for students and teachers in No Child Left Behind, Title II, Part D, Enhancing Education Through Technology. www.tea.state.tx.us/technology

Purpose of the Program

The purpose of the state's Technology Applications curriculum is to ensure that students and educators gain and apply critical 21st Century digital knowledge and skills across the curriculum. Technology Applications provides a vertical look at what is expected for students from prekindergarten through grade twelve. There are benchmarks at Grades 2, 5, and 8 as well as specialized, focused courses building on the K-8 TEKS at the high school level.

Background/Description

The foundation curriculum areas of English language arts and reading, mathematics, science, and social studies require the use of digital technology knowledge and skills in their TEKS. The Technology Applications curriculum teaches effective, innovative, and safe processes for planning, researching, creating, communicating, and collaborating using digital technology. The Technology Applications TEKS are not to be taught in isolation; rather, they are an integral part of every classroom's use of technology. The importance of students meeting the technology literacy benchmarks for acquiring and integrating the Technology Applications TEKS across the curriculum are paramount in leading to success in meeting the curriculum goals for Texas students and meeting the requirements of No Child Left Behind, Title II, Part D for technology literacy and integration.

Districts must ensure that sufficient time is provided for teachers to teach and for students to learn technology applications. At least four of the eight Technology Applications high school courses are required to be offered by school districts. Teacher standards for Technology Applications specify expectations for new and current educators.

Progress Since 2008:

- June 2010 – Texas STaR Chart shows improvement in number of teachers at higher levels of implementation of the Technology Applications TEKS and for technology capabilities
- April 2009 – High school Technology Applications graduation credit changes to an elective option rather than a requirement for all students in all graduation plans (since 1984, there has been a c omputer requirement for graduation.)
- Beginning with 9th graders in 2007-2008 – Advanced Placement (AP) Computer Science satisfies the fourth year mathematics graduation credit

Long-Range Plan for Technology
The *Long-Range Plan for Technology, 2006-2020* recommends the continued support for the implementation of the Prekindergarten Guidelines in Technology Applications and t he Technology Applications TEKS for Grades K-12. In addition, it identifies the need for the revision of the Technology Applications student standards to ensure appropriateness of requirements through time and alignment with 21st Century skills,

Technology Applications TEKS Revision
The State Board of Education (SBOE) has legislative authority to adopt and r evise the TEKS for each subject of the required curriculum. Technology Applications TEKS are in the revision process. SBOE members nominated educators, parents, and business and industry representatives to serve on t he review committee for Technology Applications. The process began in March 2010. There have been opportunities for feedback from the field throughout the process. Public hearing, first reading and filing are scheduled for January 2011 with second reading and adoption in April 2011. Professional development for the revised TEKS is scheduled for Spring/Summer 2012 and ongoing. Implementation of revised Technology Applications TEKS is scheduled for fall 2012.

No Child Left Behind, Title II, Part D
Goal: Technology Literacy:
"To assist every student in crossing the digital divide by ensuring that every student is technology literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability."

The state defines a "technology literate" student as one w ho has mastered the Technology Applications TEKS for Grades K-8. Districts report their progress in meeting this requirement to TEA and the United States Department of Education.

Goal: Curriculum Integration:
"…ensure ongoing integration of technology into school curricula and instructional strategies in all schools in the State, so that technology will be fully integrated into the curricula and instruction of the schools…"

The *Long-Range Plan for Technology, 2006-2020*, reinforces this requirement, as well, and specifies that the Technology Applications curriculum will continue to be used to document specific expectations for teaching and l earning with digital technology. Schools and teachers are expected to report their progress in meeting this requirement through completing the Texas STaR Charts.

21st Century Teaching and Learning

The use of digital technology in Texas schools plays a fundamental role in changing teaching and learning and preparing students to live and work in the 21st Century. Technology can be used to provide access to engaging and rigorous digital content; improve teacher effectiveness; analyze real-time, on-going data to individualize instruction and measure student progress; and dev elop professional learning communities that foster the home, school, and community connection.

In the Speak Up 2009 Survey data, provided by Project Tomorrow, a nat ional education nonprofit group, data was collected regarding technology use for school work at Grades K-2, 3-5, 6-8, and 9-12.

Texas students' responses to use of technology for school work (Top responses – scoring 30% and above)

Technology Use	Responses
Grades K-2	
Play educational games	58%
Learn to type	44%
Practice math	43%
Watch science videos	40%
Listen to books	33%
Internet research	32%
Practice writing	30%
Grades 3-5	
Play educational games	50%
Practice math	43%
Listen to books	33%
Watch science videos	33%
Grades 6-8	
Create multimedia	57%
Communicate with peers	47%
Play educational games	43%
Take tests online	30%
Grades 9-12	
Access class info	65%

Technology Use	Responses
Create multimedia	62%
Communicate with peers	57%
Collaborate on projects via Facebook	45%
Communicate with teachers	38%
Use online textbooks	36%

This gives a look at new and changing applications of digital technology from K-12.

The recommendations in the Texas *Long-Range Plan for Technology, 2006-2020* support these 21st Century learning opportunities—opportunities that would not be possible without the technology.

The Plan provides recommendations for Texas schools so that by 2020 the following can be accomplished:

- All learners engage in individualized, real-world learning experiences supported by ubiquitous access to modern digital tools; robust anywhere, anytime connectivity; and dynamic, diverse learning communities.

- All learners access, evaluate, manage, and use information in a variety of media formats from a wide array of sources. They create knowledge, apply it across disciplines and creative endeavors, and purposefully communicate that knowledge, and the results of its use, to diverse audiences. Learning experiences take place in authentic settings and require collaboration and management of complex processes. These experiences involve critical thinking, social responsibility, complex decision making, and sophisticated problem-solving.

- Learners develop the self-directed learning skills and attitudes that enable them to learn effectively.

With new 21st Century digital learning content, technology, and resources, these recommendations are more attainable than at any other time.
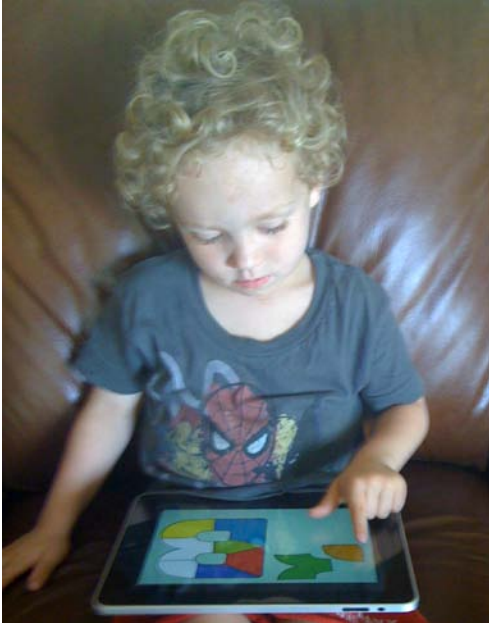
Prekindergarten Guidelines and K-8 Standards

The *Long-Range Plan for Technology, 2006-2020* recommends the continued support for the implementation of the Prekindergarten Guidelines in Technology Applications and the Technology Applications Texas Essential Knowledge and Skills (TEKS) for Grades K-12. In addition, it identifies the need for the revision of the Technology Applications student standards to ensure appropriateness of requirements through time and alignment with 21st Century skills and Texas College and Career Readiness Standards.

The Technology Applications TEKS for Grades K-12 were adopted in 1997 and became effective in 1998. Current Technology Applications TEKS that span from grades kindergarten through grade 12 have four common strands: Technology Foundations; Information Acquisition; Work in Solving Problems; and Communication.

DESCRIPTIONS OF TECHNOLOGY APPLICATIONS TEKS STRANDS FOR GRADES K-12

TA TEKS Strand	Description
I. TECHNOLOGY FOUNDATIONS:	Through the study of technology applications foundations, including technology-related terms, concepts, and data input strategies, students learn to make informed decisions about technologies and their applications.
II. INFORMATION ACQUISITION:	The efficient acquisition of information includes the identification of task requirements; the planning for the use of search strategies; and the use of technology to access, analyze, and evaluate the acquired information.
III. WORK IN SOLVING PROBLEMS:	By using technology as a tool that supports the work of individuals and groups in solving problems, students will select the technology appropriate for the task, synthesize knowledge, create a solution, and evaluate the results.
IV. COMMUNICATION:	Students communicate information in different formats and to diverse audiences. A variety of technologies will be used. Students will analyze and evaluate the results.

The refinement and revision process for the Technology Applications TEKS is underway. The implementation of the revised Technology Applications TEKS is scheduled for fall 2012.

The Technology Applications Prekindergarten Guidelines were revised and appr oved by the commissioner of education in May 2008. They are found with resources for teaching the commissioner's guidelines at the TEA Curriculum website.

The *Long-Range Plan* recommends that TEA continue to support the implementation and revision of TEKS in all content areas and include reference citations to the Technology Applications TEKS within the foundation curriculum TEKS of English language arts and reading, mathematics, science, and social studies.

Middle school students were asked, "If you could create the ideal technology class at your school, what would be the top 5 things you would like to learn in that class?"

The top responses follow:

What would you like to learn in class?	Response
How to create a website	40%
How to create an online game or simulation	35%
How to protect my computer from viruses and spam	27%
How to create and edit a video for a class project	26%
How to do computer programming	24%
How to do Internet research	22%
How to create an effective presentation	21%
How to protect myself when I am online	21%

Source: Texas Speak Up 2009 Data

High School Technology Applications Standards

With regard to high school students, the *Long Range Plan for Technology* encourages the

Texas Education Agency (TEA) to continue to support high school Technology Applications courses: both the role these courses play in teaching advanced technology knowledge and skills as well as the opportunities for these courses to support learning in the foundation curriculum areas. The Technology Applications high school courses build from the digital technology knowledge and skills identified by the K-8 standards and offer opportunities for in-depth study of technology as a result preparing students for higher education.

Courses specified in 19 TAC Chapter 126 include:

- Computer Science I and II, including College Board Advanced Placement (AP) and International Baccalaureate (IB) programs
- Desktop Publishing
- Digital Graphics/Animation
- Multimedia
- Video Technology
- Web Mastering
- Independent Student in Technology Applications

The courses have provided the flexibility to be taught in the context of English language arts, mathematics, science, and s ocial studies through the use of advanced applications that make it possible for students to visualize, internalize, and appl y complex concepts; support algorithmic thinking; communicate and collaborate with others, and ex press themselves. This connection with the foundation areas begins in the Technology Applications TEKS for kindergarten and continues to build ties and s upport the attainment of foundation-area TEKS through grade twelve.

For example, students have: developed educational games in Computer Science to support learning in various curriculum areas; created a new spaper or yearbook as a pa rt of the Desktop Publishing course; brought to life physics concepts as part of the Digital Graphics/Animation course; developed algebra "how-to's" through the Video Technology

course; and created historical event reviews through the Web Mastering course. With the focus on the 4X4 curriculum requirements at the high school level, where students must successfully complete four courses in each subject of the foundation curriculum, the Technology Applications courses have provided new methods to enhance and f urther engage students in the learning of the foundation curriculum. M any Technology Applications teachers are also certified in the foundation curriculum areas.

Just as they would in fine arts or other core curriculum areas, students can choose one or more courses in Technology Applications. They may want a course or a few courses, or they may want to pursue Technology Applications as a field of study in preparation for higher education. The courses allow for this flexibility.

The Technology Applications courses align directly with Texas College and C areer Readiness Standards, especially in the following Cross-Disciplinary Standards:

I.   Key Cognitive Skills, including Intellectual curiosity; Reasoning; and Problem solving
II. Foundational Skills, including Research across the curriculum; Use of data; and Technology

The Technology area includes these standards—all of which are a major focus of the Technology Applications high school courses as well as student standards for Grades K-8:

1. Use technology to gather information;
2. Use technology to organize, manage, and analyze information;
3. Use technology to communicate and display; and
4. Use technology appropriately.

Under 19 TAC Chapter 74, Curriculum Requirements, districts must offer at least four of the Technology Applications courses specified in TAC Chapter 126. There are multiple avenues for providing instruction in

these courses, including distance learning and dual credit/concurrent enrollment. Districts use a variety of funding sources including the technology allotment and NCLB, Title II, Part D funds to support the Technology Application courses.

House Bill (HB) 3, 81st Texas Legislature, 2009, changed eliminated the technology applications requirement from the Recommended High School Program, effective in the 2009-2010 school year. The change was made to provide flexibility in the enrichment areas of the Recommended Plan by increasing the number of elective credits. The SBOE revised the Minimum High School Program and the Distinguished Achievement Program, eliminating the technology applications requirement, for consistency across the three diploma programs in January 2010. School districts retain the authority to add requirements beyond what is required in state law and rule for graduation.

The Technology Applications graduation credit was in place for all students under all graduation plans since 1997—after the TEKS were first adopted. Prior to that, there were requirements for computer science/computing proficiency as early as 1984.

NCLB, Title II, Part D Technology Requirements

No Child Left Behind (NCLB) has two requirements in Teaching and Lea rning: Technology Literacy and C urriculum Integration. The Texas Campus and Teacher STaR Charts as well as the NCLB Technology Report assisted TEA in documenting the NCLB requirements during this progress report timeframe.

No Child Left Behind, Title II, Part D

Goal: Technology Literacy
First, the law requires that every student be technology literate by the time the student finishes eighth grade. The state defines a "technology literate" student as one who has

mastered the Technology Applications TEKS for Grades K-8. To meet the NCLB requirement for the technology literate eighth grader, documentation of student proficiency is to be made at the local level. Texas has rigorous technology applications standards and adopted instructional materials; however, there is not a standard statewide process for assessing student technology literacy.

A request by the United States Department of Education was to provide the actual number of students who are "technology literate" by the end of eighth grade. This led to the additional NCLB Technology Report, an addi tional component to the STaR Chart system, beginning in fall 2008. During the 2009-2010 school year, reporting schools identified 172,374 technology literate eighth grade students.

In the 2009-2010 Texas Campus STaR Chart focus area Student Mastery of Technology Applications (TA) TEKS, the data showed that most campuses fall at the Developing Tech level (62%). This is in line with the data that was reported specifically about the eighth graders.

A recommendation in the *Long Range Plan for Technology* that expands the NCLB requirement is for school districts to measure student mastery of the Technology Applications TEKS at grades two, five, and eight and report the results of student mastery to TEA.

No Child Left Behind, Title II, Part D

Goal: Curriculum Integration
The second requirement was for technology to be fully integrated into the curricula and instruction of the schools by December 31, 2006. Texas defines effectively and fully integrated as: teachers and students have regular access to digital resources and technology tools that are integrated into the curriculum through various instructional settings. The Texas Campus and Teacher STaR Charts have provided an oppor tunity for school districts to develop strategies to monitor and document progress of integration of technology into curricula and instruction.

In the 2009-2010 Texas Campus STaR Chart focus area Content Area Connections, the data showed that many campuses moved from the Early Tech level into the Developing and Advanced Tech levels over the timeframe included in this progress report on the Long-Range Plan. Approximately 60% of campuses rank themselves at the highest two levels on the STaR Chart (Advanced Tech or Target Tech) in the Focus Area of Content Area Connections.

Internet Safety

An important component of the technology applications curriculum and the implementation of technology in Texas schools is the proper and safe use of digital technology. During the 80th Legislative Session, House Bill 3171, Section 38.023, required the Texas Education Agency to develop and m ake available to school districts a l ist of resources addressing Internet Safety. Resources are available on the Internet Safety website at TEA: http://www.tea.state.tx.us/technology. There are resources for students, educators, and parents. This website is important as increasing numbers of students use the Internet in the classroom and at home.

Technology Literacy Assessment Pilot
House Bill 2503, Texas Education Code §39.0235

Background
Texas students are currently required by No Child Left Behind to be technology literate by the end of the eighth grade. The state defines a "technology literate student" as a student who meets the requirements of the state's Technology Applications Texas Essential Knowledge and Skills (TEKS). In addition, the Texas Education Agency's (TEA's) *Long-Range Plan for Technology, 2006-2020* includes a priority for Technology Applications accountability at grades 2, 5, and 8. The state

has rigorous Technology Applications content standards and has adopted Technology Applications instructional materials; however, there is no standard statewide process in place for assessing students' technology literacy.

During the 80th Texas Legislature, 2007, the passage of House Bill (HB) 2503 added Texas Education Code (TEC), §39.0235. The law and accompanying regulation required the establishment of the Technology Literacy Assessment Pilot program in which participating school districts measured student technology proficiency using an agency-adopted testing instrument designed to assess an individual student's mastery of the essential knowledge and skills in technology. According to law, the designated assessment was to be administered by the school districts participating in the pilot program. After issuing a Request for Product and analyzing applicants, Learning.com's TechLiteracy Assessment product was chosen for the pilot study.

In the *2008 Progress Report on the Long-Range Plan for Technology*, the agency reported on the features of the Tech Literacy Assessments, explained the pilot study's research design and sampling process, and presented preliminary findings from the analysis of assessment data collected in spring 2008. Sections that follow present the key findings from the analysis of assessment data collected by 17 school districts that served as a representative state sampling in spring 2008 and spring 2009.

Key Findings
- The average Scale Scores for the samples of Texas eighth graders improved in the second pilot study year but still fell short of the middle-school Proficiency Standard (Scale Score of 220).
- Mean scores for most of the Skill Modules across two testing years indicated that Texas eighth graders completed about half of the module items correctly. Across two years, students had the highest module scores for Telecommunications and Internet, which probably reflects their

personal use of technology as a communication tool both within and outside of school.
- Spring 2008-to-spring 2009 comparisons for Texas eighth graders' average Skill Module Scores showed small improvements for modules assessing Systems and Fundamentals, Social and Ethical, Spreadsheets, and Multimedia and Presentations. However, average Skill Module Scores declined across years for Telecommunications and Internet, Word Processing, and Database.
- Across two years, about 6 of 10 Texas eighth graders met the Proficiency Standard needed to show proficiency with technology tools and concepts. Results indicate that many Texas eighth graders are failing to acquire the technology knowledge and skills needed to compete in the 21st century.
- Comparisons with national averages show that the technology proficiency gap between Texas eighth graders and all eighth graders who completed the TechLiteracy Assessment narrowed in spring 2009, with 61.5% of Texas students meeting the proficiency standard compared to 62.9% of eighth graders nationally.

Additional analyses were conducted to determine whether any of the changes in eighth graders' scores across years differed to a statistically significant degree.

Key Findings
- Eighth graders who attended schools that administered the TechLiteracy Assessment in spring 2009 had statistically significant, higher mean Scale Scores (222.2) than eighth graders who completed the assessment in spring 2008 (219.2). However, the difference between groups was small.
- Eighth graders who completed the TechLiteracy Assessment in spring 2009 compared to eighth graders tested in spring 2008 had higher scores for four modules by statistically significant margins: Systems and Fundamentals; Multimedia and

Presentations; Social and Ethical; and Spreadsheets.

- Eighth graders who completed the TechLiteracy Assessment in spring 2009 compared to eighth graders tested in spring 2008 had lower scores for three modules by statistically significant margins: Database; Word Processing; and Telecommunications, and Internet.

Differences between student groups must be interpreted cautiously because they involve comparisons between cross-sectional cohorts (students at a particular grade level are compared across years). Thus, detected score disparities may reflect differences in the characteristics of students tested across years.

To explore the association between student characteristics and m astery of the Texas Technology Applications Standards, researchers conducted an analysis of the strength of relationships between student characteristics (measured at the school level), school characteristics, and students' Scale Scores in 2008 and 2009:

Key Findings

- Analyses of the relationships between average student and s chool characteristics and average Scale Scores show that the percentages of limited English proficient, economically disadvantaged, and H ispanic students at a c ampus were negatively associated with the TechLiteracy Scale Score at a statistically significant level.
- In contrast, the percentage of White students at a campus was significantly and positively associated with eighth graders Scale Score. Findings for African American students were neutral.
- Results suggest that many disadvantaged students need stronger school supports for their mastery of technology knowledge and skills. The technology-related experiences of White students and more economically advantaged students outside of school may help to explain differences in performance.

Average TechLiteracy Assessment outcomes for each of the participating districts/schools reveal that, while 7 districts (41%) had noteworthy increases in the percentages of eighth graders meeting the technology proficiency standard in spring 2009, proficiency rates continued to vary greatly across the sample districts; additionally, both testing phases revealed mean Scale Scores ranging to similar degrees. Ten (59%) of the 17 districts/schools had an average Scale Score at or above the proficiency standard in both 2008 and 2009. Final results and additional program information are available on TEA's Technology Literacy Assessment Pilot website.

Technology Immersion Pilots (TIP)

The [Technology Immersion Pilots](#) were funded through Public Law 107-110 No Child Left Behind Act of 2001, Title II, Part D, Subpart 1, Enhancing Education Through Technology; CFDA # 84.318.

Purpose of the Program

The idea of immersing a campus in technology is based on research about the effectiveness of education technology. By putting together all of the resources necessary to effectively introduce and use technology in the teaching and learning process and implement them as a package rather than piecemeal, schools can harness the true power of technology to expand and extend learning. This bundling of resources ensures that technology becomes a partner to the teacher.

With the Technology Immersion Program (TIP) model, schools implemented six critical technology components at the same time. T he six components included: a wireless mobile computing device for each student for use at home and school; ongoing professional development for teachers and administrators through proven training models; online instructional resources; online formative and di agnostic assessment tools; productivity tools; and technical support. TIP created an environment where technology was a pa rtner to teaching and learning. Teachers still facilitated learning but had the technology to carry the act of learning beyond the classroom walls and beyond the school day. Technology immersion allowed each student direct, ongoing access to teaching both within and beyond the classroom, and allowed each teacher the ability to extend the process of learning. In addition, technology immersion gave all students access to educational resources along with increased educational opportunities.

The TIP project in Texas achieved an important step in its ongoing promotion of the use of technology as over 39 Middle School campuses statewide moved to 1:1.

Technology Immersion Pilot

Technology Immersion Pilot Objectives
- Provide a wireless mobile computing device to each student in a participating school.
- Implement the use of software, online resources, and other appropriate learning technologies that have been shown to improve student academic achievement.
- Improve student performance on assessment instruments.
- Reduce student dropout and increase student attendance rates.
- Increase student enrollment in higher education.
- Enhance teacher performance and increase teacher retention rates.
- Increase communication among students, teachers, parents, and administrators.
- Increase parental involvement in the education of the parent's child.
- Increase community involvement and support for the district and/or school.
- Increase student proficiency in technologies that will help prepare the students for becoming a member of the workforce.

TIP Evaluation
Launched in 2003 by the U.S. Department of Education, Evaluating a State Education Technology Program (ESEPT) grants funded the TIP Evaluation called eTxTIP (Evaluating the Texas Technology Immersion Program). The scientific research design involved a random assignment of middle schools to experimental and control groups with experimental campuses implementing the technology immersion model. The Texas Center for Educational Research (TCER), a nonprofit research organization was selected to conduct the four year evaluation. All of the

evaluation reports on TIP are located at http://www.tcer.org/research/etxtip/.
Data was collected from fall 2004 to spring of 2008 and included interviews and focus groups, as well as making classroom observations. Through this multi-year study some significant positive findings emerged. Some of the traits of successful schools can be obtained from the 3rd year report entitled "Third-Year (2006–07) Traits of Higher Technology Immersion Schools and Teachers, July 2008."

Findings from four implementation years suggest that Technology Immersion can be implemented if districts and schools are committed to the specifications of the TIP model, especially students' personal access to laptops within and outside of school, addressing anytime/anywhere on demand learning. The TIP design requires a comprehensive approach that changes and enhances the nature of teaching and learning.

The 4th year report discusses the challenges and issues that the grant faced as TIP was implemented and also makes recommendations for schools interested in immersion and sustaining the program. Further information on these findings can be found in the 4th report, titled "Final Outcomes for a Four-Year Study (2004–05 to 2007–08) January 2009," at www.tcer.org.

More information can be found on TEA's Technology Immersion Pilot (TIP) website.

TIP Results

Results of TIP were provided in the *2008 Progress Report on the Long-Range Plan for Technology, 2006-2020*. Among the key findings, this report noted:

- Teachers at higher immersion schools believed laptops improved student learning.
- Students at higher technology immersion schools typically had one to one access to laptops within and outside of school.
- Students at higher immersion schools used laptops for an array of assignments in their core classes, and they used laptops for some complex and challenging projects.
- Students at higher immersion schools used laptops extensively for learning at home. This proved to have a significant positive finding on student achievement.
- Students believed laptops improved their learning by making schoolwork more interesting, providing immediate access to informational resources, improving their technical skills, and assisting them in getting

better grades and in preparing for the TAKS test.

- Students at higher immersion schools believed laptops helped them to be more organized and efficient, more responsible, and better prepared for the future.

TIP Sustainability

As part of final evaluation site visits, administrators, technology specialists, and teachers commented on sustainability of the Technology Immersion model at their schools. Comments indicated that:

- Sustainability depended on the commitment of district leaders to Technology Immersion and to long-range planning for continuation.
- Sustainability of Technology Immersion depended on the adequacy of funds to support continuation.
- Sustainability of Technology Immersion was associated with educators' beliefs about technology's value for addressing the learning styles and needs of students, and educators' commitment to move toward digital school environments.
- Some school administrators were committed to continuation of Technology Immersion but wondered if an incremental approach to implementation might have improved their long-term prospects for sustainability.
- Several schools that had great difficulty implementing the Technology Immersion model planned to abandon one-to-one student laptop access and return to more conventional configurations of educational technology.
- Findings from the four-year project suggest that Technology Immersion can be implemented and is sustainable if districts and schools are committed to the model; however, other approaches to technology use may be appropriate for some districts and schools.

Since the funding to the TIP grants ended in June 2008, the original participants report that they are continuing to support progress in technology immersion. They are encouraging their teachers to use technology for more

effective instruction, and they assist teachers with technology immersion throughout the school day. Experienced teachers mentor and train new teachers on the technology tools and on the use of technology for classroom instruction. Teachers co-teach and model technology lessons. Vertical teams within each department provide on-going support to address areas of concern and to provide best practices. Districts continue to partner with their education service centers (ESCs) and other partners to provide training for teachers both on- and off-site.

At most TIP campuses, the Technology Instructional Specialist continues to mentor, co-teach, and train during staff development activities within the classroom. Continued district level collaboration is invaluable to districts as they strive to sustain their TIP campuses.

Sustaining programs can be challenging, but schools find that some aspects of the program can be sustained through the knowledge gained during the program implementation. For instance, the knowledge gained during the TIP program has given schools a rich understanding of web-based resources that are at their fingertips. These resources support instruction that expands the classroom boundaries. Trained teachers have the confidence to use tools and strategies for learning that leverages the best that technology can offer in support of student excellence and achievement.

TIP Toolkit
The TIP Toolkit is a tool for planning a school technology immersion program and provides an overview of the TIP project and factors to consider before implementing a technology immersion program. Developed for the TIP program, the TIP Toolkit is available to districts that want to start an immersion program. Information is provided in the following categories:

- Leadership, Vision and Planning
- Teacher Readiness and Receptivity

- Stakeholder Buy-In
- Commitment of Time and Support
- Budget

The toolkit provides detailed information on the evaluation principles, methods, procedures, instruments, and analyses employed in the study of technology immersion. The toolkit can enable other educators, evaluators, and researchers to conduct empirical studies of technology initiatives by replicating the approaches used in the study.
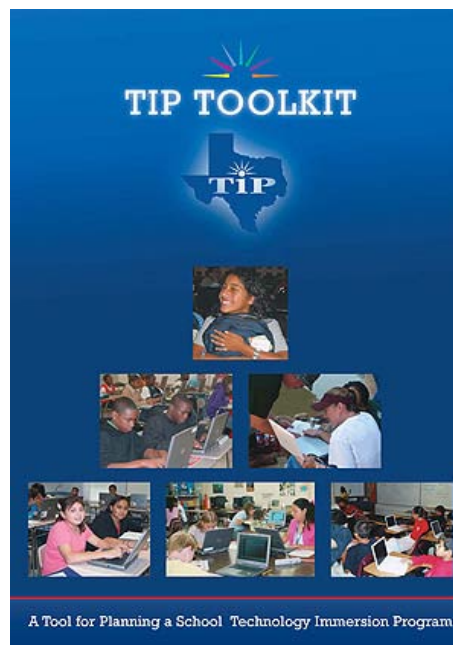
The TIP Toolkit is available online and continues to provide school districts that are in the early stages of immersion implementation with invaluable information and lessons learned from the TIP program implementation.

Vision 2020 Grant

The [Vision 2020](#) grant is funded through No Child Left Behind, Enhancing Education Through Technology, Title II, Part D. For more information, please visit www.tea.state.tx.us/technology

Purpose of the Program

Vision 2020 is targeting the best practices and lessons learned from earlier pilots implemented within the state of Texas educational technology arena such as the Virtual School Pilot (VSP) and the Technology Immersion Pilot (TIP) 2004-2008 and the STAR (Professional Development for Schools, Teachers, Administrators and Regions Grant) 2007-2009.

Background Description

The primary goal of Vision 2020 is to increase the academic progress of teachers and students who are participating in the project by providing an option to participate in one of two strands of this grant.

The purpose of the Technology Immersion strand is to provide schools with funding necessary to provide (a) a wireless mobile computing device for each educator and student on an immersed campus to ensure on-demand technology access at school and at home; (b) productivity, communication, and presentation software for use as learning tools; (c) online instructional resources that support the state curriculum in English language arts, mathematics, science, and social studies; (d) online assessment tools to diagnose students' strengths and weaknesses or to assess mastery of the core curriculum; (e) professional development for teachers to help them integrate technology into teaching, learning, and the curriculum; and (f) initial and ongoing technical and pedagogical support.

The Virtual Learning strand grant was developed to build capacity to participate in the Texas Virtual School Network (TxVSN). Districts could use funds for students to take courses through TxVSN, for the development of courses for submission to TxVSN and to provide professional development to enable teachers to teach online. With the passage of House Bill 3646, 81st Texas Legislature, 2009, all students could take courses through TxVSN via allotment funding. However, the Virtual Learning strand continued to provide funding for on-site mentors for students taking online courses, professional development that trained teachers to teach online for the TxVSN, and many participants developed online courses for the TxVSN through this strand. Find out more about TxVSN at www.txvsn.org.

Vision 2020 Grant

Results from Progress Reports and Evaluations

Immersion

Immersion reports from grantees indicate teachers and students have increased access to and use of digital content from online and network based applications. Immersion classes increase individualized instruction through a wide variety of technological features that enable analysis, feedback, and customization of instruction. In addition, increased web-based instruction provides students with anytime, anywhere access to assignments and assessments by creating portals for student use and submission of data. The increased use of technology, through immersion, changes the way staff teach.

Virtual Learning

Virtual Learning reports from grantees show improved face-to-face teaching as a result of professional development for online teaching. As a result of professional development, teachers are increasingly using blended learning practices. As part of blended instruction strategies, teachers are increasing their use of Web 2.0 tools such as blogs, wikis, and podcasts. The Virtual Learning grants have increased the availability of courses via distance learning, including foreign languages, art appreciation, English IV-AP. In addition, an increased numbers of students at grant schools are taking dual credit online courses, helping districts in their efforts to support first generation college students. An increased numbers of students are receiving class credit outside of normal attendance time, leading to more flexible scheduling and opportunities for student electives. As part of capacity building for TxVSN, teachers have completed approved professional development to teach for TxVSN. Districts have created courses for submission to TxVSN. This grant project has also increased local recognition of the benefits of online coursework. Grantees report increased interest in the virtual learning process for teachers and students.

Leadership Conferences

Beginning with the Technology Immersion (TIP) program, a l eadership conference at the beginning of each grant implementation has been held to provide essential information and support to district administrators, teachers, and grant managers and to provide participants with an opportunity for networking and sharing. The leadership conferences provide schools with the vision behind the NCLB Title II Part D grants. Because of the significance of the leadership conferences for successful grant implementation, leadership conference attendance was required for districts participating in the Vision 2020 grants.

Conclusion

Through the Vision 2020 grant, districts in the Immersion strand have been able to implement technology immersion, giving students and teachers one-to-one computers for the classroom. In addition, through the Virtual Learning strand of Vision 2020, districts are providing professional development for teachers to teach and develop online courses, increasing local awareness and us e of online learning, and building capacity for district participation in the TxVSN. Between professional development for teachers, online courses for students, and the purchase of content and technology, the Vision 2020 grant continues to help Texas public schools acquire and use technology effectively for teaching and learning.

Vision 2020 Timeline

Vision 2020 C ycle 1 grants began on September 1, 2008, and ended June 30, 2010. Vision 2020 C ycle 2 grants began on September 1, 2009, and end on June 30, 2011.

For inquiries contact:
vision2020@tea.state.tx.us

Target Tech in Texas (T3) Grant

The Target Tech in Texas (T3) Collaborative Grant is codified in the Public Law 107-110, CFDA #84.386, No Child Left Behind (NCLB) Act of 2001, Title II Part D and The American Recovery and Reinvestment Act of 2009 (ARRA or Recovery Act), enacted February 17, 2009 (P.L. 111-5). For more information, please visit: www.tea.state.tx.us/technology.

Purpose of the Program

The funds, made available through the T3 Collaborative Grant, provide up-to-date and innovative technology to students and educators. The grant enables schools to focus on improving teaching and learning to support college and career readiness and prepare students to learn and work in the 21st Century.

Background

The Target Tech in Texas (T3) Collaborative Grant—American Recovery and Reinvestment Act (ARRA) of 2009 provides funding to assist schools with the goal of working towards the Target Tech level. "Target Tech" refers to the highest level of progress as described on the Texas Campus and Teacher School Technology and Readiness (STaR) Chart. The

STaR Chart provides a measure of how well a teacher or campus has integrated technology into teaching and learning and also measures fundamental aspects of the education process, such as leadership, professional development, and infrastructure. The goals of the grant include providing students with the necessary advanced technologies, educational technology programs and practices, and well-trained teachers to enable schools to use innovative teaching strategies designed to engage students and promote critical thinking, problem solving, creativity, and college and career readiness. The recipients of the Target Tech in Texas (T3) Collaborative Grant received their grant funding beginning on November 1, 2009.

T3 Impact on STaR Chart

Teaching and Learning

With T3 funding, districts across the state are implementing innovative teaching strategies using technology in their classrooms to focus on math and science and have already seen a strong impact.

For instance, districts have begun podcasting lessons, helping to create online learning environments that are accessible 24/7. Teaching practices are being transformed by creating lessons that require more student involvement and interaction. Using digital storytelling in teaching and learning provides students with the opportunity to work in groups, to solve real world issues, and manage a project from beginning to end.

Target Tech in Texas (T3) Grant

Educator Preparation and Development

Teachers involved in the Target Tech in Texas (T3) Collaborative grant are required to complete 18 hours of professional development each year of the two year grant on the use of educational technologies to improve teaching and learning. The professional development selected by grantees is research-based and ongoing. Rather than being dependent on specific hardware or software, the professional development focuses on educational technology pedagogical strategies for classroom instruction that include mentors and coaches. Through professional development, T3 teachers are focusing on taking objective instructional lessons and integrating them into a deliverable product through technology that can be electronically housed and shared with other teachers. Teachers are meeting in Professional Learning Communities with district level personnel from Curriculum and Instructional Technology to continue their learning and provide a support system for their coworkers.

Leadership, Administration, and Instructional Support

Support from all stakeholders on the campuses involved in any educational technology grant is crucial to the success of the program. Administrators for the T3 grant are required to complete at least 12 hours of educational technology leadership training each year of the grant focused on achieving the Target Tech level. In addition, administrators must act as role models for teachers by providing them time to attend professional development meetings and by supporting the use of professional learning communities and peer coaching. Part of the leadership support for the T3 grant is involving parents in the grant process and ensuring that the community knows the benefits of educational technology.

Through the grant, grantees have hosted media fairs for the community and parents that showcased students' electronic media projects resulting from the T3 grant funding. They have created blogs and websites with announcements and successes to help keep parents informed of the benefits of transforming the instructional practices to incorporate technology.

Infrastructure

Target Tech in Texas (T3) grantees had to determine whether their existing infrastraucture was appropriate to support the district technology goals and, if not, had to upgrade technology infrastructure to a suitable level to ensure the success of their grant program. In addition, appropriate technical support needs to be available to teachers as they integrate technology into curricula and instruction in order to make substantial progress in meeting the Target Tech level. Through the American Recovery and Reinvestment Act, over 124 districts and 4 charter schools were able to make a significant impact in their infrastructure for technology.

Principals have reported that the addition of technological resources have increased the overall capacity of the school to use technology to teach and learn. As a result of increased bandwidth, many schools are taking advantage of summer TxVSN courses for dual credit, college credit, and credit recovery.

T3 Timeline

The T3 Grant began in October 2009 and will be completed in October 2011.

For more information:
www.tea.state.tx.us/technology
www.t3grant.wetpaint.com
For inquiries, contact: T3@tea.state.tx.us

Connections Grant

The Connections grant is authorized by House Bill (HB) 2893, passed during the 81st Texas Legislative Session, 2009, and c odified in Texas Education Code (TEC), §§32.151-157. The Connections grant was funded under NCLB, Title II, Part D Enhancing Education Through Technology.

For more information, please visit: www.tea.state.tx.us/technology
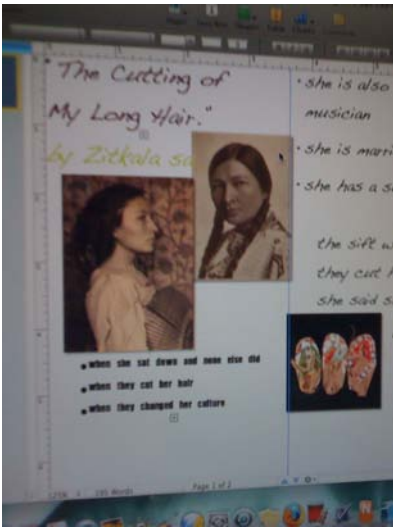
Purpose of Program

The purpose of the Connections grant is to identify and recruit local educational agencies (LEAs) to serve as statewide models for the transformative use of digital content in the classroom and at home. The grant is focused on building statewide connections among schools, teachers, and students.

Connections grantees will connect with other LEAs that need a ssistance to establish programs that use digital content and district- or

student-owned technological equipment in order to increase student achievement.

Connections grantees were asked to model in their demonstration site programs:

- Technologies that are most frequently used by students and that many already have at home, facilitating the extension of learning from campus to home

- Teaching and l earning practices that use digital content and innovative media tools

- Teaching and learning strategies that meet 21st Century competencies and demonstrate high student technology literacy skills

- Flexible learning schedules and flexible learning approaches, which may include extended campus learning hours to increase the availability of Internet access and technology for students and parents

Background Description

The Texas Education Code (TEC) §§32.151-32.157 establishes a technology demonstration sites project, building upon key lessons learned from the Technology Immersion Pilot (TIP), that allows students and teachers to:

- Demonstrate the use of technology for improving teaching and learning
- Use digital tools and resources to extend learning opportunities from school to home

Connections Grant

- Exemplify instructional practices and lessons that support academic learning in the classroom and at home

To implement TEC §§32.151-32.157, the Texas Education Agency leveraged funding available through No Child Left Behind, Title II, Part D, Enhancing Education Through Technology, in the amount of approximately $8.5 million to develop the Connections grant program. Eleven grantees were notified of their award in August 2010. The agency anticipates that addition funding will be available for a 12th district in fall of 2010.

Learning Connections
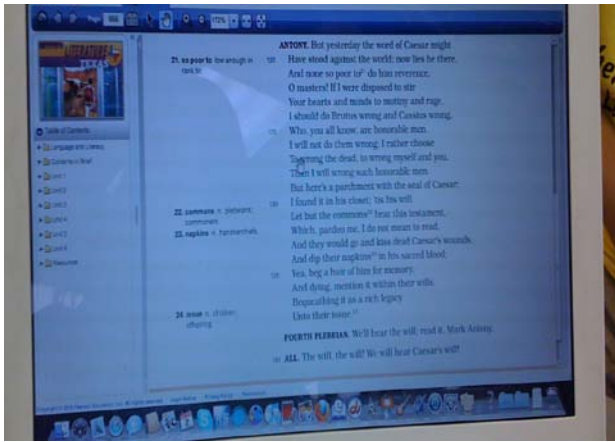
The eleven districts have varied program implementation plans. Among the most common technologies to be used under the grant are: wireless electronic tablets; various electronic readers; Macbooks, tablet PCs, and netbooks; smart phones with 3G capabilities; interactive whiteboard; student response systems (clickers); and flip cameras. Many districts have plans in place for students to use their own cell phones on campus for learning activities.

Some districts are using the grant for additional equipment that will help extend internet access for those students who do not have access at home. In addition to technological equipment, districts are using the grant to continue building their digital content resources and teachers' use of those resources. Most have plans to use the

resources available through Project Share as part of their grant implementation.

As part of their connection to other districts and stakeholders, Connections grantees will demonstrate teaching and learning with digital content through websites and campus visitation schedules for stakeholders.

Along with statewide outreach, Connections grantees with collaborative partners will work to identify and pr ovide needed t echnology equipment, digital resources and c ontent, and professional development. Connections grantees will work with their collaborative partners to build partnering district and/or campus capacity for the use of digital content and transformative practices. Districts and/or campuses collaborating with a C onnections grantee will adopt transformative teaching and learning strategies that use digital content in lieu of textbooks. They are also expected to leverage students' most frequently used technology tools in coordination with professional development and a pr oject plan as described in the grant application.

Connections Timeline

The Connections Grant begins October 1, 2010 and ends on June 30, 2012.

For more information, please visit:
www.tea.state.tx.us/technology
For inquiries contact:
connectionsgrant@tea.state.tx.us

Rural Technology Pilot Program

The 80th Texas Legislature, with the passage of House Bill 2864, directed the commissioner of education to establish a pilot program to provide state grant funds to finance technology-based supplemental instruction for students in grades 6 through 12 in rural school districts. As a result of this legislation, the agency established the Rural Technology Pilot Program (R-Tech). R-Tech is funded through the General Appropriations Act, Article III, Rider 81, 81st Texas Legislature and Texas Education Code 29.919.

For more information, please visit: www.tea.state.tx.us/technology
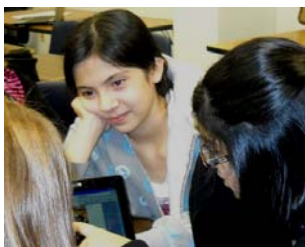
Purpose of Program
The purpose of this grant is to establish pilot programs to provide technology-based supplemental instruction, including online courses, to students in rural school districts to improve the overall success of students and address their individual academic needs.

Background Description
R-Tech allows eligible school districts to establish pilot programs to provide technology-based supplemental instruction, including online courses, to students in rural school districts (i.e., districts with an enrollment of less than 5,000 students and location outside a standard metropolitan statistical area) to improve the overall success of students and address their individual academic needs. The R-Tech program is designed to improve student performance for those students not currently meeting academic standards in English language arts, social studies, mathematics, science, or languages other than English and to supplement the education of students needing more opportunities than currently provided by the district.

Program Facts
- Eligible campuses may receive an amount not to exceed $200 in state grant funds for every eligible student participating in the program.
- Districts are required to provide $100 in matching funds for every eligible student participating in the program.
- R-Tech Cycle 1 and 2 - $6,334,743 in total funding available.
- R-Tech Cycle 3 - $3,750,000 in total funding available.
- Permissible expenditures under the R-Tech program include costs incurred to provide the following:
  - Research-based instructional support;
  - Teacher training;
  - Academic tutoring or counseling;
  - Distance learning opportunities that use the Internet and are aligned with the essential knowledge and skills adopted under TEC Section 28.002 for the subject

Rural Technology Pilot Program (R-Tech)

areas of English language arts, social studies, mathematics, science, and languages other than English, as applicable; and

- Distance learning opportunities that enable students to earn college credit in the subject areas of English language arts, social studies, mathematics, science, or languages other than English.

The additional funding required for the R-Tech matching funds may consist of local funds, private funds, or state funds other than R-Tech grant funds provided. For program activities provided at the high school level, the high school allotment may be used to meet the additional funding requirement.

A campus participating in the program must provide students with individual access to technology-based supplemental instruction for at least 10 hours each week.

To assist districts in selecting a vendor partner to provide the technology-based supplemental instruction, TEA issued a request for qualifications that led to the issuance of a list of qualified vendors for the R-Tech program. School districts could select a vendor on the list or were free to select any vendor available as a partner in the project.

Status and Progress since 2008
R-Tech Cycles 1 and 2 were completed in May 2010. R-Tech Cycle 3 was awarded in February 2010 and will be completed in February 2012.

Evaluation
Findings from the 2-year evaluation indicate that districts that incorporated R Tech as part of regular instruction (i.e., non-supplementary programs) experienced benefits relative to districts that strictly adhered to the grant's intent and implemented supplementary programs. The evaluation's results indicate that districts implementing non-supplementary programs:

- Served more students using R Tech resources

- Experienced lower average per-student implementation costs
- Had better student outcomes in reading/ELA and mathematics, and
- Achieved greater teacher buy-in and support for grant goals.

Details regarding the challenges that rural districts experience in implementing supplemental instructional programs, is available in the evaluation of R-Tech Cycle 1 on the agency website.

Program Timeline

February 2008	Release of R-Tech Cycle I Application
2008-2010	R-Tech Cycle I
June 2008	Release of R-Tech Cycle II Application
2009-2010	R-Tech Cycle II
October 2009	Release of R-Tech Cycle III Application
2010-2012	R-Tech Cycle III

For more information please visit:
www.tea.state.tx.us/technology

For inquiries contact: rtech@tea.state.tx.us

Distance and Online Learning

Distance learning has been des cribed as "a process to create and provide access to learning when the source of information and the learners are separated by time and distance, or both." Through distance learning, students across the state can have equitable access to quality education and instruction regardless of the district's or the student's wealth or geographic location. Distance learning enables schools of all sizes and of all economic means to expand students' options, supplementing and enhancing local resources.

Educational technology, which has been embraced by our state leaders and the public education system, has fostered the evolution of distance learning from traditional correspondence courses to contemporary forms delivered via interactive videoconferencing (IVC) and over the Internet. The latter is commonly referred to as online learning.

Over the past ten years, a succession of state and national reports has testified to the effectiveness of online learning. The agency and Texas stakeholders have been di rectly involved in research into online learning. That research is available in reports such as the state reports on the Virtual School Pilot (VSP), the Electronic Course Pilot (eCP), the Texas Virtual School Network (TxVSN) and other reports from entities such as the Southern Regional Education Board (SREB), and t he annual *Keeping Pace with K-12 Online Learning Report*. Research shows that online learning provides the interactive, collaborative and self-paced learning environment that help students gain the skills needed t o succeed in their pursuits following graduation—in the workforce and hi gher education. The SREB notes that "…most online courses are at least as successful as their face-to-face counterparts, and many have a h igher completion rate." Per the 2009 K eeping Pace Report, "State virtual schools now exist in 27 states," including Texas.

Student enrollment in state virtual schools is multiplying. As Keeping Pace also notes,

"Together, the state virtual schools provided roughly 320,000 course enrollments (one student taking one semester long course)."

The success of online learning, nationally and s tatewide, and its importance as a means for addressing students' needs in public education is reflected in its adoption into a num ber of strategic plans for public education in 2010. In the spring release of the U.S. Department of Education's National Educational Technology Plan, "Transforming American Education: Learning Powered by Technology," a recommended strategy for teaching is to "develop a teaching force skilled in online instruction." The National Ed Tech plan recognizes that the online learning "environment creates virtual classrooms in which educators and s tudents can interact in new ways with course content and with one anot her." The agency's *Strategic Plan for the Fiscal Years 2011-2015*, considers the increased importance of the Texas Virtual School Network (TxVSN), in light of tightening budgets and new technology. The strategic plan notes that the TxVSN expands access to quality programs online that supports the academic achievement of all students and i ncrease opportunities for post-secondary success.

Senate Bill (SB) 1788, 80th Texas Legislature, 2007, defined online learning as a hi ghly interactive form of learning in which teachers and students are engaged in discussions and collaborations that promote critical thinking skills, and—while learning is student-centered—the teachers are actively engaged with their online students and become familiar with each student's learning style, communication style, and

Distance Learning

interests. The online courses are teacher-led with digital content delivered via the Internet that includes media in the form of text, image, animation, streaming video and audio.

With the establishment of the Texas Virtual School Network through SB 1788, and its role in the agency's strategic plan, online learning has an i ncreasingly accepted and vital role within the education plans of Texas students.

Online Learning Texas STaR Chart Data
General data regarding online usage is gathered in the Texas Teacher and Campus STaR Charts. The STaR Chart update aligns with the LRPT, 2006-2020, and reflects its aim of assisting classroom teachers in assessing needs and s etting goals for the use of technology in the classroom to support student achievement in the 21st Century. It also provides data for the LRPT recommendation that all learners have access to specialized courses and ex panded curricular and instructional offerings through the use of technology, including online and other distance learning and digital content services to meet the

diverse and per sonal learning needs of all students.

In order to obtain better data regarding statewide online learning, beginning in the 2006-2007 school year, the Texas STaR Chart included substantially expanded reporting categories for online and distance learning in all four key sections. This update reflects the growing sophistication of web-based educational technology, teachers' growing proficiency, and the recognition that distance learning via the Internet is rapidly expanding as a means of meeting students' needs, both across the nation and statewide.

The data reported in the Teaching and Learning section of the Teacher STaR Chart below indicates a s light increase in teachers' self-assessed proficiency in online teaching and learning in the over the past two years. "Early" tech integration has decreased, while "Advanced" and "Target," the highest areas of integration, have increased slightly. O ver 300,000 Texas teachers were surveyed.

Teacher School Technology and Readiness (STaR) Chart: Teaching and Learning

	ONLINE LEARNING	2008-2009	2009-2010
Early Tech	Most teachers use a few web-based learning activities.	18.79%	13.90%
Developing Tech	Most teachers customize several web-based lessons which include online TEKS-based content, resources, learning activities and interactive communication that support learning objectives.	72.85%	76.21%
Advanced Tech	Most teachers create web-based lessons which include online TEKS-based content, resources, learning activities, and interactive communications that support learning objectives.	7.35%	8.83%
Target Tech	Most teachers create and integrate web-based lessons which include online TEKS-based content, resources, learning activities, and interactive communications that support learning objectives throughout the curriculum.	1.01%	1.06%

Texas Virtual School Network (TxVSN)

Texas Virtual School Network is authorized by Texas Education Code (TEC) Chapter 30.A and General Appropriations Act, Rider 80, 81st Texas Legislature www.txvsn.org.

Purpose of the Program

The Texas Virtual School Network (TxVSN) was established by the Texas Legislature to provide Texas students with equitable access to quality, supplemental online courses.

Background/Description

The TxVSN is administered by the Texas Education Agency under the direction of the commissioner of education. The TxVSN offers a statewide catalog for high school and dual credit courses provided by eligible Texas school districts, open enrollment charter schools, education service centers, and public or private institutions of higher education. These TxVSN Provider Districts submit courses for inclusion in the statewide catalog and are responsible for instruction. Each course in the catalog is reviewed for alignment to course TEKS and the International Association for K-12 Online Learning's (iNACOL) National Standards of Quality for Online Courses. Once approved by TxVSN, the online course catalog displays all approved courses with each course description and objectives, associated technology specifications, schedule, assessments and other relevant data from each TxVSN Provider District. School personnel and students can review options to select online courses that best meet students' learning styles and graduation plans.

All high school TxVSN courses are taught by a Texas-certified instructor who has completed TxVSN-approved professional development for effective online instruction. Dual credit courses are taught by college or university staff members who meet both the credentialing requirements of their higher education institution as well as the professional development requirements of TxVSN.

The TxVSN is a supplemental rather than diploma-granting program. The network works in partnership with the home district to meet students' needs. Each student's home district continues to award credits and diplomas and remains accountable for the student's academic progress. Since its inception in January 2009, the TxVSN has provided Texas high school students and schools with a valuable avenue, for interactive, collaborative, instructor-led online courses taught by state certified and appropriately credentialed teachers. The 81st Texas Legislature created a "state virtual school allotment" through House Bill 3646. The TxVSN Allotment is used to provide funding for online courses offered through the TxVSN for courses that have been successfully completed by Texas public school students.

TEC Chapter 30.A provides the structure for the operational, course evaluation, and professional development requirements of the TxVSN. ESC Region 10 in collaboration with Harris County Department of Education serves as TxVSN

Texas Virtual School Network

Central Operations. From 2008-2010, ESC Region 4 conducted the review of electronic courses to be offered through the network to ensure that all courses meet or exceed the standards established by the state. Beginning with FY 2011, Central Operations has absorbed course review services from ESC Region 4 to streamline the course review process, increase communication, expedite placement of courses in the course catalog, and coordinate efforts with new Provider Districts. TxVSN-approved professional development courses for online teachers are available through a variety of providers. To date, ten professional development providers train educators to deliver online instruction through TxVSN. www.txvsn.org/AboutTxVSN/ProfessionalDevelopment.aspx
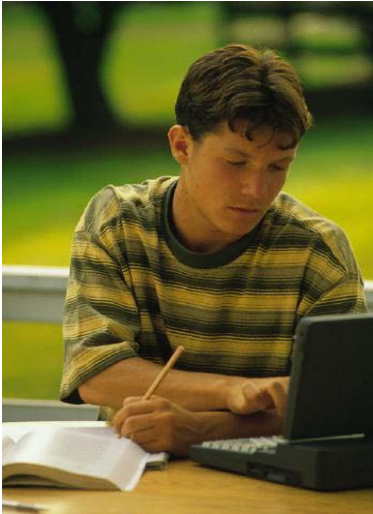
District Participation in TxVSN is Growing

Districts and open-enrollment charter school participation in the TxVSN is growing rapidly each semester. All Texas districts can participate in this state-led resource. Districts complete an agreement, a needs assessment, and pre-assess students' readiness for online learning. Local support staff, such as the TxVSN site coordinator, is designated by the Receiving District at the time of application. The TxVSN site coordinator assists in identifying, registering, and approving online course enrollments and provides critical mentoring support services to local students.

Status and Progress Since 2008:

- June 2007 – SB 1788 established the state virtual school network
- April 2008 – Contracts awarded for Central Operations and Course Review
- January 2009 – TxVSN Course Catalog opens with high school courses from three TxVSN Providers Districts
- June 2009 – HB 3646 creates the state virtual school allotment
- September 2009 – State virtual school allotment becomes available
- September 2009 – Dual credit catalog opens
- January 2010 – Number of districts receiving courses exceeds 300
- May 2010 – TxVSN offers all courses required by Recommended Graduation Plan
- June 2010 – 15 TxVSN Provider Districts participating; more than 500 semesters of coursework reviewed

TxVSN Semester Course Enrollments Soar! Program Facts:
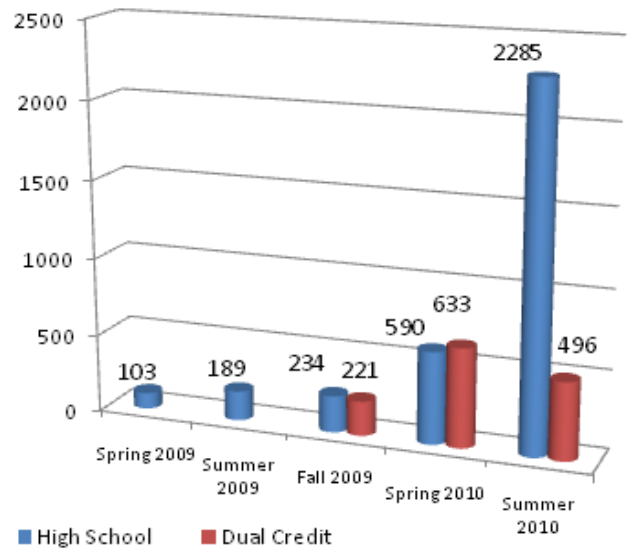
Districts with TxVSN Participation Agreements

Spring 2009	Summer 2009	Fall 2009	Spring 2010	Summer 2010
29	99	148	193	335

List of Courses in the TxVSN Course Catalog

English Language Arts	Math	Science	Social Studies	Fine Arts	Languages Other than English	Health and PE	Career and Technical Education	Driver and Safety Education
English I – IV	Algebra I - II	Biology	US History AP US History	Art I	French I-IV	Health Education	Business Computer Information Systems	Drivers Education
Communications Applications	Geometry	Chemistry	World History	Music History	German I–II	Physical Education		
	Precalculus	Physics	World Geography		Latin I - III			
		Astronomy	Economics		Spanish I-IV			
AP English Language & Composition	Math Models with Applications	Integrated Physics and Chemistry	US Government AP US Government & Politics		AP Latin 4 (Vergil)			
	AP Calculus	AP Biology	AP Macroeconomics					
		AP Chemistry	AP Psychology					
		AP Physics	Sociology					
		AP Environmental Science						
Dual Credit								
English III-IV	Algebra II	Computer Science	Economics	Art III History				
	Independent Study in Mathematics	Independent Study in Technology Applications	Special Topics in Social Studies					
			Psychology					
			US Government					
			US History					
			Sociology					

**Providers Offering High School Courses
through the TxVSN Catalog:**
- Alief ISD
- Amarillo ISD
- ESC Region 6
- ESC Region 12
- Mansfield ISD
- Mineral Wells ISD
- Pasadena ISD
- Plano ISD
- SuperNET (District Collaborative)
- Texas Virtual School (ESC Collaborative)

Providers Offering Dual Credit Courses Through the TxVSN Catalog

University	Colleges
Lamar University	Angelina College – Lufkin, TX
University of Texas Arlington	Howard College – Big Spring, TX
University of Texas at the Permian Basin	St Philips of Alamo Colleges – San Antonio, TX
	Texas State Technical College – Harlingen, TX
	Tyler Junior College – Tyler, TX

**Current or Potential Providers with High
School Courses under Review or in
Revision:**
- Alief ISD
- University of Texas – Austin
- Canadian ISD
- Cleburne ISD
- Dimmit ISD
- El Paso ISD
- ESC Region 1
- ESC Region 12
- Frenship ISD
- Irving ISD

- Mansfield ISD
- Poolville ISD
- Pasadena ISD
- Plano ISD
- Spring Branch ISD

eCP Course Providers:
- Houston ISD
- Southwest Schools

**Current or Potential Providers with Dual
Credit Courses under Review or in Revision:**
- Dallas County Community College District (DCCCD) - revision
- El Paso Community College – revision
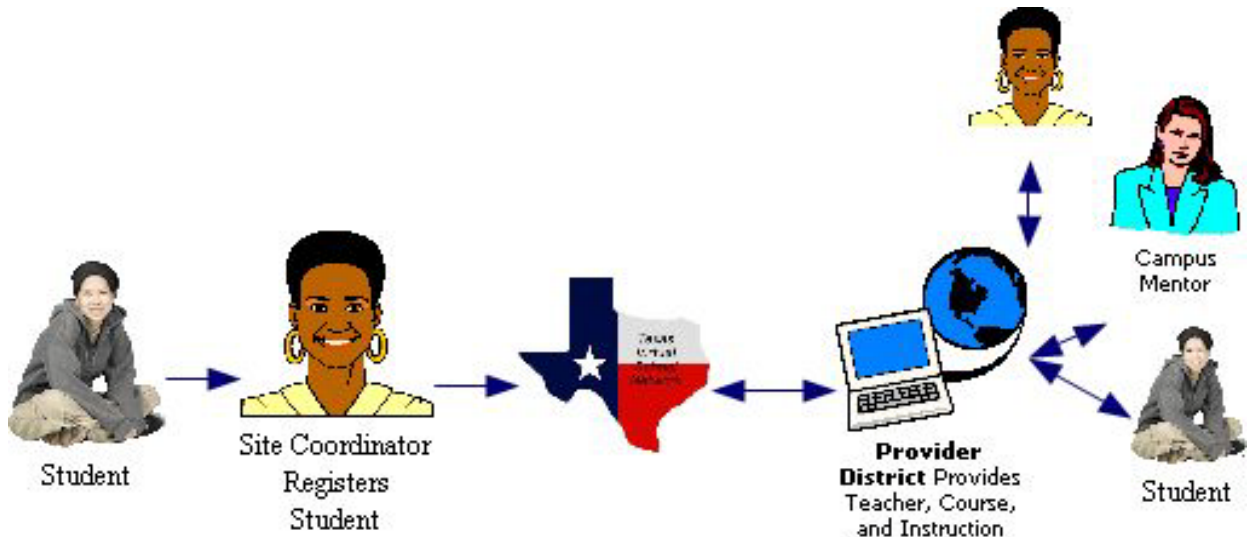
HB 3646, Section 92: A Report on Funding Based on Course Type

Summary

House Bill (HB) 3646, Section 92, 81st Texas Legislature, 2009, directed the Texas Education Agency to evaluate whether providers of different types of electronic courses offered through the state virtual school network established under Chapter 30.A, Texas Education Code (TEC), should receive varying amounts of state funding based on the type of course provided.

Initial input was gathered through a focus group, including eligible Texas Virtual School Network (TxVSN) high school and dual credit course providers, commercial vendors, instructional designers from public and private organizations, and an assistive technology consultant. Participants addressed a series of questions in order to reveal the actual cost of delivering online courses to their students as well as to determine what the current education market will support as a semester course cost. In addition, a literature review was conducted to study cost centers impacting the development, delivery, and sustainability of online courses.

Cost centers for online courses include course design, course delivery, professional development, and student support.

Course Design and Development

Students approaching online learning for the first time may be less patient and more easily frustrated than with a traditional face-to-face course. This means that all aspects of an online course need to be a step better than in a traditional course (Capper, 2001). Course design includes creating a plan for teaching and learning as well as actually building a course with appropriate content, digital and web-based learning objects, and other resources. To a greater extent than for face-to-face courses, content development for online learning requires the completion of several specific design steps, such as defining the learning objectives, organizing the material to be covered, assembling resources such as texts and research sources, and designing student assignments. Good instructional design for online courses moves beyond simply digitizing materials used in a traditional classroom. It could include the use of interactive multimedia for teaching and learning, offer graphically rich exercises that can be done by students either individually or collaboratively, and should always include a range of teacher-to-student and student-to-student communications strategies and collaboration tools, support online presentations, and the use of graphics and visual tools such as whiteboards (Sjogren & Fay 2002).

A challenge faced by online course designers is balancing the cost of development with the need for interactivity and engagement. A frequent complaint about online courses is their lack of interactivity. There is a growing body of research indicating that interactivity has a direct impact on course completion and learning mastery, therefore, it should be given considerable attention in design. But an effective instructional designer must balance the use of online and digital learning objects for their contribution to teaching and learning rather than as "eye candy." As attractive or attention-getting as some learning objects may be, usage can be intellectually undemanding or actually distract from learning. Course design must also take in account the varied levels of internet bandwidth and hardware available to student audiences, as well as accessibility considerations for learners with disabilities. Ultimately, course design should support the needs of multiple learners, but this is of

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particular importance when providing courses for statewide or national programs. Course content and pr esentation design must be flexible and edi table, because an e ffective online course will be modified and r efined as curriculum standards such as the Texas Essential Knowledge and Skills change or when new digital and web-based learning objects are found to be i nstructionally effective. So course providers face both initial costs, but also on-going costs for each course developed; as a result, course design is often and ar guably considered the most expensive cost center for providers.

Development costs for one onl ine course ranges from $2,000 to $100,000 according to a BellSouth Foundation study (Darrow, 2010). However, a course that includes simulation or animation, professionally produced video, proprietary web-based or digital learning objects, or artificial intelligence can cost $250,000 to $500,000 per semester course (Weller, 2004). For this reason instructional designers carefully balance instructional need for such enhancements with cost to produce and sustain the course. However, the rate at which a pr ovider needs recoup design and development costs will drive per course cost.

Some TxVSN providers develop their own content, while others purchase or license course content from a commercial vendor. The latter is most often done if a provider does not have 'in-house" expertise to develop courses or when a program needs to expand its course offerings quickly. Commercial vendors such as Aventa Learning and Class.com Inc. allow school districts to purchase and/or license their courseware for delivery through the local server and learning management systems. The provider pays an annual license fee contingent on the number student projected to access the course or slightly more expensive cost to license the course "in perpetuity." Whichever option is selected, TxVSN providers report that the addition of digital and web-based learning objects to enhance the course to meet local or state standards is needed. A provider's instructors usually bring the course to

standards, as well as, ultimately delivering instruction using the enhanced course. Reported costs for annual licensing may range from $3,000 to $25,000 depending on t he number of students served and t he number of courses licensed. Courses purchased "in perpetuity" cost 25%-75% more.

Another option for acquiring coursework without assuming initial development cost is by partnering with a c ommercial vendor. In this instance, the vendor is responsible for course hosting and del ivery through its learning management system, may supply qualified instructors, handle registrations of students, and marketing. In this arrangement the eligible TxVSN provider assumes responsibility for services it can readily provide and t he vendor fulfills those services the provider cannot. The cost of such arrangements is difficult to discern, as it is highly contingent on which services are provided by the vendor and those provided by the TxVSN provider. The eligible provider, however, is responsible for all aspects of course delivery through the TxVSN.

Course cost may also be i nfluenced by its audience size. A foundation course such as Algebra, for example, will have national audience since almost all high school students are required to take this course, but a Mandarin Chinese course may not have as broad a market. As result, providers develop courses that will appeal to a larger audience in order to recoup development costs at a faster rate, but the statewide need may be for a course that not every student is required to take or is not readily available to all schools due t o the specialized nature of the course. If a provider elects to develop for a niche market such as technology applications, fine arts, advanced placement, then it must either aggressively market to the target audience or sell content licenses to recoup development costs. Otherwise, providers must overlook the short term course development costs and look at the long-term potential when developing new courses (Capper 2001). While school districts and higher education institutions may be able to do this when grant funds or sufficient local

revenue from course offerings are available to sustain their online program, it is not an option when immediate cost recovery is required. As a result, course fees may have to increase in order to support course catalog expansion.

Course Delivery

Course delivery and support involves investment in technology infrastructure and a course learning management system (LMS) to deliver course content to students and instructors.

The need for scalable network capacity, server installation and maintenance, operating system licenses, expandable teacher and student communications, and maintenance personnel may involve a major start-up and on-going investment. Of the two, the greater start-up expense for the provider is often the infrastructure; however, a learning-management system includes some start-up costs and recurring annual costs. LMS costs are driven by the number of courses delivered and the number of students served as well as options and customization required to meet a provider's program needs. Learning management systems are available through commercial vendors such as Blackboard™, through open source options such as Moodle or Saki, or may be a proprietary system built by the provider. Currently course are delivered through the TxVSN are in Blackboard™, open source systems, and proprietary systems with an annual cost of $6500 to $50,000.

Instructors, Staff Support, and Professional Development

In its 2006 report titled "Cost Guidelines for State Virtual Schools," the Southern Regional Education Board notes that the largest single cost for both traditional and online schools is personnel. A traditional school typically spends between 70 per cent and 80 per cent of its operating budget on staff. The proportion of personnel costs in the operating budget for a state virtual school can be even higher, including online teachers, administrators, registrars, professional development opportunities, clerical support and possibly,

guidance counselors. TxVSN providers concur that their most significant cost and concern is employing, preparing, and retaining quality online instructors.

In order to teach a course offered over the Texas Virtual School Network, a high school online instructor must be a Texas certified teacher and have previously completed TxVSN-approved professional development. Initial professional development fees range from $350 to $1,500 with the average cost of advanced professional development at $650 for 4-12 week course. Depending on the TxVSN provider district policy, the initial and continuing professional development cost may be completely assumed by the instructor, assumed by the instructor then partially reimbursed after successful service over a period of time. In some instances costs are completely covered by the provider district.

Instructor costs vary based on the provider district. Some providers contract with online instructors and pay a flat per course base rate ranging from $800 to $1,000 then add a $100 per pupil payment. In order to ensure students receive attention necessary to be successful, the TxVSN allows up to 35 students per section with a maximum of 150 students served per semester per teacher. However, providers report that not all of their contract instructors support 150 students each semester. Providers allocate seats to instructors based on instructor experience, complexity of course content, and student needs. An online instructor with less experience usually serves fewer students than an instructor with demonstrated proficiency in the content area and online teaching.

Some TxVSN providers do use full or part-time, salaried instructors to deliver instruction. Dual credit course instructors, for example, are employees of the higher education institution and are paid according to each institutions pay scale. Some high school instructors may teach both traditional and online courses as a part of their daily schedule. At the time of the focus group no high school provider reported a

salaried employee teaching online full-time, but many anticipated the need coming.

Non-instructional staffing is key to the success of an online program. Providers must have a full-time online school administrator to oversee all aspects of the course development delivery, manage hiring and contract of instructors, and coordinate professional development. Some TxVSN providers have part-time or full-time staff to handle attendance accounting, registration, and counseling services for students. Even with technology requirements noted in the TxVSN course catalog, all providers have staff that offer technology support to students enrolled in their courses. Professional or technical support staff troubleshoots for the student or with the student's district technology staff when technical issues arise. Finally, all providers support full-time clerical staff or shared fees (split-funded) for finance office services.

The current $400 course cost cap makes forecasting revenue or cost recovery easy; however, some providers are conservative in hiring or contracting with instructors in case sections do not make. If sections do make, providers assume the risk of a low success rate due to a combination of excessive drops or low success rate. Many receiving districts and students accessing TxVSN provider courses are new to online learning and may not recognize the rigor and time commitment involved in taking an online course or the local support required for student success. While districts that participated in the TxVSN during the 2009-2010 school year are expected to better select and support students participating, new districts and students are projected to join the TxVSN, so providers will continue to experience these issues surrounding excessive drops and variable success rates. Focus group participants expressed a desire to develop new courses to TxVSN standards, but acknowledge that sufficient revenue must be generated in order to do so.

In the TxVSN model, the student and district is "held harmless" for the course cost if the student drops, does not complete, or fails the course. Reasons for drops reported to the TxVSN are attributed to the inexperience of some districts and students with online learning. The most frequently cited reasons for dropping a course is that the students has underestimated the amount of time to complete the course, that the student was not prepared for the rigor of the online course content and environment, or that the student or site coordinator determined the prerequisite knowledge and skills to complete the course successfully were lacking. The majority of course drops occurred 10 or more days after the course instruction began. In that situation, the provider has already delivered instructional services to the student but is still liable for paying the online instructor and other associated costs.

Student Support

Student support provides an online student with the same level of service and resources that the brick and mortar classroom student receives. This may involve access to instructional materials, library databases, counseling and tutoring services, or a Help Desk that provides registration assistance, technical support and serves as point of contact for the student or instructor.

It is important to understand that some costs or services are borne by the campus where the student attends school. While the indirect costs of participating in a TxVSN course to a local school or district are relatively modest, they are essential to success. The local school or district needs to assign a "TxVSN site coordinator" to address management and facilitation issues and to ensure that students are enrolled, supported and monitored during each course. There also should be a staff member in each participating school to support student technical issues and to provide on-going local support. Technology, including a computer, printer and Internet access, should be provided by the local school, or provision must be made to ensure that each student has adequate technology access. In addition, a location that is conducive to learning should be available when the

student is online or working on t he course during the school day. If students take courses outside the school day, usually for course acceleration, a student should have access to a home computer.

Findings

Focus group participants determined that course costs vary for reasons including teacher-to-student ratio; recoupment of development costs; instructional material and t extbook fulfillment; licensing fees for learning management systems; and per sonnel and professional development costs. However, no specific course titles were identified as costing more than others since development and delivery factors varied by provider, not necessarily by course title or type.

Identified as critical to providers in continuing to offer courses through the TxVSN catalog are:

- flexibility in the TxVSN model so that students or campuses provide some instructional materials or texts;
- students' districts to proctor exams and mentor students locally;
- adequate lead time for providers to update courses as state standards are revised;
- use of locally adopted learning management systems for provider courses.

Recommendations

TxVSN course providers report that the current $400 per course fee is sustainable and varying course fees are not required for varying course types. However, they also indicate that this recommendation holds true because hard copy textbooks and s cience kits are currently provided outside the LMS and ar e the cost of materials is covered by students or their home districts. In essence, as long as the conditions identified as critical under "Findings" in this report continue to be met, the current course fee is appropriate remuneration for courses provided through TxVSN.

Contract Payment Example				
Semester Course	**Per Course Base Rate**	**Per Student Rate**	**Per Student Rate**	**Per Student Rate**
Algebra I A	$1000	**10 students per section @ $100**	**20 students per section @ $100**	**35 students per section @ $100**
Section 1		$1000	$2000	$3500
Section 2		$1000	$2000	$3500
Section 3		$1000	$2000	$3500
Section 4		$1000	$2000	$3500
Subtotal	$1000 *plus students served*	$4000	$8,000	$14,000
Total		**$5000**	**$9,000**	**$15,000**
		40 students	80 students	140 students
Does not include professional development costs paid or equipment supplied by the course provider				

HB 3646, Section 93: A Report on the Feasibility of Language Acquisition Courses through State Subscriptions or Other Means of Access

Summary

House Bill 3646, Section 93, 81st Texas Legislature, 2009, directed the Texas Education Agency to provide a report on the feasibility of language acquisition courses through state subscriptions or other means of access.

Over the biennium, research into best practices in the acquisition of languages other English (LOTE) was conducted, including research into the availability of online LOTE coursework. Teacher certification and assessment of LOTE proficiency were also explored. A body of research supports that developing advanced language proficiency requires an extended period of time so that students have ample opportunities to experience and practice the language in meaningful communication. Students beginning a LOTE course of study early, for example in elementary school, have a better chance of developing an advanced level of proficiency. LOTE achievement in a high school online course may contribute to proficiency by assisting students to develop mastery of content such as grammar and vocabulary. However, access to an online LOTE course of study from elementary through high school might be more likely to provide true language proficiency.

Providing teachers for TxVSN LOTE courses is not simple. In the TxVSN model LOTE courses must be taught by Texas certified teachers who are not only fluent in the language but also pedagogically qualified. Many school districts report a shortage of qualified LOTE instructors which limits the number of languages they can offer. In addition, to serve students in the TxVSN, online LOTE content is available for licensing or purchase. However, customization to reflect the Texas Essential Knowledge and Skills and the iNACOL National Standards of Quality for Online Courses would be required to meet Texas online standards. Further, to make LOTE online courses available to all Texas

school districts through TxVSN, it would be necessary to rapidly develop cadres of Texas "brick and mortar" teachers with appropriate LOTE certifications into online instructors. Given these specifications, it is noteworthy that Spanish, German, Latin, and French are currently offered through the TxVSN with additional titles in the review process allowing the TxVSN to serve more students.

Research

Researchers don't agree on what supports and what impedes language acquisition. In examining the impact of technology, research focuses on the investigation of computer use that facilitates or promotes those strategies believed to aid language acquisition. Therefore, much research deals with analysis of learner conversation and qualitative surveys on student reactions to technology use. Researchers then attempt to determine if a relevant, causal relationship exists between these variables and learning. Most research on language acquisition has been carried out using higher education student populations with very little research taking place at the K-12 level, although this is where most language instruction takes place in the United States (LeLoup, 2003).

Online teaching and learning for language acquisition is more complicated since there are fewer comprehensive evaluation studies available to identify best practices (Goertler and Winke, 2008). Most language professionals do not dispute that in order to reach advanced proficiency; students need to interact with native speakers. Ideally, that would occur face-to-face in the country where the language is spoken. However, since fewer than 3 percent of the students in higher education actually undertake such study (Blake, 2008), alternatives are clearly needed. One way that higher education, and to a more limited extent K-12, have attempted to provide such opportunities is through CALL.

CALL is an acronym for "computer assisted language learning" and the term generally refers to language instruction that is provided through the use of a computer, but more

recently through a v ariety of web-based technology tools. Early CALL tools drew heavily on programmed instruction, often referred to as "drill and kill" practice. Later multimedia refinements to CALL added error analysis and feedback, and more advanced programs analyzed learners' responses, identified errors, and then branched to remedial activities. These multimedia CALL tools are usually delivered by CD-ROM or DVD (Chapelle and J amieson, 2008). Most recently online or web-based language learning allowed both synchronous and a synchronous communication between students and a tutor or instructor (Oxford and Oxford, 2010). While the majority of CALL research has been l ess in the area of online courses and more focused toward multimedia tools, some research may generalize to the online environment. In Second Language Acquisition and T echnology: A Review of the Research, moderators Leloup, Ponterio and Cortland reviewed research on l anguage learning areas in which CALL has been found to be effective.

Few studies focused specifically on the skills of listening or speaking. The g reatest advantage noted for research on listening is that multimedia CALL activities address the use of different modalities and may support a wider variety of student learning styles. In terms of improvement in reading skills, the research emphasis has been on vocabulary acquisition with students using technology to assist in comprehending reading passages and identifying vocabulary. Some research indicates the students using technology out-performed students who did not have this assistance.

In the field of Computer-Assisted Language Learning (CALL), the term "Net Generation" has been clearly defined by Prensky (2001), who states that today's Net Generation students are digital natives since they have spent their entire lives surrounded by and us ing computers, videogames, digital music players, cell phones, and all and tools of the digital world. But other researchers note that they digital divide is still present so that not all schools, districts, or homes have access to the broadband

telecommunications necessary to access robust digital content. Indeed, many research studies caution against the assumption that all students have the knowledge necessary to apply their "recreational technology skills" to focused language learning.

As a r esult, implementing available language learning technology in researched-based, pedagogically sound fashion (Oxford and Oxford 2010) is critical. The promise of technology for language learners may be:

- Fostering intercultural understanding through social networking
- Providing learners with apparently limitless possibilities for publishing and communicating online
- Providing opportunities for language learners to engage in regular prolonged communications with native speakers
- Assisting students to recognize and analyze their own discourse in order to improve linguistic accuracy

Again, more important than the use of technology is the quality of instruction. A poorly designed course or activity is ineffective whether it is technology-based or face to face. Using technology is not enough. In order to promote successful learning, tasks must be meaningful, have a high level of interaction, and have a comprehensible purpose for the language student. Setting and maintaining standards for quality language learning coursework is key to student success.

Models
While online courses, hybrid or blended courses, and self-paced courses are often lumped together, each is different and should be considered separately. In "Learning Foreign Languages at a D istance: Characteristics of Effective Online Courses," authors Nielson, Gonzalez-Lloret, and P inckney describe online courses as those in which no f ace-to-face interaction takes place between the instructor and students. The authors indicate that a distance course is the ideal environment for the implementation of a task-based curriculum

designed according to the actual language needs of the students.

Online Instructor-Led Courses
Online courses require a Learning Management System (LMS) to organize content such as websites, wikis, blogs, and other digital learning objects. Students and their instructors communicate through discussion boards, instant messaging, email, telephone, and/or digital recordings. While a teacher in a traditional classroom must be concerned with providing instruction for all students simultaneously, instructors in online environments can tailor instruction, feedback, and assignments to each student.

Some online language instructors report that there are challenges to a purely online approach which include: arranging for students to communicate with fluent speakers of the target language, instructor availability in order to provide just-in-time feedback, maintaining authentic communications in all instructional activities, and facilitating a high level of student-to-student interaction in the target language.

There is no one-size-fits-all model to language teaching and learning. Online courses are appealing because it is difficult to find qualified instructors for less-commonly-taught-languages (LCTL) and because there is often insufficient student interest to justify the expense of offering these courses in a traditional format. LCTL languages with non-Roman writing system and country-specific dialects may stretch both the technology and instructor capabilities. As a result, there can be challenges in finding and retaining teachers who are proficient in the target language, proficient with technology, and skilled in delivering instruction in the online environment.

Hybrid or Blended
In a hybrid or blended course, traditional face-to-face instruction is paired with online or technology based instruction. The format of hybrid language courses varies widely to include courses evenly divided with face-to-face and online activities, to those that only meet face-to-face for testing or question/answer sessions, to those where a face-to-face teacher uses online modules to augment or advance instruction for students.

A hybrid class can be extremely efficient because concepts are introduced in person and then practiced and reinforced at a distance. Some of the challenges inherent to online courses may be circumvented with a hybrid approach because students and instructors can meet in person to develop rapport, deal with problems, and handle administrative issues (Nielson, Gonzalez-Lloret, and Pinckney, 2008). While such needs can be met online, each may be expedited in the face-to-face environment. Similar to teachers in the online environment, however, teachers need training for the effective delivery of instruction in a hybrid environment.

Self-Paced
Technology is a patient and tireless language tutor that allows students to practice repeatedly with the computer program providing feedback. Language learning may be difficult to adapt to technology-based instruction than other subject areas since such tutorials seem inconsistent with the current language learning model based on meaningful task-based interactions (Godwin-Jones, 2007). However, the addition of graphics, audio, and video, advanced technologies such as voice recognition, live online tutors, and the opportunity to collaborate with other learners makes self-paced courses appealing. In the K-12 learning environment, self-paced language learning has been used to primarily to augment face-to-face instruction or to provide access when a qualified instructor is not available. There is little or no research that shows that self-paced courses, alone, develop language proficiency in K-12 students.

It is important to remember that each language comes with its own set of challenges—there is no one-size-fits-all model to language teaching and learning. Distance learning course are not for everyone, but tend to be somewhat self-selecting due to circumstances for the student or the school district. Many students find out

that these distance learning options require much more motivation and self-discipline than they are willing to give (Blake, 2008). However, providing choices and options for students is an advantage to the long term process of language learning.

Language Instructors

Regardless of the model selected, teacher qualifications are critical to student success with language learning. In 2008, the Center for Applied Linguistics (CAL) conducted a nationwide survey of elementary and secondary schools to collect detailed information on foreign language education in the United States. Survey results revealed issues of unequal access to foreign language instruction for schools in rural areas and s chools whose students were of lower socioeconomic status. One quarter of elementary schools and nearly one third of secondary schools offering languages reported being affected by a shortage of qualified language teachers. The shortage of language teachers was so severe that some schools were seeking alternative sources of teachers, such as agencies that provide teachers from other countries, commercial language schools, and foreign governments that send teachers to the United States. Not surprisingly urban districts had better results with alternative sources than rural schools.

Recommendation

Beyond specific security and ec onomic requirements at national and l ocal levels, language abilities are an essential characteristic of a well-educated citizenry. As Thomas Friedman reported in *The World is Flat* (2005), global communication and commerce are part of the regular daily work of small businesses and individuals not just corporations and government.

To continue to compete successfully in this environment, all Texas students should have basic functional knowledge and i deally proficiency in a foreign language and culture.

- Establish new teacher development programs and support existing ones
- Continue to expand the number of LOTE courses offered in the Texas Virtual School Network catalog in order to reach student in rural districts
- Provide incentives for teachers of less-commonly-taught-languages to complete professional development in the effective delivery of online courses

HB 3646, Section 94: A Report on the Feasibility of Creating Online Courses to Be Offered in Alternative Educational Settings

Introduction

House Bill 3646, Section 94, 81st Texas Legislature, 2009, directed the Texas Education Agency to investigate matters related to the efficacy of online coursework for students in alternative education placements (AEP). This report outlines the results of the research into this matter, details the steps taken, research conducted, and data collected.

Section One: Research and Surveys

State Virtual School Programs

Two surveys were conducted in order to determine how other states serve students in alternative education placements. The first survey gathered data regarding how other state virtual schools serve students in alternative education placement. The second survey was administered to personnel assigned to alternative schools, including district, county, and state facilities, served by those state virtual schools. Survey questions were designed to compare each program's similarities and differences to the Texas Virtual School Network (TxVSN) model, to identify researched-based practices with demonstrated student academic achievement, as well as helpful features of the online programs serving students in these programs.

The survey findings suggest most states are providing online courses to students in

alternative education placements on a limited basis. No state virtual schools provide courses specifically developed for AEP students or programs. Since the state virtual school courses offered to all students meet state standards, students in AEP programs access the same course catalog. Nor do state virtual schools make significant technology adjustments to accommodate AEP program access to online courses. The responsibility lies with each alternative program or facility to alter and/or modify the learning management system, coursework, browser security settings, or internet filter for students in AEP programs.

Online courses offered to students in AEP programs present the following challenges:

- Program policy or statute may limit or deny student access to the internet
- Interaction must be limited to student to teacher only (i.e., no student-student interaction)
- High mobility rate of students and varying length of stay in AEP programs
- Availability of start-up and sustainable funding for online courses
- Student reading and technology skills are frequently below grade level
- Need for local-campus support staff and systems to facilitate progress
- Need for online instructors to understand the unique needs of students in AEP placements, requiring additional professional development and experience

While all states expressed a desire to serve students in alternative education placements through online courses, most serve only those recommended or selected by AEP program administrators or counselors. Students are selected based on the course credit needs, academic measures, as well as demonstrated motivation to work in the online environment. Most acknowledge that the design and delivery of online courses can provide a flexible, personalized education experience for students. Research indicates that those students most successful in the online environment understand that their instructors are facilitators

of their learning process and that they must be a dedicated and goal-oriented self-starter. Some students in AEP programs may lack those attributes and would need considerable local campus support to be a successful online student. So it is possible that fewer students in AEP programs will find online courses an appropriate solution for coursework than peers in non-AEP programs.

In 2007-2008 the U.S. Department of Education and the National Center for Educational Statistics (USDOE NCES) investigated the number of students in alternative programs across the nation and the reasons for their placement and release back to a home campus. By definition, an alternative school is designed to address the needs of students that typically cannot be met in regular schools (Alternative Schools and Programs for Public School Students At Risk of Educational Failure: 2007-2008, p. 1). The students who attend these schools are at risk of educational failure due to a variety of reasons, which include low academic performance, truancy, disruptive behavior, and pregnancy. Providing online courses to students in AEP programs is impacted by both the student's length of stay in a placement, as well as by the arrival in the placement. Students in long-term alternative education placements could take an online semester-based course, but might arrive late into a semester and need to start a course when the other members of the course cohort have almost completed the course. As a result, the instructor must be willing and able to instruct students working at different levels and pace within the course. Course design may need to be modified or adapted into a modular format to accommodate this need and a reduced student to teacher ratio will allow the online teacher to meet individual learning needs.

The student in a short-term alternative education placement can be more challenging. These students will need to join an online course cohort at any point within the semester, but may only participate in the course for a few days or weeks. Ideally, the online instructor

uses assessments available in the course to place the student so that mastered knowledge and skills are leveraged and new knowledge and skills are acquired. Once the student returns to the home campus the option to continue in the course (portability) may be an option, but the student may prefer to return to the traditional classroom instruction. Either way, regular assessment and feedback should be provided to the student and to the home campus in order to document each students' progress.

According to the USDOE NCES report, in the 2007-2008 school year:

- 646,500 students were enrolled in public school supported alternative schools. Most schools only offered grades 9 through 12 in their program (p.3)
- One-third of the districts had to stop enrolling designated students into alternative schools due to maximum occupancy. Most of these instances were in cities and suburban areas (p.4)
- Reasons for placement were: physical fights or attacks (61%), possession, use, or distribution of alcohol or drugs (57%), disruptive verbal behavior (57%), continual academic failure (57%), truancy (53%) (p.4).
- Sixty-three percent of schools had policies in place to allow students to return to their home campus. Reasons for returning were: improved attitude/ behavior (78%), completed time (60%), and improved grades (58%) (p.4)

In the West region that includes Texas, the statistics for each of the above categories is higher by three to five percent.

- Leading the reasons for placements were possession, use, or distribution of alcohol and drugs, and physical fights or attacks at 75% and 64% respectively.
- Districts with 21% or higher minority enrollment had the most enrolled students in alternative settings. Sixty-five percent of the students placed were minorities in these designated districts.

- When the academic improvement surveys were compiled, the results showed little improvement in relationship to grades and academic readiness by a standardized test during a student's stay in an alternative school. Overall, 58% of students improved their grades while enrolled and 16% showed improvement on standardized test.
- Only 17% of these alternative programs used distant education as an instructional delivery mode. The highest use of distance education was in rural areas, while the lowest use was in suburbs. And smaller districts, less than 2,500 students, provided more courses through distance learning methods.

Research conducted during the investigation for HB 3646, Section 94, indicates that there are limited online programs currently available to meet the needs of students in AEP programs. There is no consistency in the organization, implementation, or delivery of the programs surveyed. Student success also varies widely among programs. The surveyed program directors indicated that an increasing need to provide better access to rigorous online courses for students in AEP programs, but many factors make solutions complicated. Complicating factors include the length of student placement, restrictions placed on Internet access and communication tools, and the interaction between students. Currently there is no "one size fits" all option for these students.

Student support is another critical element in serving student AEP program. A promising practice used by Transition High School in Milwaukee, Wisconsin addresses the social and emotional needs of students placed in its program. Transition High School serves students who were incarcerated, expelled, chronically truant, or close to graduation but at-risk of dropping out. Through a blended approach this high school program incorporates online and traditional face-to-face coursework, but also places considerable emphasis on social-emotional education. Students participate in community support workshops, outdoor activities focused on team building, anger

management, as well as group therapy. Parent training and mentoring is provided as well. The availability of staff and strategies to assist students to successfully transition back into the traditional programs is a hal lmark of this successful program. By 2009, the program retained 63% of students whereas previous only 14% remained in school after incarceration. Clearly the extra support makes a difference.

Student support at the most basic level should include a s tudent mentor or facilitator. These are adults who, along with parents or guardians, provide students with support, counsel, reinforcement, and constructive criticism. Mentors are good listeners; people who can assist the student in navigating school program options, check to see that the student is making progress in the online course, and in general help students capitalize on t heir strengths. Many state and local virtual school programs attribute the presence of a l ocal mentor to be as important as a qualified online instructor. Such onsite staff play an es pecially important role for students in AEP settings.

Section Two: Focus Groups
In December 2009, representatives from the TxVSN, the TEA, the Texas Youth Commission (TYC), the Texas Juvenile Probation Commission (TJPC), the Windham School District (WSD), Juvenile Justice Alternative Education Programs (JJAEP), and District Alternative Education Programs (DAEP) met to discuss the academic needs of the students in AEP programs. The experts assembled for this meeting were invited based on recommendations of education services centers, TJPC leadership, and t he Texas School Safety Center. The focus group discovery revealed the vast differences in all alternative education placement programs. Student length of stay ranges from adjudicated youth incarcerated for up to three years to students discretionarily placed in district alternative schools for 5 to 15 day s. Also, the different instructional needs of students, and the level of support services available from the districts, counties, and state agencies in charge

of the alternative programs, varied considerably.

The subsequent meetings stemming from this discovery session produced the following conclusions:

- There was agreement that students needed access to rigorous online courses, but some programmatic restrictions would have to be addressed.
- There is currently no uniform model to satisfy the online course needs of these programs.
- A program model would have to be developed appropriate to all AEP programs
- The current TxVSN model would supplement curriculum delivery. Estimations are that students leveraging the current model would be limited.
- The current TxVSN model is not optimum for serving students in short term alternative placements; as a result, a possible pilot program targeting students in a long-term AEP program might be most appropriate.

Juvenile Justice Alternative Education Programs (JJAEP)
In February 2010 follow-up discussions with JJAEP representatives continued at the Texas Association of Alternative Educators Conference in Austin, Texas. Current practices for each JJAEP facility were reviewed and promising practices from other state virtual schools and c ounty alternative programs were shared.

The table on the following page outlines the recommendations and rationale of this panel.

JJAEP Needs

Current TxVSN Model	JJAEP Recommendation	Rationale
Offers continuous and non-continuous enrollment courses. Courses varying in length from 7, 9, 20+ weeks. Courses are rigorous and it is expected that students have met all prerequisites prior to beginning a course.	All courses should be continuous enrollment so student can enter a course at any point.	Because of the fluid nature of students enrolling and exiting JJAEPs, online course need to be open for enrollment at any time in the semester.
Course pace may be sequential, semester-paced with a cohort of students working on the same activities simultaneously, accelerated with students working at their own pace and teacher adjusting instruction for each student, or a combination of both. Instructors may approve a student moving to the next activity based on assessment results.	Course must be designed for students to work at a different pace. Instructors must approve students moving to the next activity or course component based on assessment results and local mentor recommendation.	Credit advancement and recovery are the main needs for students in JJAEPs. Designing courses to fit this model will meet the unique needs of the students, reduce frustration with difficult content, and increase mastery of course TEKS.
By definition TxVSN providers use a provider- adopted, open LMS allowing both teacher to student and student to student interaction. In general students have wide access to internet websites and resources. Students interact with others statewide.	The Learning Management System (LMS) must be a closed system. Course interactivity should include student to teacher, but not student to student interaction. Limitations to the number and types of websites and resources are needed.	This system would allow a more secure environment for students to access the online courses, provide a high level of supervision by local mentor, and limit interaction to the online instructor and student. JJAEPs do not allow interaction between students on the campus and certainly not between students outside the AEP setting.
Online instructors must be Texas certified for the course, subject area and/or grade level taught. Also TxVSN approved professional development must be completed prior to teaching over the network.	In addition to the current TxVSN instructor requirements, online instructors must have experience teaching in an alternative setting and/or complete professional development relating to the needs of students in alternative placements.	This recommendation will ensure the unique academic and social-emotional needs of students in JJAEP placements are understood and addressed.
Courses meeting the Texas Recommended or Distinguished Achievement Graduation plans are offered through the TxVSN course catalog.	Pilot courses should be higher- level math, science, and foreign language courses.	Most JJAEPs report that current staff can provide 9th and 10th grade coursework; however, 3rd or 4th year courses needed for the Recommended or Distinguished Achievement Graduation plans are a challenge.

The recommendations and f eatures noted would require that a JJAEP facility have reliable internet access, sufficient student workstations, and staff to mentor students taking online courses provided by a designated TxVSN or a third party provider. A JJAEP could host courses on a local server for students to access through a locally adopted learning management system. However, this scenario works best when online instructors are also local. The current TxVSN model is designed to meet the needs of most students, but in order to serve JJAEP students providers would have to develop or modify courses specifically for JJAEP audiences. Modifications to course learning management systems, communication tools, course structure and resources, as well as additional professional development would be required. It is also worthy to note again that an additional student benefit of this recommendation is a r educed student-to-teacher ratio; however, online instructor costs may be more than for current TxVSN courses.

A critical component of the JJAEP recommendation is the careful screening of student candidates for online coursework and a strong local mentor or facilitator for the student. This system would be appropriate for residential students being served in county facilities as post-adjudicated students transitioning from incarceration. S tudents in alternative environments such as JJAEP need consistency within their academic schedule; therefore, an option as the one proposed would allow portability of the course back to home campuses so that students could continue with the teachers and c ourse or courses begun while in the program.

DAEP
In January and February of 2010 focus groups with DAEP administrators in three regions met to discuss academic needs of DAEP campuses. An overview of the current TxVSN model was presented and then feedback was gathered on how the TxVSN could be leveraged to meet student needs.

Participants were asked to share what online or computer-aided instruction they use and what features best meet student needs. Most participants reported licensing or purchasing online or computer-aided tools for credit recovery or advancement for their students.

The DAEP recommendations are somewhat consistent with the online course needs noted by JJAEP campuses. However, participants commented that a regular TxVSN semester long course does not serve DAEP students because their students often move in and out of DAEP placement quickly.

Nevertheless, DAEP participants were interested in the quality of courses available through TxVSN. Most use programs may allow students to recover a credit. Because these tools lack a tight alignment to the course TEKS, the courses are primarily for credit recovery not mastery. This may have a ne gative impact on students' performance once they return to the regular classroom. It was suggested that there is a place for such tools in the DAEP setting, but current TxVSN courses offer a better quality of learning experience.

Recommendations would require a D AEP facility to have reliable internet access, sufficient student workstations, and s taff to mentor students taking online courses provided by a designated TxVSN or a t hird party provider. Similar to the JJAEP option, a district could host courses on a l ocal server for students to access through a l ocally adopted learning management system. This scenario is best when online instructors are also local. Due to the limited period of time that most students remain in a DAEP, course providers would have to adapt course instructional design to accommodate students moving in and out of courses with frequency. In particular, assessments to place students appropriately in the course and to provide the home campuses with grade reports would need to be av ailable. In a s tatewide delivery of online coursework, it is unlikely that the course scope and sequence will match the scope and sequence prescribed by each student's district. So accommodating a

highly mobile student population and ev ery district grading cycle and annual calendar is not viable unless the students' districts are also willing to make adjustments.

Windham School District (WSD)
The most unique instructional arrangement researched was the Windham School District. Don Lawrence, Division Director of Operations, was interviewed to gain an under standing of program needs.

WSD provides academic and v ocational education to eligible offenders incarcerated within the Texas Department of Criminal Justice. WSD operates over 80 schools serving the Institutional Division (ID) and S tate Jail Division (SJD) of TDCJ. Its academic and vocational programs are designed to provide offenders with the skills needed to obtain employment upon release. Literacy program participants attend classes for 15 hours per week, and m ost of those participating in CTE programs attended 30 hours per week. Similar to the TxVSN, the WSD is not a diploma granting institution. As a result, it cannot convey academic credit for graduation plans.

Adjudicated offenders who are public school age are incarcerated at Gatesville-Hilltop and Brazoria-Clemens. It is estimated that currently TxVSN may only benefit two to three students per semester in these facilities. Challenges to implementation are that most offenders are not allowed access to the internet, that instruction may be interrupted by mandatory facility "lock down" for extended periods of time, and that judge's orders may require a General Educational Development (GED) track for many students.

WSD currently offers some coursework in a closed, thin-client environment which meets the program security requirements. If allowed access to a TxVSN course, students would work in the same lab in the evening. Contract staff would be needed t o monitor and mentor the students during this time. Internet filters would have to be configured to allow students access to the TxVSN course and any websites

required by the course. This would have to be determined well in advance of the course start date in order to configure the filter. Technology staff would have to be av ailable to handle browser and filter needs. Online instructors should expect to serve students with significant academic challenges and as with other alternative education programs no student-to-student interactivity would be allowed. Unlike other programs noted in this report, all levels of foundation courses would be needed.

It may be m ore effective and c ost efficient to provide diagnostic prescriptive, non-instructor-led options for these students.

Texas School Safety Center
Billy Jacobs, Deputy Director of the Texas School Safety Center and Leslie Smith, TEA Educator Affairs and Performance, were interviewed in March 2010 to identify promising practices in Texas as well as to verify that key stakeholders were identified. The survey data and focus group were shared and input was solicited on nex t steps with the study. It was suggested that gaining an ac curate representation from districts and facilities of all sizes and dem ographics was crucial. Texas School Safety Center recommended the following be addressed:

- Ensuring that TxVSN model will supplement current curriculum practices with JJAEPs and DAEPs, not replace them.
- Concern is that students would be isolated at a computer and receive no guidance or interaction with faculty on site.
- Consideration of the costs of implementation of online courses. Many facilities that house alternative programs, especially at the JJAEP level, are leased so the technology infrastructure and bandwidth is not controlled by the organization implementing the program. Cost of implementing, facilitating, and sustaining online courses must be considered by the receiving AEP program.
- Awareness of operations and number of school districts within the alternative program. Some DAEPs and all JJAEPs

must work with multiple curriculum and texts from sending districts to meet the grade level TEKS. Online courses must be flexible enough to complement unique scope and sequence, adopted textbooks, and resources.

Section Three: Summaries and Recommendations

The following recommendations are made for all AEP programs studied.

The online courses are most effective for students:

- Reading on grade level
- Taking courses for credit toward high school graduation
- With good school attendance
- Ability to express themselves clearly and concisely in writing
- With technology literacy skills

According to the AEP personnel estimates, less than 5 per cent of students in alternative education placement programs are served through instructor-led online courses.

When researchers asked if courses designed to increase reading and math literacy were a need, al l AEP programs said that need i s currently met through third party or commercially acquired coursework or tools. The definite need i s for online courses to provide high school credit, preferably higher level math and science and Languages Other Than English (LOTE) courses at an ac celerated pace. S tudents should be abl e to enter a course after being assessed for placement in the appropriate point of the course. They should not all have to start at the beginning of the course. A lso, students should be abl e to advance through the course with online instructor approval in order to complete the course faster than the original end date.

Recommendation #1: The online course must be instructor-led. As the student works through the course, the instructor provides feedback to gauge the pace at which the student should

progress. For example, if the student finished the lessons and as signments for week one, he/she should be able to begin the next week's lesson, making completion of the course before the end date a possibility. This is a strong recommendation from the alternative school experts because it adds the benefit of credit recovery and c redit advancement for the students.

Recommendation #2: The online courses must offer continuous enrollment (rolling start date). Because students enter alternative programs at all times during a semester, the option to enroll into an onl ine course on an y day of the semester should be av ailable. This allows students placed for less than 45 days the opportunity to enroll in an onl ine course until time to transition back to the home campus. Many alternative schools cannot offer electives or dual credit courses, so this option affords the students the chance to complete the courses required for all graduation plans.

Recommendation #3: The online course must have a diagnostic element to place a student in the appropriate point in the course. Students will enroll in online courses at any time during the semester, so the online instructor and campus personnel need to efficiently assess where the student should enter the course and if the course will transfer when the student returns to the home campus.

Recommendation #4: The course must be designed for only students in alternative education placements to safeguard all students. A specific course or section designated for alternative students is necessary.

Recommendation #5: The student will receive consistent and fully developed feedback from the online instructor and mentor. This feedback should be i n the form of encouragement and critiques on the work habits and quality of work of the students enrolled in the course.

Recommendation #6: A pilot program with no more than one or two course offerings should be attempted to serve student in long-term

programs. Results from the pilot could later be used to generate program design recommendations for students in short-term AEP programs.

Recommendation #7: Funds and i ncentives should be made available to provide courses for the pilot program and a TxVSN provider identified to serve these students.

Pilot Program Recommendation

The pilot program should be instituted in long term placement facilities only at its beginning. The minimum length of stay for students to receive online courses through the TXVSN should be less than 85 days. This will allow for a full semester course to be taught in its entirety. The current TxVSN model is not tailored to serve students in shorter term placements in a c ost effective manner and could not be adapted to the needs of short-term students without significant resources.

The redesigned model to serve the majority of short term placements will be c ostly because major modifications, structures, and policies will have to be c reated and i mplemented throughout the TxVSN model. The pilot program directed toward students in long-term programs will be l ess costly and funds can be used to further explore the possibilities presented in this report.

Lastly, it is recommended that one J JAEP participate in the pilot program for long-term placements. A dditionally, it is recommended that a r esearch-based entity be i nvolved to provide outcomes to be studied from the pilot program.

Section Four: Cost of implementation

When designing and i mplementing an online course, several areas must be evaluated to effectively estimate the cost of the course. These include:

- The use of a learning management system (LMS) to host the course. An LMS serves as the classroom repository for the teacher and students to interact and communicate in a

virtual setting. Special consideration must be given to which LMS will host the customized "closed" atmosphere for a course taught in an AEP program. The average cost for process is $30,000 per entity providing a course.

- The number of hours of instruction to be designed for the course. Accepted in the industry, it takes 10 ho urs of planning and development per hour of instruction for a unique course. S ubsequent courses are designed at 90 percent of the original time. It takes one to one half years to develop a semester long course. Depending on t he pay rate per hour, course features, and artificial intelligence, the cost to develop a single course can be between $50,000 and $100,000.

- The cost of faculty to teach and pr ovide support (instructional and technological). Salaries for teachers and support staff must be considered when evaluating the cost of teaching, supporting, and directing an online course in the AEP program. Each entity would need t o budget for salaries and benefits for online instructors, technology coordination and support, and program director. It is recommended that each entity use a c ounselor to help make decisions to place students in appropriate courses.

- Cost of professional development for staff to teach within the course guidelines. The teachers of these courses will have to undergo professional development to enhance their abilities to master teaching in an online environment. The cost for professional development is $500-$1,000 per teacher depending on the provider.

Electronic Course Program (eCP)
The Electronic Course Program (eCP) is administered by the Texas Education Agency (TEA) and c odified in Texas Education Code (TEC) Chapter 30.A.

For more information, please visit: www.tea.state.tx.us/technology

Purpose of the Program
Through approved Texas public school districts and open-enrollment charter schools that applied and w ere approved to participate, the eCP program provides full-time online learning options to public school students in Grades 3-9 who are not required to be physically present on campus during instruction.

Background/Description
Senate Bill 1108 passed by the 78th Legislature (TEC Chapter 29.909) called for the commissioner of education "…to establish a program under which a school district may offer electronic courses to students enrolled in the district or to students enrolled in another district, as provided by an agreement between the districts." The pilot allowed the agency to examine a new Foundation School Program (FSP) funding model that supported quality online learning and had the potential to scale for use statewide.

Gathering data on additional pilot participants serving middle and elementary students provided the agency with a bet ter understanding of the requirements for quality online classrooms at those grade levels. During the 81st session of the state legislature ending June 2009, new legislation (House Bill 3646) was passed that repealed TEC Chapter 29.909 and incorporated the eCP into TEC Chapter 30.A, which established the Texas Virtual School Network (TxVSN). The eCP was incorporated into the TxVSN during the 2009-2010 school year.

Schools selected for participation are eligible to earn FSP funding for students enrolled in electronic courses through the eCP. Districts may offer the instructional program to students enrolled in the district or to students in another district. Open-enrollment charters may offer the instructional program to students who reside within the existing boundaries of the charter school's geographic service area in which they are enrolled. All eCP participants are included in the state's accountability system.

Participants
Currently, there are three districts participating in the eCP, Southwest Schools (SW), Houston Independent School District (HISD) and

Electronic Course Program

Responsive Education Solutions (RES). See each participant's website for more information.

Status

The eCP currently serves Grades 3-9. Grade 10 will be added beginning with the 2010-2011 school year. eCP plans call for the addition of Grade 11 in the 2011-2012 school year and Grade 12 in the 2012-2013 school year.

Participant	Website Address
SW	http://ecp.txva.org/
HISD	http://www.connectionsacademy.com/texas-houston-school/home.aspx
RES	http://iqacademytx.com/

Program Facts

Eligible districts and o pen-enrollment charter Schools must apply to participate; be in compliance with program requirements (prior to acceptance); request waiver to the 2hr/4hr attendance rule; administer statewide student assessments required by law as well as have courses approved through the Course Review Process administered by TEA, per the timeline established by the agency.

Eligible students must reside in Texas; be enrolled full-time in Grades 3-9 in an eC P participating district or open-enrollment charter;

reside within the existing boundaries of the charter school geographic service area in which they are enrolled as well as take statewide student assessments required by law.

Eligible teachers must be certified in the content area of the course and grade level; be i n compliance with highly qualified teacher requirements under No Child Left Behind (NCLB), in accordance with law as well as adhere to the eCP Professional Development Policy for online teaching.

Program Timeline	
2004-2005	Initial eCP Application to Participate released
2006 (Spring)	First students began to be served through the pilot
2008-2009	New eCP Application to Participate released; HB 3464 repealed TEC 29.909 and incorporated eCP into TEC 30.A; Pilot became a Program
2010-2011	New eCP Application to Participate released

Beginning with the 2010-2011 school year, the agency is expanding the eCP to allow additional public school districts and open -enrollment charter schools to apply to participate in the pilot program. The TEA recognized that there is a potential for tremendous value in the expansion of the eCP and the inclusion of more schools and course providers.

A new eCP application for participation and revised Terms of Participation was released in August 2010. (http://www.tea.state.tx.us/index2.aspx?id=4826&menu_id=2147483665)

Interactive Videoconferencing (IVC)

Prior to and c oncurrent with the national and statewide growth in online learning, distance learning through interactive videoconferencing (IVC) has provided Texas students, teachers, and districts with increased opportunities for learning and pr ofessional growth and experience. IVC continues to be a v aluable distance learning option for Texas students, educators, districts, and communities. Through the TETN network, the state's 20 Education Service Centers (ESCs) provide IVC across the state and within their region to meet the needs of students and districts. IVC is used to provide courses including dual credit and graduate courses, professional development, certification programs, and student programs. The table on the following page shows the growth in IVC usage over the past years, as well as the variety of learning opportunities available via IVC.

IVC Return on Investment (ROI)

The ESC networks provide IVC connectivity to 900 school districts as well as higher education and cultural institutions in their region. These "other" entities provide content to students and teachers in the ESC region and also use TETN to reach students in other regions. School districts have taken advantage of the TETN backbone service by participating in student collaborative projects, statewide meetings, and sharing classes.

In the past, using TETN for IVC consistently saved TEA and the ESCs approximately $2 million a y ear in travel costs and productivity expenses. The cost-saving formula is derived by calculating the number of ESC sites in a conference and appl ying the State of Texas travel reimbursement formula assuming one person traveled from the ESC to Austin. With the increase in fuel and other travel costs, the use of TETN from September 2008 t o May 2010 increased the cost savings to over $2.8 million a year. District-to-district classes using the TETN backbone services are not included in the calculation since this cost is not measured in terms of travel, but in terms of students receiving classes and/or enriched curriculum.

With the migration to the new TETN Plus network, K12 classes and student programs that involve two sites between TETN Plus members no longer are bridged by the TETN Office. With unlimited bandwidth, ESCs place video calls and schedule classes with one l ess coordination point thereby saving TETN resources for other multi-regional classes and events.

Between September 2008 and May 2010, 1,134 statewide conferences and professional development sessions were held on TETN that resulted in saving of $5.6 million in travel and pr oductivity expenses. School districts participated in almost half of those conferences to receive first-hand information and answers to questions.

During this same time period, 3,673 K12 classes, field trips and collaborations between school districts were conducted over TETN.

The following are common uses of TETN:

- collaborative projects among students

- dual-credit classes between regions (e.g. community college to high school)

- high school-to-high school classes between ESCs (i.e. sharing teachers)

- professional development classes across the state (e.g. university teaching master level classes to

Interactive Videoconferencing

professionals located around the State.)

- electronic field trips (e.g., museums, NASA)

- training sessions for school board members or charter schools

- legislative updates (e.g., overview of new legislation)

- administrative meetings between TEA and coordinators in the ESCs

- collaborative meetings among ESC staff (e.g. business managers)

- special projects (e.g., state agency using TETN to meet with educators)

- public hearings on proposed commissioner rules

- TEA updates on new rules or regulations and grants

- toll-free calling among the ESCs and TEA

High Definition Interactive Videoconferencing (HD IVC)

IVC classroom equipment is becoming more affordable and of fering HD capability. T he ESCs are making investments in HD MCUs (multi-point control units) to support multi-point HD calls. The TETN Office has an HD MCU that can support up to six HD sites. In spring 2010, the ESCs and TETN hosted an H D-day

to encourage the use of HD video conferencing. The program included providers such as the Challenger Center where students prepared 3-days in advance to create a command center capable of making weather predictions, the Manhattan School of Music where students received close visuals of the art of making music and a presentation on nanotechnology and the use of an electron microscope by the University of Georgia Science Lab.

IVC Usage

The table below indicates the use of IVC for dual credit and high school credit courses from the 2008-2009 school year through the 2009-2010. During the biennium the trend of usage shows that IVC is being used less for dual credit and high school courses. We believe this is a result of the districts taking advantage of courses offered through the Texas Virtual School Network. E ven though fewer students earned credits using IVC, more course titles were offered and more campuses participated in IVC classes. We believe this suggests that the courses offered are targeting specific needs of students.

Student Courses Delivered by Texas ESCs Through Interactive Videoconferencing	2008-2009	2009-2010
Number of Dual Enrollment Course Titles Delivered	255	293
Number of Dual Enrollment Courses Delivered	746	736
Number of Campuses Receiving Instruction	275	301
Number of Student Enrollment	12,354	10,746
Number of High School Credit Course Titles Delivered	58	44
Number of High School Credit Courses Delivered	138	107
Number of Campuses Receiving Instruction	100	84
Number of Student Enrollment	3,414	2,717

Student Programs Delivered by Texas ESCs Through Interactive Videoconferencing (IVC)	2008-2009	2009-2010
Number of Student Programs Delivered	4,214	4,499
Number of Campuses Receiving Student Programs	1,374	1,542
Number of Students Participating	180,029	251,196

IVC Field Trips and Student Collaborations

Distance learning through IVC is moving from being a supplemental activity to an integral part of classroom instruction. Veteran teachers now integrate IVC activities into their lesson plans. Whether the activity is a v isit to a remote museum or a classroom-to-classroom collaboration, students complete assignments in preparation before and after an IVC session. Students visit museums, aquariums, observatories, and other sites, and they interact with experts in fields such as geology, astronomy, and m arine science. As well as providing the chance to venture beyond the classroom, distance learning student programs, offer students an opportunity to apply what they have learned as they watch, listen to, and interact with professionals in many different disciplines, as well as with other students.

TETN events are designed to provide engaging content and interaction between students, educators, and ex perts in the field. Individual ESCs hosted a wide variety of student events over TETN that added to the educational experience of students across the state.

Examples of IVC programs sponsored by the ESCs in 2009-2010 include:

- **Fairy Tale Re-Write**
  Students in 3rd and 4th grades were assigned the task of modernizing a fairy tale. Students re-wrote the tale, posted it on a secure website and then presented it via IVC to other students across the State. Observing students could go online and critique the tales. Key to this program was the use of technology to complete the assignment, whether it was the use of social networking technology or video recording the tale.

- **Texas History Mystery**
  Students in 4th grade researched a historical figure or event and g ave clues to other students across the state simulating the "Mystery Quest" game.

- **Celebrity Guests**
  Barbara Bush read to 27,000 students across the State. Students were selected to ask questions and interact with the esteemed wife and mother of former presidents. ESCs facilitated the distribution of the book, *Mr. President: A Book of U.S. Presidents*, to every student who watched the program. Philippe Cousteau talked to students about coral reefs from the Seattle Aquarium. Author Elaine Scott discussed her book, *When is a Planet Not a Planet: The Story of Pluto*, with 4th and 5th graders.

- **Other Programs**
  Professor John Ishiyama, Editor of Political Science Education and faculty at North Texas University, talked to students about the fall of the Berlin Wall, and scientists talked to students about their research while on board the ship JOIDES that was streaming towards Antarctica.

The figures in the table above show the significant growth in the number of IVC student programs sponsored by the ESCs and T ETN from the 2003-2004 to the 2009-2010 school year.

ESC Distance Learning Events 2010

George Bush Presidential Library

Education Service Center, Region 6 hosted several statewide videoconferences this past year, including the Reading Discovery videoconference with Former First Lady Barbara Bush. This was the third year for the event and i t has grown tremendously each

year. This year, 17 of the regions participated with over 18,000 students and teachers watching via videoconference. Another 8,000 watched via live stream or the recording afterwards. With the success of this program, the George Bush Presidential Library and Museum offered 3 more videoconferences statewide that were well-received by all.

Mrs. Bush & Lisa Miller, Outstanding Educator

Texas History and the Alamo

Education Service Center, Region 20 partnered with the Daughters of the Republic of Texas and the staff of the Alamo to present a statewide videoconference in March 2010 to commemorate the Battle of the Alamo and other major battles for Texas independence. Students interacted with Dr. Bruce Winders, historian and curator of the Alamo, and other staff members, all dressed in vintage attire. During the videoconference, students worked together to complete a timeline activity with information and materials provided prior to the conference by the education staff of the Alamo. (Note: This was the Alamo's first time to present via a distance learning program. ESC-20 is working with staff to help purchase equipment and routinely provide student content.)

Philippe Cousteau

Education Service Center, Region 11 partnered with Philippe Cousteau, world-renowned environmentalist, Discovery Channel host and grandson of the renowned explorer Jacques Cousteau, to present live from the Seattle Aquarium. Students in Grades K-2 explored the coral reef animals and their adaptations, while 3rd-5th grade students examined the interdependency of organisms in the ocean. Pre- and post- field trip curriculum aligned to elementary science TEKS, was distributed to

students to deepen and extend their understanding of the coral reef.

Pre-conference activities

Philippe Cousteau

### JOIDES Research Vessel
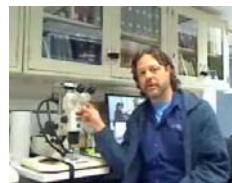
Students talked to scientists and other crew members on the amazing 470 foot long research vessel JOIDES Resolution (JR). The international group of marine geologists and technicians were out at sea on their way to Antarctica. Students were taught about the vessel and its role in increasing our understanding of the seafloor, plate tectonics, and past climate change.
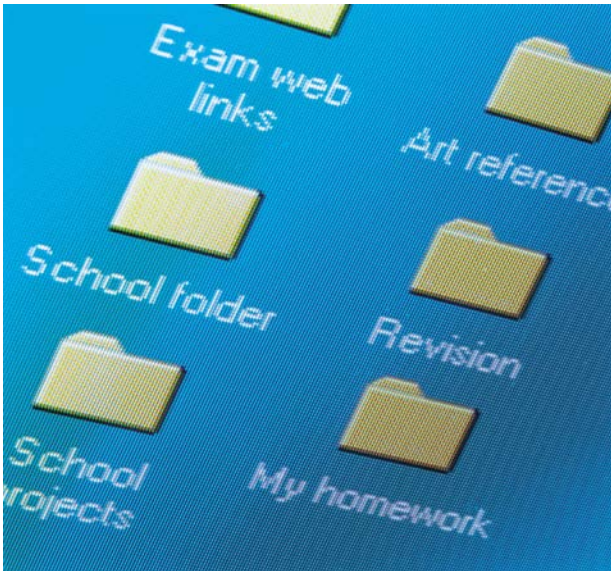
Digital Content and Instructional Materials

Digital content is a key reporting area in the Texas *Long-Range Plan for Technology* Teacher and Campus School Technology Readiness (STaR) Charts. Beginning with the first field testing of the STaR Chart in spring 2001, teachers have been reporting on the use of digital content in the classroom.

Texas teachers incorporate digital content within teaching and learning through many means. These include shared, teacher-created curriculum and resources over the Internet using free, open-source and paid, proprietary Learning Management Systems (LMS); web-based content subscriptions for audio and video; and TEKS-aligned, basal instructional materials made available by publishers through the Internet. There is evidence that Texas teachers and students are increasingly familiar with and are using digital content and resources in the classroom. This is demonstrated in the data collected through the STaR Charts.

Data on digital content is collected in the Campus STaR Chart, in the Focus Area Teaching and Learning 2 (TL2), Frequency/Design of Instructional Setting Using Digital Content. From 2008-2009 to 2009-2010, the number of campuses at the Advanced and Target levels increased by 8 percent and the

number of campuses reporting at Early and Developing Tech decreased by 8 percent. This data shows that the capacity of Texas teachers and students to use digital resources in the classroom is increasing. While there are always opportunities for further progress, it is encouraging to see gains of this level made in access to technology and digital content in the classroom.

With the passage of House Bill (HB) 4294 and HB 2488, 81st Texas Legislature, 2009, the spotlight fell on digital content. These two pieces of legislation are now codified into the Texas Education Code (TEC) Chapter 31, TEC 32.0231, Electronic Textbooks and Instructional Materials List, and Subchapter B-1, State-Developed Open-Source Textbooks, respectively.

Digital Content

**Texas Campus School Technology and Readiness (STaR) Chart:
Frequency of Instructional Setting Using Digital Content**

Level of Progress	Description	08-09	09-10
Early	Most teachers occasionally use technology to supplement or reinforce instruction in classroom, library, or lab	3.44%	2.45%
Developing	Most teachers have regular weekly access and use of technology and digital resources for curriculum activities in the classroom, library, or lab	43.44%	35.82%
Advanced	Most teachers have regular weekly access and use of technology and digital resources in various instructional setting such as in classroom, library, lab, or through mobile technology	47.69%	55.45%
Target	Most teachers and students have on-demand access to appropriate technology and digital resources anytime/anywhere for technology integrated curriculum activities on the campus, in the district, at home, or key locations in the community	5.45%	6.27%

List of Electronic Textbooks and Instructional Materials

The 81st Texas Legislature, 2009 passed House Bill (HB) 4294, revising Chapter 31 of the Texas Education Code (TEC) and providing additional options for instructional materials for school districts and open-enrollment charter schools. The legislation's passage gives local authorities greater flexibility in determining whether printed and/or electronic textbooks best serve the needs of their student populations and furthers the opportunity to generate textbook credits. In addition, this legislation permits—for the first time—the use of state textbook funds to purchase technological equipment.

Historically, in order to have instructional materials purchased by the state, school districts and open-enrollment charter schools choose from lists of materials adopted by the State Board of Education. Those materials that are submitted for adoption, and reviewed and approved according to the process established by the State Board of Education are eligible to be placed on the lists of adopted materials and purchased with state funds. HB 4294 requires the commissioner of education to adopt a list of

electronic textbooks and instructional materials, making them available to Texas Schools at state expense. These materials, meant to convey information to the student or otherwise contribute to the learning process, may include not only digital content that addresses the Texas Essential Knowledge and Skills (TEKS), but also tools, models, and investigative materials designed for use as part of elementary science curriculum.

All materials submitted for inclusion on the Commissioner's List of Approved Electronic Textbooks are reviewed by a panel of recognized experts to ensure that the materials meet the statutorily required criteria. In order to be eligible for inclusion on the Commissioner's List, materials must:

- be reviewed and recommended by a panel of experts in the subject area for which the textbook or instructional materials are intended;
- be aligned with current research in the subject area of the textbook or materials;
- be aligned to the Texas Essential Knowledge and Skills; and
- include appropriate training for teachers.

Commissioner's List of Electronic Textbooks

Product Name	Publisher	Content	Materials	Grade Level
AWARD Reading Online	AWARD Publishing	English Language Arts and Reading	Teacher and Student Edition	K-2
Imagine It!	SRA/McGraw-Hill	English Language Arts and Reading	Teacher and Student Edition	K-5
Imaginalo!	SRA/McGraw-Hill	English Language Arts and Reading	Teacher and Student Edition	K-5
iStation Reading	iStation	English Language Arts and Reading	Teacher and Student Edition	K-5
CompassLearning Odyssey	CompassLearning	English Language Arts and Reading	Teacher and Student Edition	K-12
ClassTools Achieve	APEX Learning	English Language Arts and Reading	Teacher and Student Edition	9-12
Glencoe Lit Texas Treasures	Glencoe/McGraw-Hill	Literature	Teacher and Student Edition	6-12
Standards2Strategy	A+Rise	English Language Proficiency Standards	Teacher Resources	K-8 and 9-12
ELLevate	Glencoe/McGraw-Hill	English Language Proficiency Standards	Teacher Resources	9-12
ELPS Toolkit	Pearson Longman	English Language Proficiency Standards	Teacher Resources	9-12
Longman ESOL 1&2 Keystone	Pearson Longman	English Language Proficiency Standards	Teacher Resources	9-10
Bridge3000	Bridge3000	English Language Proficiency Standards	Teacher Resources	6-8

The first Request for Quote (RFQ), calling for submissions for inclusion on this Commissioner's List, was released in January 2010. The submission deadline was in March 2010. The RFQ called for all of the content areas in Proclamation 2010 as well as Proclamation 2011. The legislation also allowed state textbook funds to be used for the purchase of technological equipment necessary to use either those electronic textbooks and instructional materials on the Commissioner's List of Approved Electronic Textbooks or any electronic instructional materials adopted by the State Board of Education.

School districts and open-enrollment charter schools are eligible to receive textbook credits for ordering instructional materials on the Commissioner's List priced below the cost limit established for the subject and grade level by the State Board of Education. These textbook credits—one-half the difference between the price of the materials and the SBOE-approved maximum cost—may be used to purchase additional electronic textbooks, order print textbooks adopted by the State Board of Education, or to purchase technological equipment to access the approved instructional materials and electronic textbooks.

The date for issuing a subsequent RFQ for electronic textbooks is dependent upon the curriculum needs of districts and open-enrollment charter schools.

Commissioner's List of Technology Equipment

Equipment	Vendor
Whiteboards	SMART Technologies
Laptops, desktops, whiteboards	Dell, Inc.
Whiteboards	Promethean
Laptops, iPods, IPads	Apple
Laptops, desktops	Hewlett-Packard

State-Developed Open-Source Textbooks

In 2009, the 81st Texas Legislature passed House Bill (HB) 2488, making possible the adoption of open-source textbooks for use in Texas Schools. An open-source textbook is defined as "an electronic textbook that is available for downloading from the Internet at no charge to a student and without requiring the purchase of an unl ock code, membership, or other access or use charge, except for a charge to order an optional printed copy of all or part of the textbook." This bill requires the State Board of Education to adopt open-source textbooks for secondary courses submitted by a research university or emerging research university (as defined by the Texas Higher Education Coordinating Board), a private university in Texas that is a member of the Association of American Universities, or public technical institutes in Texas.

Additionally, the legislation gives the commissioner of education the authority to purchase—through a competitive process—state-developed open-source textbooks. The commissioner may purchase more than one state-developed open-source textbook for a subject or grade level. The costs of developing the material are paid from the state textbook fund. State-developed open-source textbooks are wholly and irrevocably owned by the state, and the state has unlimited authority to modify, delete, combine and/or add c ontent to the textbook after purchase. Because state-developed open-source textbooks are the property of the state, the commissioner may license their use to any public school or open-enrollment charter school in the state or any state or local agency educating students in any grade from prekindergarten through high school.

State-developed open-source textbook must:
- be reviewed and r ecommended by a panel of experts in the subject area and grade level for which the materials are intended
- align to the Texas Essential Knowledge and Skills

- align with current research in the subject area of the textbook

Requiring these materials to align with current research ensures that the students and teachers will have the benefit of practices and/or strategies that have demonstrated success in providing high-quality content that is up-to-date, standards-aligned, and meets the different learning needs of K-12 students as determined by evaluations or research that use valid and r eliable measures published in peer-reviewed journals.

School districts and open-enrollment charter schools are eligible to receive textbook credits for ordering state-developed open-source textbooks. These textbook credits—one-half the difference between the license price of the materials and the SBOE-approved maximum cost—may be used to purchase additional electronic textbooks, order print textbooks adopted by the State Board of Education, or supplement the district's technology allotment to purchase technological equipment to access the approved instructional materials and electronic textbooks.

Additional Progress in Digital Content

Both HB 4294 and HB 2488 required the agency to establish commissioner's rules to support the implementation of digital content in Texas schools. The process of developing and implementing the new 19 Texas Administrative Code (TAC), commissioner's rules for Chapter 66, State Adoption and Distribution of Instructional Materials, began in summer 2009. First reading of the new rules took place in November 2009. By spring of 2010, the new TAC for both the list of electronic textbooks and instructional materials and s tate-developed open-source had r eceived full public hearing and comments. Final adoption is on t arget for fall 2010.

Future Considerations for Digital Content

The state is also providing a pl atform for expanding and enhancing the use of digital
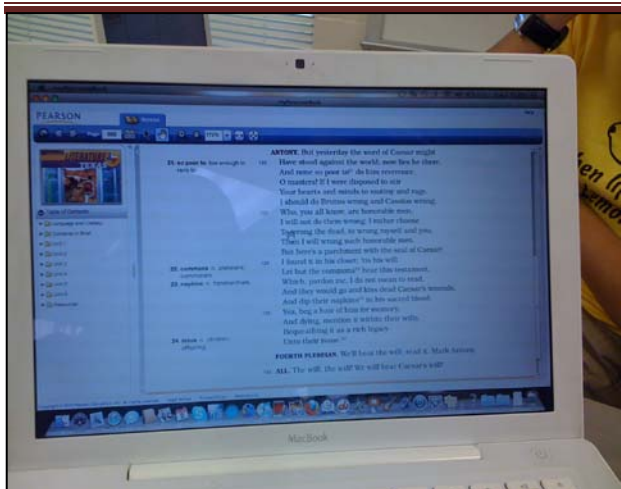
content for teachers' professional development and for teaching and learning. Project Share is a new initiative designed to provide a collection of digital tools to a community of educators dedicated to improving teaching and learning through interactive and engaging online environments. A report on Project Share is available in this Progress Report under Educator Preparation and Development.

Additionally, the TEA's *Strategic Plan for Fiscal Years 2011-2015* and the National Educational Technology Plan 2010 embrace the use of digital content in the classroom. The material on the Commissioner's List of Electronic Textbooks and Instructional Materials and the state-developed open-source materials put Texas on the leading edge. Through this legislation, the state has already been implementing goals called for in the new National Educational Technology Plan. Those goals include leveraging "the flexibility and the power of technology to reach all learning anytime and any where," the use of open educational resources, and access to devices to support student access to learning through web-based instructional materials.

Along with the commissioner's options for digital content, the State Board of Education (SBOE) adopted Proclamation 2010 instructional materials that included digital content from many publishers. The SBOE took further action for Proclamation 2011 by adding requirements for all digital content submissions. These requirements included:

- A publisher that offers digital versions of a print program must bid the versions separately.
- All digital programs must be platform-neutral for PC and MAC environments.
- Publishers of electronic programs are to offer a statewide license.
- Publishers are to provide a digital version of all teacher materials.
- Publishers are to provide ancillaries electronically.

The SBOE continued their efforts to include digital content with a request for Supplemental Science instructional materials. All Supplemental Science submissions must consist of online materials.

In the context of teaching and learning, the foundations for success in implementing digital content statewide have been reported in the *Progress Report on the Long-Range Plan for Technology* for more than a decade. Educational technology grants such as TIP, Vision 2020, and STAR have been implemented over the past ten years, providing thousands of Texas teachers with professional development. That professional development has enabled teachers to teach in innovative and effective ways in classrooms where students use digital devices such as laptops and handhelds to access digital content and Web 2.0 tools.

As exemplified in the Campus STaR Chart for Frequency of Instructional Setting Using Digital Content, Texas teachers and students are ready to use the digital content and resources that are increasingly available to them. In fact, many are already engaged in instruction with digital content. Their best practices and created content—demonstrated on Project Share, during the annual TATN event, and through other projects and programs—are part of the rich tapestry of experience that provides a strong base for digital content use in Texas.

Finally, in the context of digital content, it is beneficial to consider the data gathered from the 2009 Speak Up Survey of Texas students in Grades 6-12. Students were asked the following question: "Imagine that you could design a new kind of textbook that will be 100% online. What should be included in that new online textbook?" They were instructed to check all that applied from a list of 25 choices, including "other." For students, the ability to search through key terms or events, the ability to communicate and collaborate with peers, the ability to highlight and take notes, quizzes for self-test, and the calculator features all score high. There are many exciting features available in digital content. For Texas students, as well as for parents who responded to the parent survey, good digital content must include instructional features that support students' understanding and learning. The feedback from this report will help inform and guide future implementations of electronic textbooks and instructional materials and state-developed open-source materials.
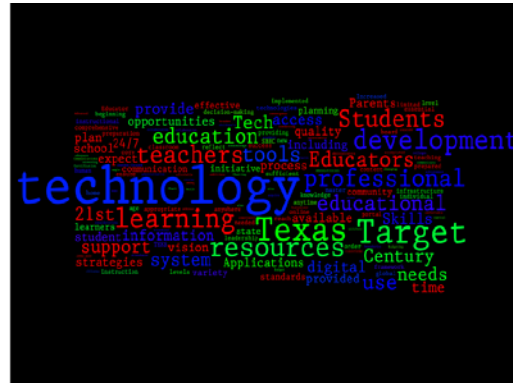
Texas Students Views on e-Textbooks: Desired features and functionality

Use	Gr 6-8	Gr 9-12
Ability to search through the textbook by key terms or events	41%	46%
Ability to make electronic highlights or notes	43%	47%
Quizzes and test that I can take myself	40%	44%
Access to online tutors at anytime	37%	41%
Ability to communicate with classmates about subject matter (IM, email, Chat)	44%	46%
Animations and simulations that explain concepts	36%	39%
Calculator	43%	49%
Brain teasers or advanced topics to extend my learning	39%	37%
Links to useful websites	37%	40%
Self paced tutorials	33%	38%
Links to real-time data (such as: populations, weather, NASA, earthquakes, Google Earth, etc)	35%	36%
Tools to help me organize my school work (Communications, organize my assignments,	34%	34%
PowerPoint presentations of teacher/lectures	38%	39%
Tools to help me develop my writing skills	31%	31%
Video clips about topics I'm studying	35%	34%
Virtual lab	33%	32%
Ability to download information to my cell phone	38%	40%
Ability to create podcast or videos	36%	33%
Tools to help me collaborate or share information with my classmates (such as: blogs, social networking sites, wikis, bookmarking)	30%	31%
Virtual reader that could read the text	30%	29%
Podcast from subject experts	27%	27%
Webcams or video conferencing	27%	25%
Other	6%	4%

K-12 Databases

K-12 Databases were authorized during the 80th and 81st Texas legislative sessions. Funding is provided through Riders 78 and 88 directed the commissioner of education to transfer amounts up to $2.5 million in each year of the biennium for the resources.

For more information, please visit: www.tea.state.tx.us/technology

Purpose of the Program

The purpose of the online databases is to provide equitable access to students, educators, and parents across the state with the following resources:

- Broad range of learning resources that support state student standards
- Unbiased collection of authoritative and reliable sources
- Select content for all subject areas updated regularly
- Focused and relevant search results
- Essential resources for academic research unavailable for free on the Internet

Background/Description

The state-funded K-12 Databases program provides access to databases, 24/7, to Texas students, teachers, parents, and school leaders from school and hom e. Regardless of district size or funding, all Texas public school communities have equal access to these state-funded resources.

Databases to schools are provided through a par tnership between the Texas State Library and Archives Commission (TSLAC), the Texas Education Agency (TEA) and Education Service Center, Region 20 (ESC 20). They are funded through the technology allotment.

Through the K-12 Databases, schools receive access to 34 databases provided by EBSCO Publishing, including a comprehensive collection of full text periodicals, biographies, primary source documents, essays, almanacs, reference books, pamphlets, newspapers, transcripts, photos, maps and more. These are accessible through user-friendly, grade level interfaces.

Through the resources, the K-12 Databases provides an environment wherein students can:

- Look up ar ticles, biographies, primary source documents, photos, maps, and more;
- Research with age-appropriate content and features from leading reference resources;

K-12 Databases

- Search for material based on r eading level and using audio and/or video files for research; and
- Use features like translation tools and read-aloud functions to support English Language Learners.

Four encyclopedias in English and two in Spanish are provided by Encyclopedia Britannica with illustrations, maps, and v ideos. Also included are interactive learning materials, teacher resources, a world atlas, dictionary and thesaurus. All materials are aligned to state curriculum standards.

These same materials also include resources for educators such as activities and lesson ideas, and articles from professional journals to assist educators in keeping up with research and new developments in education.

Benefits of Using K-12 Databases:
- Helps increase student achievement and promotes 21st century skills
- Helps differentiate instruction
- Addresses core content standards
- Critical to College and Career Readiness
- Provides equitable access to quality resources
- Supports parental involvement
- Allows educators to grow professionally
- Promotes technology literacy for students, teachers, and administrators
- Assists educators in reaching Advanced and Target levels in the STaR Chart by providing online databases that support teaching and learning
- Promotes health through providing the latest health resources and updates

Training through the ESC, Region 20:
- Communication of updates through statewide electronic discussion lists;
- Exhibiting and presenting breakout sessions at local, regional, and state conferences;
- Training via face-to-face workshops at multiple regional service centers, webinars, self-paced online modules, tutorials, and Mini10 modules;

- Program updates at local, regional and statewide events such as TEA updates;
- Adapting workshop content to include other

statewide initiatives as appropriate;
- Video clips that introduce the databases to students, parents, and teachers;
- eKit that addresses the priorities of school leaders;
- Lesson plans;
- Collaboration with regional education service centers;
- Flyers, brochure, and bookmark designs;
- A dedicated help desk and technical support center; and
- A dedicated, comprehensive website (http://web.esc20.net/k12databases).

Texas students, teachers, librarians, administrators, and s tudents' parents across the state have used the online research and information resources. Database usage statistics has been av ailable to schools. For three consecutive years, the highest use is observed between the months of March, April, and May. Not unexpectedly, the lowest use is observed during the summer months.

Public School Library Study
The TSLAC and TEA were directed by the 80th Legislature to conduct a study of public school libraries (Government Code Sec. 441.021). The K-12 Databases was an ar ea of the study. Study respondents determined that the partnership between TSLAC, TEA, and ESC 20 has worked well to make the resources available to all public and charter schools in the state of Texas as well as to provide training and support for their use. Additional study results are found under the School Libraries heading at **http://www.tea.state.tx.us/technology**

Online Tutoring Pilot

The Online Tutoring Pilot was established in accordance with Rider 13 of the Texas Library and Archives Commission. It was implemented from September 1, 2008 to August 31, 2009 with the goal to help increase student achievement and overcome academic obstacles through the use of live tutors via an online tutoring resource. Tutor.com was selected as the vendor-partner and 43 high school campuses from across the state were identified as participants. Education Service Center, Region 20 as sisted with the pilot implementation through a partnership with the Texas Education Agency.

ESC 20 purchased 3,235 student access codes for this project. Each student had an unlimited number of online tutoring sessions for the duration of the pilot. Online tutoring sessions allowed students to log on anonymously and connect with a l ive tutor. On their screen, students see a whiteboard with interactive tools, a chat window—similar to those available in Yahoo Chat or AIM—where they communicated with their tutor. Tutors did not give students the answers to any problems, but instead helped them work through problems.

Just in Time Online Tutoring was officially launched in mid-November 2008 at 34 participating campuses. Nine more campuses were added in the spring of 2009. The distribution of student logins was based on a ratio of approximately 10% of the student enrollment at each campus based on the October 2007 snapshot.

Between the months of November 2008 and August 2009, the total number of online tutoring sessions was 9,018. Session content was distributed as follows:

- 6,565 sessions in Mathematics
- 1,486 in Science
- 525 in Social Studies
- 442 in Language Arts

Only 31 sessions were requested in Spanish.

The highest usage was observed during the months of February through May, with the highest peak in April, which was right before TAKS. The highest number of online tutoring sessions was observed the week of April 13-17, with a total of 621 sessions.

While the pilot targeted high schools, the structure of the tutoring service allowed access to all grade levels. Students were able to select a grade level each time they logged into Tutor.com. Some students opted for AP and college-level work (98 sessions), while others opted to work at a lower level (400 sessions). The vast majority of students worked on grades 9 t hrough 12 (8544 sessions).

According to usage statistics, the average number of sessions per student between November 2008 and August 2009 w as 6.7. The data also indicates that the average duration of sessions was fairly consistent from December 2008 through August 2009, at 19.11 minutes. The time spent in online tutoring during the nine months of the pilot totaled 161,008 minutes, or more than 2,683 hours of individualized instruction. Usage varied throughout the day with 62% of sessions taking place during regular school hours, 28% before

Online Tutoring Pilot

8 AM or after 3 P M, and 9% of sessions on weekends.

Numerous positive results were observed in this pilot. Once students began using online tutoring, they were positive about both the experience and its benefits. They seemed to especially like the anonymity of the interaction. Online tutoring was helpful when used for credit recovery, preparing for tests (including TAKS), when the teacher was not available, and t o accelerate students who needed t o be challenged. The tutoring approach was also beneficial. Tutors helped students use problem-solving skills and draw their own conclusions.

On campuses where the pilot implementation was successful, efforts to promote the use of online tutoring included the following strategies:

- Issuing of student certificates (most sessions, most minutes, most improved);

- Drawings for popcorn, books, iPods, and iTunes gift cards;

- Mobile labs available after school several days a week exclusively for online tutoring plus late transportation home provided (Palestine HS);

- Targeting specific critical areas, such as essay writing, math, or science;

- Availability of computers in the library dedicated to online tutoring to be used anytime during the school day (Willis HS);

- Credit recovery teachers used online tutoring to save time and effort (Cedar Hill HS);

- Reminders of the availability of online tutoring during morning announcements;

- Sharing lists of online tutoring participating students with all teachers at the campus and at department meetings;

- Allowing students to store the login information in their cell phones;

- Taping bookmarks to computer workstations at the computer lab as constant reminders;

- Allowing counselors to refer students for online tutoring;

- Promoting the resource as something they can use to help them improve their grades;

- Students who had a positive experience encouraged reluctant users to use the resource;

- Integrating online tutoring in a TAKS Academy (Cedar Hill HS) and summer school (Palestine HS);

- Encouraging ELL students to use the online tutoring service available in Spanish; and

- Including a letter to parents explaining the implementation and benefits of online tutoring.

Comments from campus administrators about the quality of the online tutoring service, the availability of tutors and the variety of subjects reflected an overall positive opinion. Campuses that took more aggressive steps to promote the resource and i mplement the pilot shared that online tutoring assisted their students to improve TAKS performance and end -of-year exams, increase attendance and reduce discipline referrals.

In conclusion, it was evident that once the resource was made available to students, their response was overwhelmingly positive. Once students were provided access, they used the resource extensively as needed. While some adults were unfamiliar with the technology and reluctant to use online tutoring, students were extremely comfortable with the entire experience. The data captured in 2008-2009 is encouraging and worth exploring the long-term benefits of online tutoring.

Educator Preparation and Development

Ongoing, sustained, high-quality professional development is essential to prepare teachers to meet the needs of their students by increasing student engagement and learning. Technology plays a major role in providing Texas students with the skills necessary to succeed as 21st Century learners. Districts across the state are making it a priority to prepare educators to incorporate technology into their classrooms and as a result have shown strong impacts in achievement, student engagement, and even teacher morale.

Texas educators have a wide range of opportunities for professional development. The state's 20 regional education service centers are critical to the mission of providing teachers with the continuing education they need in order to teach effectively in 21st Century classrooms. The agency has also committed to developing and delivering high quality professional development in an interactive and engaging learning environment. This initiative, Project Share, uses a collection of Web 2.0 tools and applications to provide professional development resources across the state to build professional learning communities, participate in professional development courses, and search for resources to be used in the classroom and for personal growth. Project

Share offers access to digital content through online repositories, state-owned instructional materials, and Texas Education on iTunes U. Throughout the summer of 2010, the agency and the ESCs have worked together to provide professional development to enable teachers to access and begin using Project Share for teaching and learning. With over 225,000 teacher accounts currently created, the depth of knowledge and experience to be shared by Texas teachers through professional learning communities is limitless. That, in turn, has the potential to transform student learning statewide.

Other TEA initiatives focusing on professional development have provided exciting opportunities for teachers across the state. Title II, Part D grant funding distributed to hundreds of districts requires that a minimum of 25% of the funding goes towards professional development. Through training, grantees are helping districts be a part of the 21st Century and see that changes in teaching must be made to prepare the students to live in their world. Intel® Teach, a Train-the-Trainer model, is a worldwide initiative to enhance student learning by providing teachers with the skills to integrate computer technology effectively into existing curriculum. The program offers courses from many of the Education Service Centers (ESCs) in partnership with TEA, and is free to all schools. In addition, as part of the requirement for teaching courses in the Texas Virtual School Network (TxVSN) and the Electronic Course Program (eCP), the number of teachers taking professional development and learning to teach and even develop courses online continues to increase annually.

The Progress Report shows how the necessary tools and resources for administrators, teachers, librarians, and students are being provided for our 21st Century classrooms. This section of the *Progress Report on the Long-Range Plan* will highlight the impact that technology has made in Educator Preparation and Development from 2008-2010.

State of the State Using STaR Chart Data

Campus STaR Chart Data and Analysis for Educator Preparation and Development

The Texas Campus STaR Chart produces a profile of the campus' status toward reaching the goals of the *Long-Range Plan for Technology* (LRPT) and No Child Left Behind. The profile indicators place a campus at one of four levels of progress in each key area of the LRPT: Early Tech, Developing Tech, Advanced Tech, or Target Tech. The key areas include: Teaching and Lear ning; Educator Preparation and Development; Leadership, Administration and Instructional Support; and Infrastructure for Technology. Most campuses in Texas show continued improvement and ar e moving from lower levels on t he campus chart towards the Target Tech level. During the past biennium, the data gathered through the Campus STaR Chart for Educator Preparation and Development shows that the majority of Texas teachers and c ampuses evaluate themselves as either Developing or Advanced Tech.

Early Tech. Early Tech means that technology skills include multimedia and the Internet. Of educators, 10% meet State Board for Educator Certification (SBEC) standards. Administrators recognize the benefits of technology in instruction. There is minimal personal use of online resources. The technology budget allocates 5% or less for professional development. In 2008-2009, 4.5% of Texas teachers reported themselves at the Early Tech level in Educator Preparation and Development. In 2009-2010, 3.7% of teachers rated themselves at the Early Tech level in Educator Preparation and Development. This .8% decrease indicates more campuses are reaching Developing, Advanced, or Target Tech.
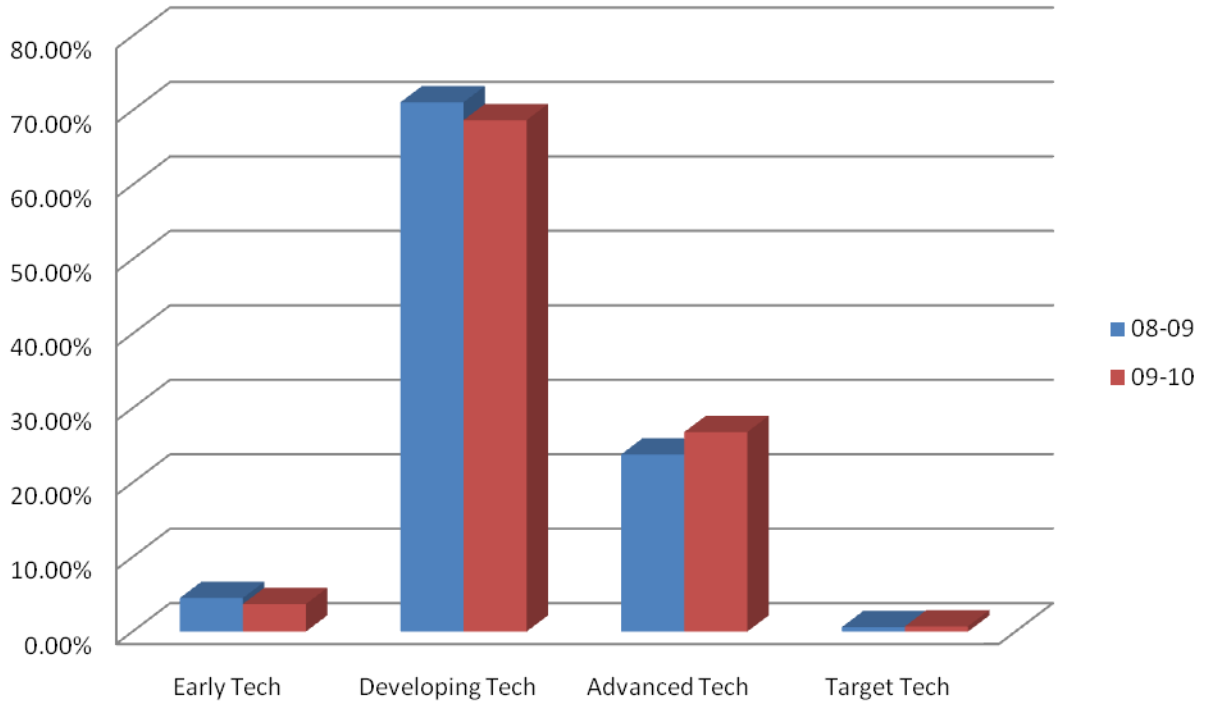
Developing Tech. Developing Tech refers to instruction in which technology is used for administrative tasks and c lassroom management. Online resources are used. Of educators, 40% meet SBEC standards. Administrators expect teachers to use technology. The technology budget allocates 6-24% for professional development. In 2008-2009, 71.1% of Texas teachers reported themselves at the Early Tech level in Educator Preparation and D evelopment. In 2009-2010, 68.7% of teachers rated themselves at the Developing Tech level in Educator Preparation and Development. This 2.4% decrease indicates more campuses are reaching Advanced or Target Tech levels.

Advanced Tech. At the Advanced Tech level of the STaR Chart in Educator Preparation and Development, there is integration of technology into teaching and l earning. Online resources are used regularly. Of educators, 60% meet SBEC standards. Administrators recognize and identify the exemplary use of technology. The technology budget allocates 25-29% for professional development. In 2008-2009, 23.8% of Texas teachers reported themselves at the Advanced Tech level in Educator Preparation and Development. In 2009-2010, this number increased by 3%. During that period, 26.8% of teachers rated themselves at the Advanced Tech level in Educator Preparation and Development.

Target Tech. At the highest level of the STaR Chart for Educator Preparation and Development, regular technology-supported, learner-centered projects occur. Technology Applications TEKS and anytime, anywhere use of online resources are vertically aligned. Administrators ensure the integration of appropriate technology. Of educators, 100% meet SBEC standards. The budget allocates 30% or more for professional development. In 2008-2009, .6% of Texas Teachers reported themselves at the Target Tech level in Educator Preparation and D evelopment. In 2009-2010, this number increased by .1%. During that period, .7% of teachers rated themselves at Target Tech level in Educator Preparation and Development.

Educator Preparation and Development

Bar chart showing percentages by technology level for years 08-09 (blue) and 09-10 (red):
- Early Tech: ~5% (08-09), ~4% (09-10)
- Developing Tech: ~72% (08-09), ~70% (09-10)
- Advanced Tech: ~24% (08-09), ~26% (09-10)
- Target Tech: ~1% (08-09), ~1% (09-10)

Educator Expectations and Preparation

Educator Expectations for Technology Literacy

No Child Left Behind, Title II, Part D funding has enabled technology initiatives that support educator development. This funding provided opportunities for schools to transform traditional classrooms into "21st Century Classrooms"—expanding the learning environment beyond the traditional classroom—and made it more possible than ever before to address the individual learning styles, interests, and needs of students.

Current Texas educators are expected to be technology literate as a part of No Child Left Behind. Being technology literate is defined for teachers and librarians as meeting the Technology Applications Educator Standards and for administrators as meeting the administrator standards specified by the International Society for Technology in Education (ISTE®). The Texas STaR Chart is designed to help campuses and districts gauge progress in meeting federal requirements for technology literate teachers, librarians, and administrators.

As a part of the accountability for the funds, schools must report the technology capabilities of teachers, librarians, and administrators. The teachers and librarians data is taken from the Texas STaR Chart, while the administrator data is taken from the NCLB Technology Report. For the 2009-2010 school year, 179,941 teachers, 2,847 librarians, and 6,732 administrators were reported to be "technology literate" as defined by the state.

Educator Preparation

Educators must meet high standards and be well prepared to teach in the classrooms of Texas. Providing a quality education for all Texas children require partnerships among TEA, educator preparation program providers, public and private schools, institutions of higher education and the community. The Texas

Education Agency is committed to ensuring quality educator preparation programs that recruit and prepare qualified educators who meet the needs of all learners in today's and tomorrow's Texas classrooms.

To support educator preparation programs, there were a series of professional development opportunities that focused on meeting the needs of digital learners, sharing best practices, and planning for new learning opportunities. These three events were:

- Texas Educator Exchange (TEX) Conference;
- 21st Century Skills for Digital Learners: Sharing what Works in Teacher Preparation; and
- Focus Forward: Looking Ahead in Texas Education.

The Texas Educator Exchange (TEX) Conference, sponsored by the Division of Educator Initiatives and Performance at the Texas Education Agency, was a two-day conference designed for Texas teachers, principals, superintendents and teacher preparation program staff. Attendees shared their best practices on emerging issues affecting teacher preparation, teacher retention and student achievement in the classroom. In August 2009, the conference focused on the role of technology and social media in education and education policy. Invited participants included representatives from teacher preparation programs, education-related organizations, and other educational leaders.

TEA hosted the conference, 21st Century Skills for Digital Learners: Sharing What Works in Teacher Preparation, in February 2010. The conference was designed to bring teacher preparation programs together and share what aspects of educational technology work best within teacher preparation. The conference had numerous break-out sessions highlighting using cell phones as learning tools, creating online classrooms, using wikis, blogs, and more, and technology for special education.

In July 2010, TEA hosted Focus Forward: Looking Ahead in Texas Education. The conference focused on several emerging education issues, including:

- Educational Technology
- Teacher Effectiveness
- Student Achievement
- School Support
- College Career Readiness
- Educational Leadership
- Data Systems

Teachers, principals, superintendents and other educational stakeholders were invited to attend.

Through these professional development opportunities, educators learn and s hare together to bring 21st Century learning opportunities to their programs.

Educator Technology Applications Standards

The SBEC-approved educator certification standards in Technology Applications are for ALL beginning educators. The Technology Applications standards are incorporated into the Texas Examination for Educator Standards (TExES) for Pedagogy and P rofessional Responsibilities at each certification level. The Technology Applications SBEC standards are based on the Technology Applications Texas Essential Knowledge and S kills (TEKS) for students in Grades 6-8.

All current teachers should strive to meet the Technology Applications Educator Standards, I-V. The Technology Applications Teacher Network (TATN) as well as the adopted Technology Applications instructional materials assist teachers in meeting these standards.

Certification Opportunities

In addition to SBEC Technology Applications Standards I-V, there are Technology Applications standards and certificate options that include: Technology Applications All Level, Technology Applications 8-12, and C omputer Science 8-12. These requirements are included in the SBEC Technology Applications Standards VI-XI. Test standards, items, and frameworks were developed, and t he first administration of the TExES for these areas was October 2004.

Master Technology Teacher

There is a Master Technology Teacher (MTT) All Level Certificate. The 77th Texas legislature mandated the Master Technology Teacher Certification (TEC §21.0483) and G rant Program (TEC §21.412) through House Bill 1475. The MTT Certificate prepares teachers to mentor other teachers and work with students in order to increase the appropriate use of technology in each classroom. Certified Master Technology Teachers have played a critical role in schools as they have worked with teachers to ensure the best uses of technology to improve student achievement. These MTTs have been instrumental in helping teachers to try new

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Technology Applications Educator Standards I–V

I. All teachers use technology-related terms, concepts, data input strategies, and et hical practices to make informed decisions about current technologies and their applications.

II. All teachers identify task requirements, apply search strategies, and use current technology to efficiently acquire, analyze, and evaluate a variety of electronic information.

III. All teachers use task-appropriate tools to synthesize knowledge, create and modify solutions, and evaluate results in a way that supports the work of individuals and groups in problem-solving situations.

IV. All teachers communicate information in different formats and for diverse audiences.

V. All teachers know how to plan, organize, deliver, and evaluate instruction for all students that incorporates the effective use of current technology for teaching and integrating the Technology Applications Texas Essential Knowledge and Skills (TEKS) into the curriculum.

methods of bringing to life the curriculum using technology, making it easier for students to understand concepts, communicate with others, and build and apply 21st century skills.

Standards for the Master Technology Teacher Certificate were adopted by the SBEC board in January 2002; the test framework was finalized in February 2002; and the first administration of the examination for the Master Technology Teacher certification took place in summer 2003. To receive this certificate, a teacher must successfully complete coursework and pass the MTT exam.

Number of Technology Applications and Related Certificates Issued September 1, 2008 to August 31, 2010

Technology Applications EC-12	1212
Technology Applications 8-12	1085
Computer Science 8-12	167
Master Technology Teacher	174
School Librarian	1203

MASTER TECHNOLOGY TEACHER STANDARDS

The Master Technology Teacher:

Standard I. Effectively models and appl ies classroom teaching methodology and curriculum models that promote active student learning through the integration of technology and addresses the varied learning needs of all students.

Standard II. Selects and ad ministers appropriate technology-related assessments on an ongoing basis and uses the results to design and improve instruction.

Standard III. Applies knowledge of digital learning competencies including Internet research, graphics, animation, web site mastering, and video technology.

Standard IV. Serves as a r esource regarding the integration of assistive technologies and accessible design concepts to meet the needs of all students.

Standard V. Facilitates appropriate, research-based technology instruction by communicating and collaborating with educational stakeholders; mentoring, coaching, and consulting with colleagues; providing professional development opportunities for faculty; and m aking decisions based on converging evidence from research.

Educator preparation programs and al ternative certification programs were approved to provide opportunities for educators to meet the Technology Applications and M aster Technology Teacher standards and received the new certificates. Each of these certificates gives Texas teachers options for expanding their digital technology knowledge and skills and strategies to transform teaching and learning.

School Librarians

Certified school librarians have been instrumental in working with teachers and students to develop information literacy and digital technology literacy (Technology Applications) knowledge and skills. This support in schools can improve student achievement in English language arts and reading, mathematics, social studies, and science as well as other curriculum areas.

Knowledge knows no boundaries

Project Share

Project Share is a collection of Web 2.0 tools and applications that provides high quality professional development in an interactive and engaging learning environment. Project Share leverages existing and new professional development resources for K-12 teachers across the state and builds professional learning communities where educators can collaborate and participate in online learning opportunities. For more information, please see http://www.projectsharetexas.org/

Purpose of the Program

Project Share gives educators the ability to join professional learning communities (PLCs), participate in professional development courses, explore content repositories, and use online instructional materials. The first state-adopted online instructional materials, which may be accessed by all Texas public high school teachers, are now available through the Project Share platform.

Professional Development for Educators

One of the most critical functions the agency performs is the training of classroom teachers. While most districts provide extensive professional development at the local level, the state also contributes by providing teachers extensive support around the state's mandated curriculum and evidence-based instructional strategies in a variety of delivery options, including face-to-face and online teacher training in the major content areas. The state currently offers professional development opportunities in science, math, English language arts, social studies, English Language Proficiency Standards (ELPS), and Career and Technical Education. These trainings are designed not only to strengthen participants' content knowledge, but each also addresses the College and Career Readiness Standards (CCRS), ELPS, the Response to Intervention (RtI) model, and Gifted/Talented (G/T) education. By including these other frameworks, participants learn to incorporate the CCRS and ELPS into the classroom and provide instruction that meets the needs of a diverse student population. While the primary audience for professional development is classroom teachers, administrators are also able to take advantage of all training opportunities by either participating in teacher trainings or by taking part in administrator overview sessions.

Project Share

Professional Development in Online Environments

To sustain professional development efforts, the commissioner of education instituted Project Share, a new initiative designed to provide a collection of digital tools to a community of educators dedicated to improving teaching and learning through interactive and eng aging online environments. To launch the initiative, TEA purchased an enterprise license for a statewide digital platform designed and hos ted by Epsilen, LLC. The platform provides an environment in which teachers can complete professional development courses, join professional learning communities, search digital content offered through various online repositories, and access state-adopted instructional materials. By learning in this new environment, educators can identify tools and strategies that they, in turn, can use in their classrooms as they work with students who frequently engage in online activities.

New Tools and Resources for Classroom Instruction

Beyond professional development, Project Share gives educators opportunities to enhance the traditional learning environment by providing Web 2.0 tools for interacting, collaborating, and working with new forms of assessment such as an ePortfolio. The online platform will also provide access to numerous content repositories such as the *New York Times* Knowledge Network, PBS Digital Learning Library, Smithsonian Education, and NASA Education. The repositories will provide resources such as articles, videos, images, podcasts, and i nteractive features for teachers to use for personal learning and classroom instruction.

Introducing Project Share to Texas

Project Share is being introduced to Texas educators in two phases. Phase I, which began in the spring of 2010, included the formation of professional learning communities, the creation and dissemination of face-to-face and onl ine professional development courses, and preparation for a student-based ePortfolio pilot

project. Because there has been a significant shift in how state-sponsored professional development will be delivered, training began at each of the twenty education service centers (ESCs) in face-to-face sessions. These sessions, provided at no c ost to districts and open-enrollment charters, focused primarily on building content area knowledge. However, sessions also included overviews of Project Share and instructions on how to join online professional learning communities and how to participate in future online courses. ESCs continue to offer training and support to districts that have elected to use the Project Share platform.

Currently, over 225,000 teacher accounts have been created. Many of those teachers were introduced to Project Share and joined the online platform during face-to-face professional development sessions offered by the twenty ESCs. Teachers across Texas are taking the "Texas Tour" (an online course designed to introduce new members to the Epsilen platform), joining and creating online groups, exploring the content repositories, and—for the state's high school teachers—accessing state-adopted online instructional materials that provide information and strategies for implementing the ELPS standards.

Phase II, scheduled to begin in the 2010-11 school year, will include working with selected districts and s tudents in the ePortfolio pilot program, providing further professional development opportunities for educators, and expanding teacher access to digital content as provided through the Project Share platform. In addition to the ELPS instructional materials, it is anticipated that more state-adopted digital content, such as open-source textbooks and other instructional materials, will be ac cessed through the platform.

In 2011, the following professional development opportunities are planned and will be a vailable through Epsilen and/or iTunes U:

- Algebra II, Geometry End of Course Success
- Chemistry & Physics End of Course Success
- English III End of Course Success
- US History, World History, and World Geography End of Course Success
- K-12 Social Studies TEKS
- MSTAR Level 2
- English Language Proficiency Standards (ELPS)
- Career and Technical Education

To kick off Phase II and the start of an exciting new school year in Texas, TEA planned a special back-to-school event that all districts and open-enrollment charters were invited to attend. On August 18, 2010, TEA and The New York Times hosted a webcast featuring Thomas L. Friedman, author of *The World is Flat*. During the webcast, Mr. Friedman discussed the endless possibilities for educators and students as learning reaches beyond the four walls of the traditional classroom. He also discussed what this connectivity means for education. Districts gathered teachers into common areas to view the webcast and as k questions of Mr. Friedman. The Friedman webcast will be archived in the Project Share platform so that all Texas educators will have an opportunity to view the webcast and t hink about 21st century teaching and learning.

Future Success for Texas Students
Project Share offers an exciting and innovative approach to learning in the 21st century, both for educators and students. The Texas Legislature made extensive financial investments toward supporting districts and campuses in targeting struggling students. By offering numerous professional development opportunities that can be completed in both face-to-face and onl ine settings and a s tate-wide digital platform that gives educators access to professional development courses, professional learning communities, Web 2.0 tools, digital content, and i nstructional materials, educators have an ex panding capability to deliver instruction that prepares students for success at each grade level and for a successful transition into college and career.

With Project Share, teachers can:
- Collaborate on campus, across Texas, and around the globe
- Showcase teacher and student accomplishments
- Transition seamlessly between e-courses, e-portfolios, and Web 2.0 networking tools
- Engage students in their digital world
- Improve student performance

As Project Share continues to grow, other digital tools will be made available to all educators so that they can continue to pursue professional development opportunities and, at the same time, become skillful users of the

digital tools K-12 students frequently use in and out of school.

In 2011, the annual South by Southwest Music and Film Interactive conference has expanded to include SWSWedu. In its inaugural event, this educational conference will celebrate Project Share. The conference, "Project Share: Knowledge Knows No Boundaries," will be held March 8-10, 2011 a t the AT&T Conference Center in Austin, Texas.

SXSWedu supports innovation in learning via 21st Century content delivery and best practices for education professionals. Its inaugural conference will bring together innovative Texas educators utilizing Project Share to collaborate, share resources and showcase accomplishments.

More information on SXSWedu is available through www.projectsharetexas.org and at the South by Southwest website:
http://sxsw.com/node/5562

Texas Education on iTunes U

Texas Education on iTunes U represents another addition to Texas' efforts to put rich and relevant content into the hands of our teachers, students, and the public at large. iTunes U gives the state a dynamic platform to provide content on-the-go.
--Commissioner Robert Scott

In August 2010, the launching of Texas Education on iTunes U was announced. Texas Education on iTunes U provides free multimedia content to educators, students, and parents in Texas and around the world.

Texas Education on iTunes U is a state-of-the-art tool that students and teachers can access in order to ensure students are eng aged in an environment that maximizes teaching/learning capacity. This initiative builds upon the various initiatives that increase technology in the classroom, including the call to transition to electronic textbooks and expanding the Texas Virtual School Network into a full Virtual High School.

Anyone from anywhere in world will have access to the content posted on the site. At the same time, Texas teachers and students have access to content that other states and uni versities have created. This provides teachers with a wide array of resources in order to help them to prepare students to master the content. A ll posted content is free and makes use of and follows fair use copyright guidelines.

Texas is excited to be using a modern approach to keeping teachers engaged and informed by creating this site through Apple's iTunes software, which a num ber of other states have also seen value in using.

Content Process

Content providers will post or allow TEA to post materials for the education audience, such as content for student/teacher use in instructional activities, content for professional development, or other resources, including reports, training guides, curriculum assets, and o ther pertinent items. The agency will review the content submitted for alignment with the Texas Essential Knowledge and S kills. However, the majority of the content will be us ed as supplementary materials and does not need to meet every essential knowledge and skills standard. A teacher can access this or any other material in order to supplement the current textbook used in the classroom.

Currently, Texas Education on i Tunes U includes content from the Bob Bullock State History Museum, Texas Parks and Wildlife, and content on "Science in the Real World," which was produced by Stef Paramoure. Stef Paramoure is a m iddle school science and math teacher in New Braunfels who has been honored by the State Board of Education (SBOE) as one of six finalists for the Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST). "Voices in Texas History," contributed by the State Library and Archive Commission (TSLAC) includes selections from the First Ladies of Texas series, featuring former First Lady Laura Bush, and the Governors of Texas series, with readings from Governor Perry. These are just a few examples of the digital content available on Texas Education on i Tunes U. As content selections grow, Texas teachers and students will have quick access to rich multimedia content.

For more information on Project Share, including Texas Education on iTunes U and a video overview of Project Share, please visit the Project Share website at www.projectsharetexas.org

The Intel® Teach Program

The Intel® Teach Program is built on the belief that educators learn best from one another, fostering a community of practice that is invaluable in creating systemic change. The program results in increased technology integration and an energized standards-aligned curriculum.

Since its introduction in Texas, the Intel® Teach Program has been helping K–12 teachers to be more effective educators by training them on how to integrate technology into their lessons and how to promote problem solving, critical thinking and collaboration skills among their students. The program has served to bring over 16,500 teachers and 1,570 administrators into the 21st century by teaching how to integrate technology into the curriculum.

The Intel® Teach Program is implemented through a train-the-trainer model. Districts and schools select qualified teachers to attend Master Teacher classes. Once certified, Master Teachers then recruit and train Participant Teachers, typically their colleagues. The result is teachers learning from other teachers best practices for how technology can enhance student learning.

Intel® Teach Program course offerings include:

Essentials Course - provides teachers with a foundation of skills to fully integrate technology into existing classroom curricula and promote student-centered learning. The recently updated Essentials 10.1 curriculum has been aligned to focus more on instructional design, project approaches, multiple methods of assessment for learning, and promotion of 21st century skills. The Essentials course is also offered as an online/hybrid version, the Essentials Online Course, with a blend of face-to-face and online training.

Thinking with Technology Course - builds on effective technology integration skills using online thinking tools to enhance students' higher-order thinking.

Project-Based Approaches is the first course in the Intel Teach Elements series. The goal of the course is to help teachers improve their understanding and application of project-based approaches in the 21st Century classroom.

Assessment in 21st Century Classrooms is the second course in the Intel Teach Elements series. The goal of the course is to help teachers improve assessment of 21st century skills.

Leadership Forum provides district leaders face-to-face professional development focusing on the importance of leadership in promoting, supporting, and modeling the use of technology in instruction. Through the forum, participants explore relevant research and behaviors related to supporting effective technology integration and associated professional development as it relates to the Texas STaR Chart. As a result, leaders begin development of a technology integration action plan.

A three-year evaluation of the Intel Teach Program finds that a large majority of teachers increased the use of technology in the classroom after taking an Intel Teach course. Research also indicates that Intel Teach is closely aligned with NCLB's exacting criteria for high quality professional development.

Evidence of impact can be located online at
http://www.intel.com/education/EvidenceOfImpact/Index.htm

Technology Applications Teacher Network (TATN) Best Practices Event

Since 2002, Texas teachers have had access to resources and best practices through the Technology Applications Teacher Network (TATN) which is supported NCLB Title II, Part D technical assistance funds. It is a collaborative project between the twenty Texas Education Service Centers and the Texas Education Agency (TEA). The TATN website is designed to provide Texas teachers with resources to implement the Technology Applications Texas Essential Knowledge and Skills (TEKS) in the K-12 classroom. It contains educator resources and professional development opportunities that address the K-8 Technology Applications TEKS and their integration into the curriculum. It also includes the high school Technology Applications courses with examples of how these courses are taught within the context of foundation curriculum areas. The Technology Applications Teacher Network assists with both advancing technology literacy and with promoting the full integration of technology into curricula and instruction as specified in NCLB.

In association with the Texas Computer Education Association's (TCEA) state convention and as an extension of the TATN project, a TATN Best Practices event has been held during TCEA for the past eight years. The purpose of the full-day pre-conference event is to organize a statewide network of technology applications teachers to promote the exchange of model instructional practices for grades K-12. Each year, exemplary teachers from across the state share best practices for student projects, lesson plans, assessment rubrics and classroom management techniques. Dedicated strands are provided for teachers involved in

the integration of the technology applications TEKS with foundation and enrichment curricula TEKS for grades K-2, 3-5, 6-8 and 9-12. Additionally, exemplary classroom teachers share best practices from the middle and high school Technology Applications courses, including Computer Science, Desktop Publishing, Digital Graphics and Animation, Multimedia, Web Mastering and Video Technology.

On February 3, 2009, the seventh annual TATN Best Practices Event was held in Austin. Teacher presentations included information on lesson plans noting correlations to both core area and technology applications TEKS. Student activities, objectives and classroom management suggestions were included in the 84 sessions. Best Practices were presented for teachers in grades K-8 as well as all of the high school Technology Applications courses. Lesson plans were posted on the TATN website and compact discs containing all of the day's projects and presentations were distributed to attendees from across the state.

On February 9, 2010, the eighth annual Technology Applications Teacher Network Event was held in Austin at the TCEA conference. A record number of over 1,000 teachers attended the 84 sessions. Presentations included content specifically developed for students in all of the high school Technology Applications courses as well as students in Grades K-8. The core integration strand spotlighted best practices using technology to integrate foundation TEKS in grades 6-8 and 9-12. Lesson plans were posted on the TATN website and CD's were again distributed to all attendees.

The next TATN event is scheduled for February 8, 2011, as part of the TCEA Convention and Exposition.

STAR GRANTS

STAR Grant

The Professional Development for Schools, Teachers, Administrators and Regions (STAR) Grant was launched in 2007 and funded through Public Law 107-110 No Child Left Behind Act of 2001, Title II, Part D, Subpart 1, Enhancing Education Through Technology. STAR was initiated for schools to create replicable models of professional development programs that could be shared with other districts.

For more information, please visit:
www.tea.state.tx.us/technology

Purpose of Program

STAR was initiated for schools to create replicable models of professional development programs that could be shared with other districts. The STAR grant was designed to develop comprehensive professional development programs to provide integration strategies for each subject area and gr ade level.

Background Description

Findings from the earlier Title II, Part D grant,

the Technology Immersion Pilot (TIP), and its studies showed that teachers needed more significant, relevant, ongoing and sustained professional development tailored to their own learning styles and needs to ensure high quality learning could take place within the classroom and have a real impact on students.

The Long-Range Plan for Technology, 2006-2020, provides the vision for quality educator preparation and development.

All educators:

- Develop new learning environments that use technology as a flexible tool where learning is collaborative, interactive and customized for the individual learner.
- Ensure full integration of appropriate technology throughout all curriculum and instruction.

The Texas Teacher STaR Chart provides indicators that assist teachers in self assessment of their efforts to effectively integrate technology across the curriculum to support student achievement. The goal is for all Texas teachers to reach the Target Tech level of the STaR Chart.

Professional development should be designed to improve learning for all students. An effective professional development program must include a continuous process of:

- Leadership
- Planning
- Implementation
- Evaluation

With the aid of planning, supportive leadership, and data-driven decision

STAR Grants

making schools were asked to establish professional learning communities (PLCs) that enabled their members to discuss areas of concern and to develop strategies for dealing with those issues. They had t o involve all stakeholders in creating and s ustaining those PLCs. This leadership along with high quality professional learning on an ongoing basis could leverage improvement in professional practice and increased student achievement. Awarded schools were also to develop a r eplicable and sustainable model of professional development that could be shared with others.

Status
Twenty-six grants were funded from approximately $11,118,982 that was awarded to Texas districts and c ollaboratives designed to reach 1,354 administrators, 6,178 teachers and ultimately impact over 141,305 students.

Participating school districts reported the following educational technology developments and increase in student achievement as a result of the STAR grant:

- Development of formal campus technology plans and s et standards of use for technology
- Increased numbers of administrators equipped with the professional development and tools needed to implement 21st Century learning on their campuses
- Increased in campus leaders supporting, promoting, and using technology
- Increased requests from teachers for technology for the classroom
- Increased teacher confidence and proficiency in using technology for instructional purposes
- Establishment of professional learning communities across multiple districts with a result in increased sharing of curriculum, resources, and skills
- Development of "best practices" podcasts and other web-based resources for sharing and improving teaching and learning
- Increase in mentor teachers to support other teachers in implementing effective

instructional practices using technology in the classroom, using a t rain-the-trainer approach
- Increased use of Web 2.0 tools in the classroom
- Increased web-based instruction that provides students with anywhere, anytime access to assignments and assessments
- Improved levels on Teacher and Campus STaR Charts
- Increase in individualized instruction through technological features that enable analysis, feedback, and customization of instruction
- Increased student engagement in curricular activity
- Increased student-oriented instruction
- Increased Technology Literacy results

Districts also reported an increase in TAKS scores during the grant period. Many factors affect TAKS scores, but in the grant evaluations that TEA received, various administrators agreed that increased electronic resources had a strong impact on i mproved TAKS scores across district campuses. It is also worth noting that as a result of the training provided through this grant, teachers also reported feeling empowered to pursue additional professional development and edu cation online, thereby increasing the overall proficiency level of educators.

Leadership, Administration, and Instructional Support

The process of using technological resources in schools is complex and requires school-wide innovation such as vision-building, administrator commitment, and s killed leadership to play pivotal roles in success. Providing the essential leadership and i nstructional support is critical. The *Long-Range Plan for Technology* (LRPT) provides education leaders with recommendations for the effective use of technologies and expectations for faculty and staff.

The Educational Technology Advisory Committee (ETAC) includes state technology leaders who stand ready to advise the agency in its on-going "re-visioning" of the LRPT so that it remains a current and viable document for state and l ocal leaders. To assess leadership for educational technology, the Texas School Technology and R eadiness (STaR) Chart data is collected annually. This is a tool that assists district and campus leaders when they update their district's technology plans and conceptualize districts' vision, benchmarks, and goals surrounding technology. This data is also used by districts when applying for grants and E-Rate funding. Title II, Part D grant recipients have attended technology leadership conferences that emphasize the importance of

district leaders' role in planning and pr oviding support services for staff to ensure that technology is available and is used effectively.

School decision makers are challenged to budget real costs of technology, including high quality professional development, both initial and ongoing, and t o secure the funding to support that budget. Collaborative and ongoing planning, consistent with the *Long-Range Plan for Technology* and articulated with campus and district plans, is necessary if schools are to see improved student learning based on data-driven decisions. Fulfilling the vision of technology requires district, campus, and teacher leaders who articulate and adv ocate a v ision of what technology can do for teaching and learning as well as school operations.

The Progress Report shows how the necessary tools and r esources for administrators, teachers, librarians, and students are being provided for our 21st Century classrooms. This section of the *Progress Report on the Long-Range Plan* will highlight the impact that technology has made in Leadership, Administration, and I nstructional Support from 2008-2010.

State of the State Using STaR Chart Data

Campus STaR Chart Data and Analysis for Leadership, Administration, and Instructional Support

The Texas Campus STaR Chart produces a profile of the campus' status toward reaching the goals of the *Long-Range Plan for Technology* (LRPT) and No Child Left Behind. The profile indicators place a campus at one of four levels of progress in each key area of the LRPT: Early Tech, Developing Tech, Advanced Tech, or Target Tech. The key areas include: Teaching and Lear ning; Educator Preparation and Development; Leadership, Administration and Instructional Support; and Infrastructure for Technology. During the past biennium, the data gathered through the Campus STaR Chart for Leadership, Administration, and Instructional Support shows that the majority of Texas campuses evaluate themselves as either Developing Tech or Advanced Tech.

Early Tech. Early Tech means that there is no campus technology plan. Technology is used mainly for administrative tasks. The district does not have technical support onsite. The district does not have a technology coordinator. Technology Allotment is the only source of funding. In 2008-2009, 1.6% of Texas teachers and campuses reported themselves at the Early Tech level in Leadership, Administration, and Instructional Support. In 2009-2010, 1.5% of teachers and campuses rate themselves at Early Tech levels in Leadership, Administration, and Instructional Support. In 2009-2010, this number decreased by .1%. This .1% decrease indicates more campuses are reaching Advanced or Target Tech levels.

Developing Tech. Developing Tech means the campus plan is aligned with the *Long-Range Plan for Technology*. Teachers and Administrators have a vision for technology. There is one technical support staff to 750 computers. The district has a full-time

technology director. The Technology Allotment and local funding are used for technology purchases. In 2008-2009, 43.8% of Texas teachers and campuses reported themselves at the Developing Tech level in Leadership, Administration, and I nstructional Support. In 2009-2010, the number decreased by 5.2%. This decrease indicates more campuses are reaching Advanced or Target Tech. In 2009-2010, 38.6% of teachers and campuses rated themselves at the Developing Tech level in Leadership, Administration, and Instructional Support.

Advanced Tech. At the Advanced Tech level of the STaR Chart in Leadership, Administration, and Instructional support, there is a c ampus plan that is board approved and is supported by the superintendent. There is one technical support staff to 500 computers. There is a full-time technology director. The district uses Technology Allotment, E-Rate, competitive grants, and local funding. In 2008-2009, 50.2% of Texas teachers and campuses reported themselves at the Advanced Tech level in Leadership, Administration, and Instructional Support. In 2009-2010, 55% of teachers and campuses rate themselves at Advanced Tech levels in Leadership, Administration, and Instructional Support. During this period, this number increased by 4.8%.

Target Tech. At the highest level of the STaR Chart for Leadership, Administration, and Instructional Support, there is a c ampus plan focused on student success, and it is supported by the board and ad ministration. There is one technical support to 350 computers. The campus has instructional support staff. The Technology Allotment and E-Rate are used; state and federal competitive grants and local funding are available. . In 2008-2009, 4.4% of Texas teachers and c ampuses reported themselves at the Target Tech level in Leadership, Administration, and Instructional Support. In 2009-2010, 4.9% of teachers and campuses rate themselves at Target Tech level in Leadership, Administration, and Instructional Support. During this period, this number increased by .5%.

Administration & Support
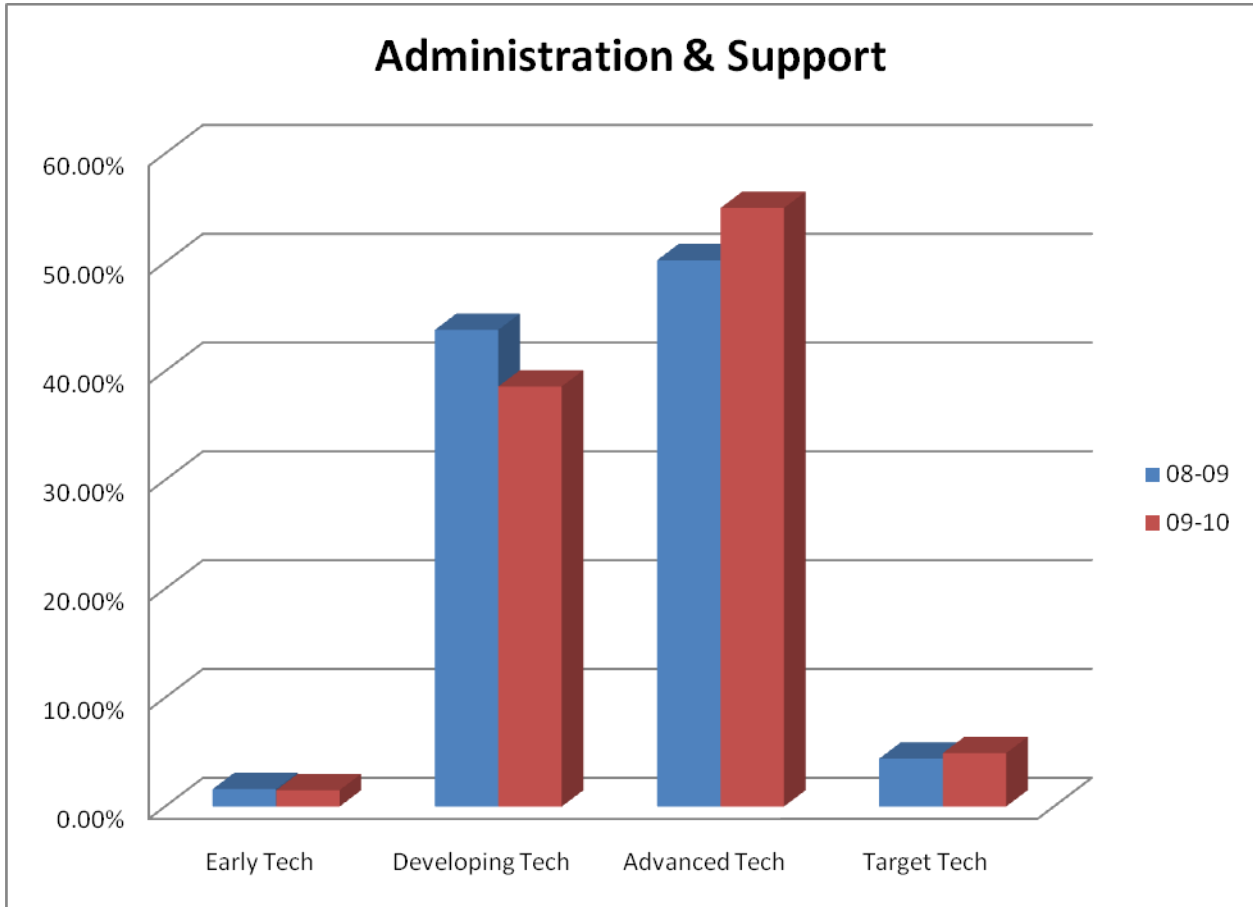
Educational Technology Advisory Committee (ETAC)

The Educational Technology Advisory Committee (ETAC) has played a key role in technology planning for Texas schools. Members of ETAC include teachers, principals, superintendents, technology coordinators, Education Service Center (ESC) personnel, national and state leaders in educational technology, and Texas Education Agency (TEA) staff. ETAC provided advice and guidance in the development of several planning tools including the Texas School and Technology Readiness (STaR) Charts for campuses and teachers and the Texas ePlan System.

Due to changes in technology and legislation, ETAC was charged with the development, implementation and evaluation of a new *Long-Range Plan for Technology (LRPT)* that spans 2006-2020. This plan is guiding districts in Texas in the effective use of technology in ways that will prepare students to learn and work in the 21st century.

ETAC convened in the fall of 2006, charged with assisting the TEA in developing strategies for implementation of the *Long-Range Plan for Technology 2006-2020*, state and federal legislation, and federal reporting requirements. The TEA has been required to report on the progress of districts receiving funds from No Child Left Behind, Title II, Part D as of January 2002. Title II, Part D reporting requirements for NCLB have been documented as a part of the Texas Campus STaR Chart. The reporting requirements have been an essential part of the process for documenting progress to support continued technology funding.

Beginning with the 2008-2009 school year, additional data at the district level has been requested for districts receiving Title II, Part D funds (formula and/or competitive). Members of ETAC participated in work sessions held to develop the No Child Left Behind (NCLB) Technology Reporting System. This system uses the STaR Chart data collection system to collect the additional data required to report on Internet connectivity by campus, the unduplicated number of 8th graders evaluated for technology literacy under the district's methodology as defined by the state at the end of the 8th grade for the 2007-2008 school year, and the unduplicated number of school personnel achieving acceptable performance on standards-based performance profiles of technology user skills as defined by the state (Title II, Part D of ESEA as required by the Results Act) by staff categories, including teachers, librarians/library media specialists, and campus administrators.

Future plans for ETAC include the ability to work virtually through Project Share to examine the new National Educational Technology Plan and its implications for the *Long-Range Plan for Technology*. In addition, there is a need to determine the priorities for 2011-2015 in light of the progress to date, especially in the areas of digital content, electronic textbooks, online learning, professional learning communities, etc. ETAC will make recommendations for changes to the STaR Chart, ePlan, and other tools to assist districts in planning and provide information to the agency for state-level planning purposes, as well as examine the impact of STEM and college and career readiness initiatives on the LRPT. Overall, ETAC helps the agency connect the dots across the various educational initiatives and how the *Long-Range Plan for Technology* supports and enables them to leverage technology.

ETAC continues to be a valuable resource for educational technology across the state.

Texas ePlan

Texas public schools have been involved in technology planning since 1988 when the State Board of Education adopted the first *Long-Range Plan for Technology*. Originally, the technology plan developed by school districts ensured careful considerations in the use of educational technology. School districts were

required to develop a plan to receive the technology allotment.

Now, school districts and charter schools must develop and implement a technology plan to be eligible to receive E-Rate funding, Title II Part D formula and di scretionary funding, and t o comply with the National Technology plan and the State Board of Education's *Long-Range Plan for Technology*.

In 2004, in conjunction with SEDL (then the Southwest Regional Development Laboratory) and Region 12 Education Service Center, the Texas Education Agency developed the ePlan system to allow districts to develop and submit plans electronically.

The agency reviews all plans submitted to ensure accuracy and c an disapprove a pl an and return it to a district for additional information. Once a plan is approved by TEA, the district receives an electronic mail notification with a link to access and print out a technology plan approval form. The form can be made available to authorities regarding the status of a district's technology plan.

Texas STaR Charts

With the adoption of the *Long Range Plan for Technology, 1996-2010*, came new technology goals and recommendations for school districts. The Campus and Teacher STaR Charts were required for all campuses and teachers to assess their readiness to improve student learning through the use of technology. In 2006 the *Long Range Plan for Technology* was updated and appr oved becoming the *Long Range Plan for Technology, 2006-2020*. The Texas Campus and Teacher STaR charts were also updated to align with these new recommendations. The STaR Charts assist school leaders in planning for and implementing new technologies in Texas school districts including questions about online learning and districts' capabilities to prepare for, support, and address online learning.

The Texas Campus STaR Chart is a t ool for school leaders to use in technology planning,

budgeting for resources, and evaluation of progress in local technology projects. All applications for state funded technology grants require a completed campus or district Texas STaR Chart profile to be f iled with the application as an indicator of current status and progress and as a formative and/or summative evaluation tool. Campuses must retain documentation of supporting data used to complete the chart. The online assessment may be used as a basis for dialogue with staff, administrators, technology directors, school board members, and community leaders to plan for future growth. Statewide reports are used to report on progress toward fulfilling the requirements in No Child Left Behind, Title II, Part D that all teachers should be technology literate and integrate technology across the curriculum. The legislation also requires that all students should be t echnology literate by the time they leave the eighth grade.

The Texas Campus STaR Chart produces a profile of the campus' status toward reaching the goals of the *Long-Range Plan for Technology* (LRPT) and No Child Left Behind. The profile indicators place a campus at one of four levels of progress in each key area of the LRPT: Early Tech, Developing Tech, Advanced Tech, or Target Tech. The key areas include: Teaching and Lear ning; Educator Preparation and Development; Leadership, Administration and Instructional Support; and Infrastructure for Technology.

The public STaR Chart is an onl ine tool that allows stakeholders to view the technology readiness of all campuses across the state. The search features enable a variety of reports such as querying campuses that are Early or Target Tech in one or more focus areas. Reports may be organized by district, ESC region, legislative district, or campus type. Data is currently available from the Texas Campus STaR Charts completed in the 2004-2005, 2005-2006, 2006-2007, 2007-2008, and 2008-2009 school years. The public site is available at http://starchart2.esc12.net/.

The Texas Teacher STAR Chart, to be completed by individual teachers, models and correlates with the Texas Campus STaR Chart and draws measures from a variety of national and state technology guidelines. It establishes a clear framework for measuring how well teachers are prepared to equip students with the knowledge and skills they need to thrive in today's information and communication technologies economy.

The Technology Planning and E-Rate Support Center (TPESC) at the Region 12 Education Service Center provides services to districts and ESCs across the state through a contract with the agency. The TPESC provides technology planning assistance, E-Rate training, online resources, and help-desk support. Additional information can be found at http://tpesc.esc12.net
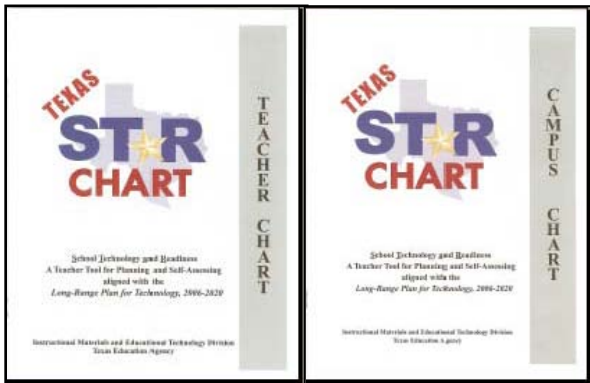
E-Rate Funding

Since its inception in 1998, the federal Universal Service Fund, commonly referred to as the E-Rate program, has benefited Texas schools and libraries with more than $2.7 billion in discounts for telecommunication services, Internet access and, in some cases, internal connections. Internal connections are the boxes and wires necessary to provide Internet access in school buildings and libraries.

This total of $2.7 billion in discounts represents more than 10 percent of the total $26.8 billion in discounts provided to all eligible entities in the United States and its territories. The E-Rate program is administered by the Schools and Libraries Division (SLD) of the Universal Service Administrative Company (USAC) under the direction of the Federal Communications Commission (FCC). Each year, the E-Rate program provides approximately $2.5 billion in program discounts. The program is intended to ensure that schools and libraries have access to affordable telecommunications and information services. It is one of four support programs funded through a Universal Service fee charged to companies that provide interstate and/or international telecommunications services.

To assist school district and charter schools with the E-Rate program, the Texas Education Agency contracts with Region XII Education

Funding Year	State Total	National Total	% Nat. Total	Through Wave
2010	$58,033,282.99	$829,540,556.11	7.00%	Wave 8
2009	$265,707,882.76	$2,727,552,447.14	9.70%	Wave 59
2008	$253,046,917.65	$2,498,031,172.97	10.10%	Wave 80
2007	$228,837,078.57	$2,409,692,741.18	9.50%	Wave 80
2006	$200,186,283.76	$1,966,975,126.59	10.20%	Wave 61
2005	$217,180,416.65	$2,059,251,250.36	10.50%	Wave 66
2004	$286,648,186.43	$2,222,874,549.50	12.90%	All Waves
2003	$414,384,438.14	$2,705,619,294.56	15.30%	All Waves
2002	$258,434,460.65	$2,227,080,106.87	11.60%	All Waves
2001	$216,313,123.00	$2,178,803,817.06	9.90%	All Waves
2000	$151,666,576.69	$2,070,429,659.11	7.30%	All Waves
1999	$147,035,423.76	$2,137,545,203.55	6.90%	All Waves
1998	$133,072,653.82	$1,695,391,432.92	7.80%	All Waves

Service Center for support through the Technology Planning and E -Rate Support Center. The TPESC assists applicants through a range of programs including E-Rate, technology planning, Teacher STaR chart, Campus STaR chart and T itle II, Part D data collections.

The E-Rate program supports connectivity - the conduit or pipeline for communications using telecommunications services and/or the Internet. Funding is requested under four categories of service: telecommunications services, Internet access, internal connections, and basic maintenance of internal connections. Discounts for support depend on t he level of poverty and the urban/rural status of the population served and range from 20 percent to 90 percent of the costs of eligible services. Eligible schools, school districts and l ibraries may apply individually or as part of a consortium.

Schools in Texas have been required to have a technology plan since the adoption of the State Board of Education's original *Long-Range Plan for Technology*. Under E-Rate rules, the adoption of a t echnology plan begins the process of applying for E-Rate discounts.

This plan sets out how technology will be used to achieve specific curriculum reforms or library service improvements. It guides planning and investment – both for E-rate funds and for the other resources needed to take advantage of technology.

A technology plan designed to improve education or library services must contain the following five components:

- Clear goals and a realistic strategy for using telecommunications and information technology;
- A professional development strategy to ensure that staff knows how to use these new technologies;
- An assessment of the telecommunication services, hardware, software, and other services needed;

- A sufficient budget to acquire and support the non-discounted elements of the plan: the hardware, software, professional development, and other services that will be needed to implement the strategy; and
- An evaluation process that enables the school or library to monitor progress toward the specified goals.

Before discounted services begin, an S LD-certified technology plan approver must approve technology plans. In Texas, the Texas Education Agency is the SLD- certified plan approver for public school districts, charter schools and educ ation service centers. The Texas State Library and A rchives Commission approves plans for libraries. Private schools seek technology plan approvals from entities such as an archdiocese.

Applicants who seek discounts only for basic local, cellular, PCS and/or long distance telephone service (wireline or wireless) and/or voice mail need not prepare technology plans.

NCLB, Title II Part D Reporting

The Texas Education Agency (TEA) has been required to report on t he progress of districts receiving funds from No Child Left Behind, Title II, Part D as of January 2002. Title II, Part D reporting requirements for NCLB have been documented as a par t of the Texas Campus STaR Chart. The reporting requirements have been an es sential part of the process for documenting progress to support continued technology funding. As of 2008, additional data at the district level is requested for districts receiving Title II, Part D funds (formula and/or competitive). Districts receiving Title II Part D funding are required to report this additional data annually.

School Administrator technology proficiency is a new reporting requirement. The NCLB collection specifically, is the unduplicated number of school personnel achieving acceptable performance on s tandards-based performance profiles of technology user skills as defined by the state (Title II, Part D of ESEA as required by the Results Act) by staff

categories, including teachers, librarians/library media specialists and campus administrators. Teacher and library media specialist proficiencies are collected and r eported from the Texas Teacher STaR Charts. Campus administrator proficiencies are now collected on a separate NCLB reporting system located within the STaR Chart system. The Technology Planning and E -Rate Support Center (TPESC) is responsible for housing and oper ating the reporting system.

The administrator proficiencies are based on the overarching standards from the ISTE Technology Standards for School Administrators below:

- Visionary Leadership: Educational Administrators inspire and l ead development and i mplementation of a shared vision for comprehensive integration of technology to promote excellence and support transformation throughout the organization.

- Digital Age Learning Culture: Educational Administrators create, promote, and sustain a dynamic, digital-age learning culture that provides a rigorous, relevant, and engaging education for all students.

- Excellence in Professional Practice: Educational Administrators promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources.

- Systemic Improvement: Educational Administrators provide digital-age leadership and management to continuously improve the organization through the effective use of information and t echnology resources.

- Digital Citizenship: Educational Administrators model and facilitate understanding of social, ethical and l egal

issues and responsibilities related to an evolving digital culture.

The importance of Administrator technology proficiencies is recognized as a key success factor in educational technology implementation and support in schools. Strong leadership builds the capacity to facilitate implementation, increase communications, provide instructional support, and establish appropriate budgets to support the infrastructure and resources. Strong support services allow for greater functionality, better response times, and i mprovement of overall school operations and t he learning environment. Technology is interwoven into the everyday life of students, teachers, educators, and parents. Administrators and support services staff must plan accordingly to ensure that technology is available and us ed effectively.

Technology Allotment

To assist Texas public schools in the implementation of the State Board of Education's *Long-Range Plan for Technology*, in 1991, the Texas Legislature created the Technology Allotment. Starting in September of 1992, school districts began receiving the Technology Allotment at the rate of the $30 per each student in Average Daily Attendance (ADA). For the current biennium, the technology

allotment was $29.66 in 2009-2010 and i s projected at $29.33 for 2010-2011.
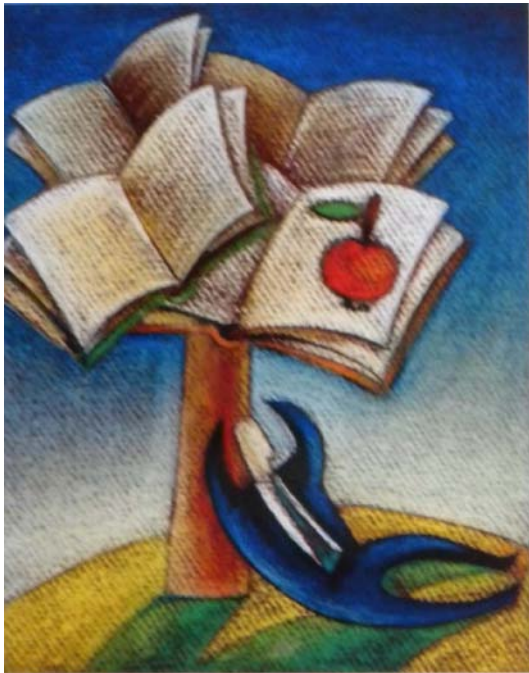
Technology Allotment funds may only be used for the purposes specified in the Texas Education Code (TEC) Chapter 32 §32.005 (B):

- provide for the purchase by school districts of electronic textbooks or technological

- equipment that contributes to student learning; and

- pay for training educational personnel directly involved in student learning in the appropriate use of electronic textbooks and for providing access to technological equipment for instructional use.

The definition of an " electronic textbook" is found in TEC §31.002 (1), an "electronic textbook" means computer software, interactive videodisc, magnetic media, CD-ROM, computer courseware, on-line services, an electronic medium, or other means of conveying information to the student or otherwise contributing to the learning process through electronic means.

The definition of "technological equipment" is found in TEC §31.002 (4). "Technological equipment" means hardware, a dev ice, or equipment necessary for:

- instructional use in the classroom, including to gain access to or enhance the use of an electronic textbook; or

- professional use by a classroom teacher.

Technology allotment funds flow to the district from TEA, and the district is held accountable for the use of those funds. How the funds are distributed in a district is a local decision, at the district level, as long as they are in compliance with the rules for the use of the funds. Expenditures of the Technology Allotment are coded in the Public Education Information Management System (PEIMS). The Technology Allotment is the key state funding source for implementation and on -going support of technology use in Texas schools.
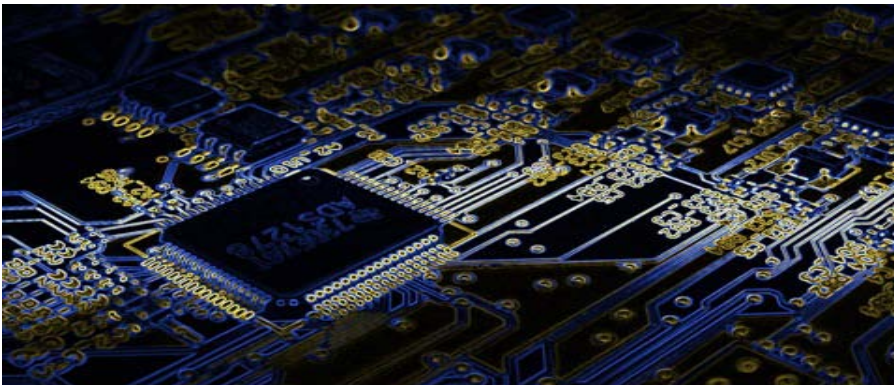
Infrastructure

The infrastructure of a school is the critical element of support for all aspects of technology. School districts across the State of Texas continue to progress toward an i nfrastructure for technology that allows students and educators to learn and use the skills necessary to be successful in the 21st century. Infrastructure capacity must support the innovative practices in teaching and learning, professional development, school leadership, instructional management, and operations.

Texas public school districts and open-enrollment charters, the state's twenty Education Service Centers (ESCs), and t he Texas Education Agency (TEA) continually work toward building a rich, robust infrastructure to support the increased use of technology and di gital content in state classrooms. The STaR Chart data collected by the agency indicates that more schools are at the Advanced level in Infrastructure than in any of the other key reporting areas in the STaR Chart. However, much work remains. The importance of a s trong infrastructure is clearly recognized and identified in plans for public education both nationally and s tatewide. For example, new changes in the National Broadband Plan will enable districts to make further progress in providing access to students off campus once policies aligned with those changes are instituted. In Texas, the Connected Texas Initiative is providing critical information that will assist in ensuring that there is broadband coverage statewide.

Grant funding has given many districts the opportunity to improve their infrastructure through broadband access, hardware, and software purchases. Some grantees even made it possible for their students to be abl e to connect to the internet at home or in key areas in their community. Further increasing infrastructure capacity, the Texas Education Telecommunications Network (TETN) provides video, voice, and data services among the twenty ESCs and the Texas Education Agency.

The Progress Report shows how the necessary tools and r esources for administrators, teachers, librarians, and students are being provided for our 21st Century classrooms. This section of the *Progress Report on the Long-Range Plan* will highlight the impact that technology has made in Infrastructure from 2008-2010.

State of the State Using STaR Chart Data

Campus STaR Chart Data and Analysis for Infrastructure

The Texas Campus STaR Chart produces a profile of the campus' status toward reaching the goals of the *Long-Range Plan for Technology* (LRPT) and No Child Left Behind. The profile indicators place a campus at one of four levels of progress in each key area of the LRPT: Early Tech, Developing Tech, Advanced Tech, or Target Tech. The key areas include: Teaching and Learning; Educator Preparation and Development; Leadership, Administration and Instructional Support; and Infrastructure for Technology. Most campuses in Texas show continued improvement and are moving from lower levels on the campus chart towards the Target Tech level.

During the past biennium, the data gathered through the Campus STaR Chart for Infrastructure shows that the majority of Texas teachers and campuses evaluate themselves as either Developing or Advanced Tech.

Early Tech. Early Tech means that there are 10 or more students per computer. Districts have dial-up connectivity. There is no web-based learning. Technology resources are shared. In 2008-2009, 1.2% of Texas teachers and campuses reported themselves at the Early Tech level in Infrastructure. In 2009-2010, 1.1% of teachers and campuses rate themselves at Early Tech levels in Infrastructure. This .1% decrease indicates more campuses are reaching Developing, Advanced, or Target Tech levels.

Developing Tech. Developing Tech means there are 5-9 students per computer. There is direct connectivity to the Internet in 50% of classrooms and library. Most rooms are connected to WAN/LAN. There is one educator per computer. Other technology resources are shared. In 2008-2009, 31.9% of Texas teachers and campuses reported themselves at the

Developing Tech level in Infrastructure. In 2009-2010, 30.4% of teachers and campuses rated themselves at the Developing Tech level in Infrastructure. This 1.5% decrease indicates more campuses are reaching Advanced or Target Tech level.

Advanced Tech. At the Advanced Tech level of the STaR Chart in Infrastructure, there are four or fewer students per computer. There is direct connectivity to the Internet in 75% of classrooms and library. Web-based learning is available. All rooms are on LAN/WAN. There is one educator per computer. Other technology resources are shared. In 2008-2009, 60.2% of Texas teachers and campuses reported themselves at the Advanced Tech level in Infrastructure. In 2009-2010, 61% of teachers and campuses rated themselves at the Advanced Tech level in Infrastructure. During this period, this number increased by .8%.

Target Tech. At the highest level of the STaR Chart for Infrastructure, there is on-demand access for every student, direct connectivity is available in all rooms, and web-based resources are available in multiple rooms. All rooms are connected to WAN. They are fully equipped with appropriate technology. In 2008-2009, 6.8% of Texas teachers and campuses reported themselves at the Target Tech level in Infrastructure. In 2009-2010, 7.6% of teachers and campuses rated themselves at the Target Tech level in Infrastructure. During this period, this number increased by .8%.

Infrastructure
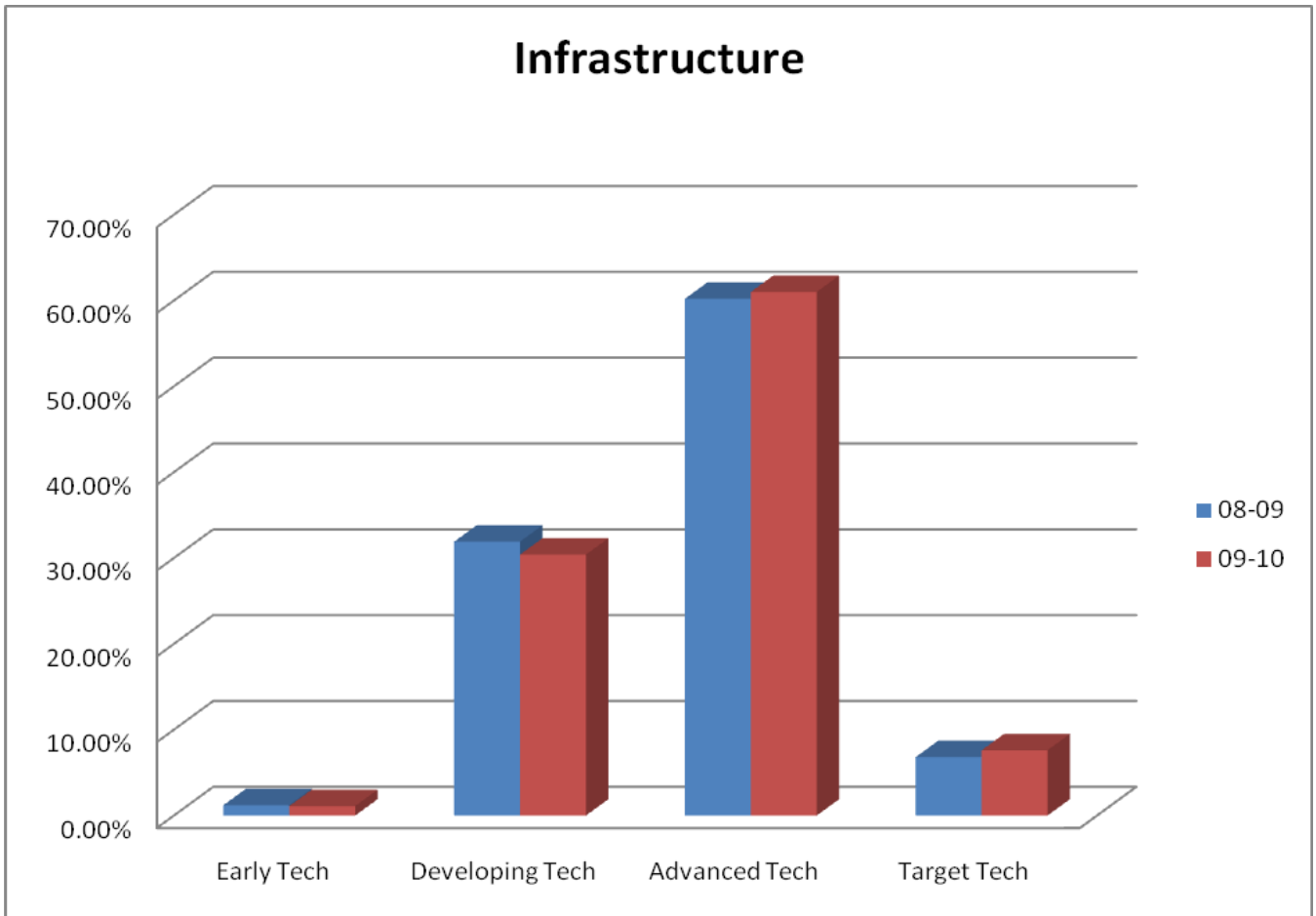
National Broadband Plan

One of the guides used by the agency in the development of new initiatives and in shaping new policies and programs can be the National Broadband Plan adopted by the Federal Communications Commission in 2010. This plan seeks to increase the role of broadband in America and states that "Broadband is the great infrastructure challenge of the early 21st century." The National Broadband Plan focuses some recommendations in the education arena.

"Like electricity a century ago, broadband is a foundation for economic growth, job creation, global competitiveness and a better way of life. It is enabling entire new industries and unlocking vast new possibilities for existing ones. It is changing how we educate children, deliver health care, manage energy, ensure public safety, engage government, and ac cess, organize and disseminate knowledge."

"Fueled primarily by private sector investment and i nnovation, the American broadband ecosystem has evolved rapidly. The number of Americans who have broadband at home has grown from eight million in 2000 to nearly 200 m illion last year. Increasingly capable fixed and m obile networks allow Americans to access a growing number of valuable applications through innovative devices."

"But broadband in America is not all it needs to be. Approximately 100 m illion Americans do no t have broadband at home. Broadband-enabled health information technology (IT) can improve care and l ower costs by hundreds of billions of dollars in the coming decades, yet the United States is behind many advanced countries in the adoption of such technology. Broadband can provide teachers with tools that allow students to learn the same course material in half the time, but there is a dearth of easily accessible digital educational content required for such opportunities. A broadband-enabled Smart Grid could increase energy independence and ef ficiency, but much of the data required to capture these benefits are inaccessible to consumers, businesses and entrepreneurs. Nearly a decade after 9/11, first responders still lack a nationwide public safety mobile broadband communications network, even though such a net work could improve emergency response and homeland security."

The plan recognizes that broadband can enable improvements in public education through e-learning and online content, which can provide more personalized learning opportunities for students. Broadband can also facilitate the flow of information, helping teachers, parents, schools and other organizations to make better decisions tied to each student's needs and abilities. To those ends, the plan includes recommendations to:

- Improve the connectivity to schools and libraries by upgrading the FCC's E-Rate program to increase flexibility, improve program efficiency and foster innovation by promoting the most promising solutions and funding wireless connectivity to learning devices that go home with students
- Accelerate online learning by enabling the creation of digital content and learning systems, removing regulatory barriers and promoting digital literacy
- Personalize learning and i mprove decision making by fostering adoption of electronic educational records and improving financial data transparency in education

The plan also recommends the adoption of six overarching goals for broadband in America:

Goal No. 1: At least 100 million U.S. homes should have affordable access to actual download speeds of at least 100 megabits per second and actual upload speeds of at least 50 megabits per second.

Goal No. 2: The United States should lead the world in mobile innovation, with the fastest and most extensive wireless networks of any nation.

Goal No. 3: Every American should have affordable access to robust broadband service, and the means and skills to subscribe if they so choose.

Goal No. 4: Every American community should have affordable access to at least 1 gigabit per second broadband service to anchor institutions such as schools, hospitals, and government buildings.

Goal No. 5: To ensure the safety of the American people, every first responder should have access to a nationwide, wireless, interoperable broadband public safety network.

Goal No. 6: To ensure that America leads in the clean energy economy, every American should be able to use broadband to track and manage their real-time energy consumption.

Broadband in Texas Public Schools

In Texas, the majority of Texas public school districts take advantage of the purchasing power of the Texas Education Telecommunications Network (TETN) to procure broadband services through their local regional education service center.

According to TETN data, out of 805 districts who receive Internet access through TETN, approximately 64% of the districts, or 514 districts, connect to the Internet at speeds of 1.5 to 4.5 Mb; 20%, or 156 districts, connect at speeds of 4.5 to 10 M b; 6%, or 55 di stricts, connect at speeds of 11 t o 50Mb; 8% of districts, or 65 districts, connect at speeds of 60 to 10 M b; and 1% of districts, or 15 districts, connect at over 100 Mb.

Broadband in Texas

More than 96% of Texas households have access to home broadband service; however, a quarter of a million households in the Lone Star State—more than all of the households in Vermont—lack access to this critical service, according to data from the state's effort to map broadband services in Texas.

Through the Connected Texas Initiative, Texas is taking strides in increase broadband capabilities throughout the state. The Texas Department of Agriculture, in consultation with the Public Utility Commission and t he Texas Public Safety Commission, is leading the effort in coordinating broadband expansion activities funded by the American Recovery and Reinvestment Act.

In January 2010, Agriculture Commissioner Todd Staples announced Texas will receive $2.5 million in grant funds from the National Telecommunications and Information Administration (NTIA) to map the state of Texas for comprehensive broadband coverage through an initiative called Connected Texas. Another $500,000 award will fund broadband planning activities.

The Connected Texas initiative has created a comprehensive broadband map for Texas and provides data on br oadband availability, technology, speed and infrastructure. The map can be us ed to help develop the infrastructure necessary to allow high-speed Internet companies to increase their service capacity to consumers across Texas.

Connected Texas also gives residents a powerful, interactive tool for improving their access to high speed Internet. The state's website (http://www.connectedtx.org/) was launched in September 2009 and allows people to test their current Internet speed, provide feedback on s ervice in their area and share their personal stories of how high speed Internet has impacted their lives.

The map includes data from 123 state providers and indicates 3.5% of Texas households, or approximately 257,000 residences, do not have access to home broadband service. Most of the unserved areas are in rural regions of the state, and a l ack of broadband access is hindering

their opportunities for business development and access to telemedicine, higher education and e-government.

The map is a tool for strategically targeting broadband infrastructure build-out and subscribership. The public is encouraged to review the map at www.connectedtx.org and provide input to help validate the data. The broadband inventory map will be updated again in the fall after consumer and provider data are collected.

The Texas broadband map includes BroadbandStat Technology, which allows a street-level view of current high-speed Internet availability. The map, which will be c ontinually enhanced and upgraded, is searchable by address, allowing users to see the type of technology used to provide service in their areas, as well as the providers servicing their areas. The public can also use the map to compare prices through direct links to service providers.

Internet Safety

At the state level, TEA continues to provide guidance to school districts, charter schools, and parents regarding the importance of Internet safety. The agency maintains, as required by HB 3171 of the 80th Texas Legislature, an Internet safety resource portal on the TEA website http://www.tea.state.tx.us/technology.

The website contains resources for students, educators and pa rents. Within each of the pages are links that categorize different aspects of Internet safety and di gital citizenship to educate and inform. The website also houses additional categories and i nformation to promote Digital Citizenship, which includes cyber bullying, communication, curriculum, security, activities and lessons.

As more and more information and resources are delivered digitally, Internet safety and digital citizenship rights and responsibilities must be offered to today's students. Through the use of the Technology Applications TEKS, acceptable use policies (AUPs), and national resources

such as the NETS standards developed by the International Society for Technology in Education, educators in Texas can reinforce these rights and responsibilities.

The Texas Attorney General's office also maintains a website on Internet safety issues. The website, http://www.oag.state.tx.us/criminal/cybersafety. shtml, contains cyber safety video tips for staying safe online for kids, parents, and consumers.

At the federal level, all schools receiving discounts from the E-Rate (the federal universal service) program are required to implement the Children's Internet Protection Act (CIPA).

CIPA is a federal law enacted by Congress to address concerns about access to offensive content over the Internet on school and l ibrary computers. CIPA imposes certain types of requirements on any school or library that receives funding for Internet access or internal connections from the E-Rate program – a program that makes certain communications technology more affordable for eligible schools and libraries.

What CIPA Requires
Schools and l ibraries subject to CIPA may not receive the discounts offered by the E-rate program unless they certify that they have an Internet safety policy that includes technology protection measures. The protection measures must block or filter Internet access to pictures that are: (a) obscene, (b) child pornography, or (c) harmful to minors (for computers that are accessed by minors). Before adopting this Internet safety policy, schools and l ibraries must provide reasonable notice and hold at least one public hearing or meeting to address the proposal.

1. Schools subject to CIPA are required to adopt and enforce a policy to monitor online activities of minors.
2. Schools and l ibraries subject to CIPA are required to adopt and implement an Internet safety policy addressing: (a) access by

minors to inappropriate matter on t he Internet; (b) the safety and security of minors when using electronic mail, chat rooms, and ot her forms of direct electronic communications; (c) unauthorized access, including so-called "hacking," and other unlawful activities by minors online; (d) unauthorized disclosure, use, and dissemination of personal information regarding minors; and (e) measures restricting minors' access to materials harmful to them.

3. Schools and libraries are required to certify that they have their safety policies and technology in place before receiving E-rate funding.

4. CIPA does not affect E-rate funding for schools and libraries receiving discounts only for telecommunications, such as telephone service.

5. An authorized person may disable the blocking or filtering measure during any use by an adu lt to enable access for bona fide research or other lawful purposes.

6. CIPA does not require the tracking of Internet use by minors or adults.

You can find out more about CIPA or apply for E-rate funding by contacting the Universal Service Administrative Company's (USAC) Schools and Libraries Division (SLD) at www.sl.universalservice.org. SLD also operates a client service bureau to answer questions at 1-888-203-8100 or via e-mail through the SLD website.

Computer Lending Pilot Program

"Just as it is not feasible to have students share learning tools such as pencil, paper, notebook, book, etc, it also doesn't make sense for students to share" computers and only have access to them during the school day. Computers have "become a student's assistant for thinking, drawing, writing, reading, analyzing, calculating, connecting, collaborating, producing, researching, presenting, and more" (theinnovativeeducator.wikispaces.com)

The 81st Texas Legislature, with the passage of Senate Bill (SB) 2178 directed the commissioner of education to establish by rule a computer lending pilot program to provide state surplus or salvage computers or computers donated or purchased for the pilot program to participating public schools for use by students and their parents.

A public school is eligible to participate in a computer lending pilot program if 50 percent or more of the students enrolled in the school are educationally disadvantaged and t he school operates or agrees to operate a computer lending program that:

- allows students and par ents to borrow a computer;
- includes an option for students and parents to work toward owning a computer initially borrowed under the school's lending program, subject to any applicable legal restrictions regarding disposition of the computer involved;
- provides computer training for students and parents; and
- operates outside regular school hours, including operation until at least 7 p.m. on at least three days each week.

Status

The legislation for computer lending recognizes the need to ensure equitable access to computers for all Texas school children. The agency conducted research and gathered information from state agencies and ot her public and private foundations regarding donation of computer equipment for the computer lending pilot program.

Through inquiries, the agency learned that in 1999, the 76th Texas legislature, through the passage of Senate Bill 1105, required the Texas Department of Criminal Justice (TDCJ) to establish and ope rate a c omputer recovery facility. TDCJ opened two computer recovery facilities. Those facilities accept surplus and salvage data processing equipment, refurbish and repair the equipment. The equipment is then distributed to a school district, a state agency, or a political subdivision, in that relative

order of preference and at no cost. The primary beneficiaries of this program are Texas public schools. In fiscal year 2009 the TDCJ computer recovery facilities provided Texas public schools with a total of 6,366 refurbished computers at an es timated savings of $1.6 million. During the summer of 2010, IMET staff members met with representatives from the TDCJ to learn more about their computer refurbishing program. From that meeting, it was determined that the agency might be able to partner with the TDCJ in the shared goal of providing refurbished computers to those schools and students with greatest need.

However, there are also a variety of public and private foundations that partner with schools and/or otherwise make refurbished equipment available to Texas public schools at low or no cost, and a number of Texas public school districts already leverage those programs. The agency has not entirely ruled out other sources for refurbished computers, but a partnership seems to be the most promising approach at the time this report was prepared. The agency plans to continue to explore a possible partnership with the TDCJ and other entities and will continue investigating the best means of implementing a computer lending pilot program.

Current research shows children in lower socio-economic households do not have access to computers but are using smart phones in lieu of more robust systems ("Mobile Access 2010," Pew Internet Research, July 2009; *Austin-American Statesman*, July 3, 2010). Mobile devices provide desirable services and ar e a welcome assist in ensuring equitable access. Nevertheless, if combined with Internet access, providing students and their parents with computer equipment will give them richer, more robust learning resources.

Texas Education Telecommunications Network (TETN)

Since its inception in 1996, the Texas Education Telecommunications Network (TETN) has provided video, voice and dat a services among the 20 Education Service Centers (ESCs) and the Texas Education Agency. These members formed the TETN cooperative to accomplish three main goals; 1) save out-of-pocket expenses by reducing travel required to attend meetings in Austin, 2) enhance productivity to service center staff, district personnel, administrators, teachers and students, and 3) create "added value" to network users.

TETN began as a network of T1 lines connecting all 20 ESCs and TEA. Dubbed the "21 Points of Light" it represented the vision of ESC leadership to provide a more efficient, effective manner to conduct statewide business among the members. T he system was developed in a c ost-share model in which all members shared equally, thereby assuring the inclusion of all ESC's across the state without undue burden. The annual cost savings on travel alone is in the millions of dollars a y ear. The network is currently highly used for video conferencing, statewide activities for students, and distance learning.

TETN Plus Network

Beginning in 2007 w ith the initiation of the TETN Plus project, TETN began replacing point-to-point T1s with a gigabit backbone to provide a h igh-speed, high-capacity backbone as recommended in the Texas *Long Range Plan for Technology*. TETN core routers were deployed among the cities of Dallas, Houston, and Austin, and ne twork switches were deployed in San Antonio and Tyler to expand the TETN footprint. Peering with Texas higher education was implemented and shared Internet2 service of 80 mbps was established by using the infrastructure of the Lone Star Education and Research Network (LEARN).

As of June 2010, twelve ESCs have joined the new network. ESC Regions 3, 4, 5, 6, 7, 8, 11, 13, 15, 16, 18, and 20 ar e connected with a minimum of 300 Mb. The long-term objective of the project includes the connection of all ESCs with a minimum 300 Mb bandwidth on a total cost share. TETN provides ESCs with wholesale internet access as an opt ional service. T ETN has a gigabit of internet being shared by seven ESCs. A second gigabit was added to the service in July 2010 in Houston. Since the initiation of the service, TETN has dropped the cost to ESCs each year by leveraging economy-of-scale pricing.

TETN Plus is positioned to serve the PK-12 community as a conduit for high quality intranet traffic including distance learning, virtual field trips, virtual participation in educational activities, professional development, virtual schooling and a myriad of applications using the broadband infrastructure. Furthermore, TETN has aligned with the National Broadband Plan for Education and the Texas *Long-Range Plan for Technology 2006-2020* with the support of online learning, digital content, data access and transparency and br oadband infrastructure.

TETN Plus Content
An integral component of TETN Plus is the addition of an educational specialist in the TETN Office. This person is responsible for developing unique content for broadband. I n addition to working with the Internet2 K20 community to identify multi-state/multi-country student projects, the specialist is focused on supporting ESC-developed content. E xamples of Internet2 activities include programs hosted by Georgia Tech University and U niversity of Illinois. T hese programs require broadband connectivity so that remote instruments such as a scanning electron microscope can be manipulated by students.

Current Funding
TEA funded the original network and a subsequent network upgrade in 2001 using state funds allocated for the Texas *Long-Range Plan for Technology*. Through the use of

collaborative funds, the TETN Office is able to leverage funds to support the ESCs and TEA. All investments in the last two years centered around purchasing equipment to support the services of TETN Plus.

Each member of the cooperative agrees to annual funding commitments for the video network:
• pay a yearly fee as determined by the TETN Governance Committee.
• designate a TETN site manager and underwrite costs for the position.
• establish and underwrite all costs for a TETN videoconferencing room.
• pay membership fee to TETN Plus network.

Network Assessment
• TETN provides an e ffective means of communication between TEA and the ESCs, as well as among the ESCs, districts, and the larger education community across the state.
• TETN Plus is positioned to support 21st century broadband needs.
• Current use of the TETN goes far beyond its original purpose of connecting TEA staff and staff of the ESCs to include district level personnel, teachers, adult education directors, public health staff, students in distance learning courses, and parents.
• Students receive classes to fulfill requirements for the Recommended Graduation Plan. School districts use TETN to provide classes when they are unable to hire a teacher in the subject area, or when there are not enough students to warrant a full-time teacher.
• Without TETN, many services would not have been possible due to the costs or the lack of ability to travel to face-to-face events.
• Stakeholders believe that the benefits of the TETN outweighed the costs.

TETN has increased productivity and added value through time savings, the provision of timely information, and the value of increasing the participation of their audience in different types of interactions.

Education Service Center Reports

The Region One Education Service Center (ESC-1) encompasses 9,662 square miles in seven South Texas counties: Cameron, Hidalgo, Willacy, Starr, Jim Hogg, Webb, and Zapata. Region One extends over 200 miles along the Rio Grande River at the southernmost tip of the United States – Mexico border. More than 399,837 students attend schools in the region's 37 school districts and 7 charters and 37 charter campuses. The Region One student population continues to be the fastest growing in the state over the last five years.

At Region One ESC, we believe that access to technology resources and services is essential in helping students achieve academic success and to assist teachers in maximizing their potential as facilitators of learning. Our technology ePlan reflects the goals and objectives that make access to technology a reality for all students.

Teaching and Learning

The goal of Region One ESC is to provide school districts with the technology and curriculum resources necessary to meet the learning needs of today's students. To achieve this goal, existing services have been enhanced and new services have been developed. Region One continues to develop new services and encourages educators to think creatively when investigating ways to positively impact student learning. Region One supports district technology efforts through a variety of initiatives including the following:

- CSCOPE curriculum services and support (Region One is a member of the Texas Education Service Center Curriculum Collaborative (TESCCC);
- integration of Technology Application TEKS into district curriculum;
- coordination of Library Services and Media Cooperative;
- digital video services;
- online virtual preview center and preview for textbook adoptions;
- Distance Learning Consortium;
- Title II, Part D Consortium;
- use of ESCONETT, the regional network, a high speed, high performance intranet for the K-12 environment; and

Technology Advisory Committees for disseminating information, providing best practices presentations, networking and collaborative opportunities, and receiving feedback.

Educator Preparation and Development

Region One is committed to helping all teachers integrate the Technology Application TEKS into their content areas and to ensuring that all high schools are offering at least four of the eight Technology Applications courses at the high school level. To support this effort, Region One provides the following professional development opportunities:

- TxVSN approved professional development for online educators;
- Microsoft Office Specialist (MOS) preparation and certification;
- Intel Teach to the Future – Essentials for Learning and Thinking with Technology;
- custom designed professional development to use the specific resources of individual districts and campuses;
- T-STEM Center provides technology integration professional development specifically for math and science teachers;
- technology planning professional development, assistance and support;
- professional development and support for school librarians;
- annual Technology Conference;
- assistive/adaptive technology professional development;
- Regional Cisco Academy support;
- technical training for district staff responsible for maintaining district infrastructure;

- availability of multipoint videoconferencing equipment for delivery of instruction and professional development;
- implementation of web-based professional development and live webinars.

Leadership, Administration and Instructional Support

One of the primary objectives of Region One ESC is to assist school districts in operating more efficiently and effectively by providing technical support and professional development related to student and financial accountability. The information tools available through PEIMS and AEIS reports can be great assets to educators when gathering and analyzing data regarding student performance and district financial accountability. ESC One provides and assures that staff has the adequate resources and training to maximize these technology tools. This includes:

- collaboration with districts to consolidate data transmissions and using existing networks in a secure and economical manner;
- development of specialized reports to increase data accuracy, analysis, and projection capabilities of districts;
- technology planning professional development, assistance and support;
- Intel Leadership professional development;
- PEIMS support services;
- student and financial data software and support services;
- data collection and analysis software and support services including: Eduphoria, DMAC, and Data One, our regionally developed data analysis tool;
- E-Rate support;
- regional online job board and common core application service;
- best practices presentations as part of Technology Advisory Committee meetings; and
- professional development to support administrators of online learning programs.

Infrastructure

The ESC One network, referred to as ESCONETT, connects over 250 campuses in Region One. ESCONETT connects every school district with a minimum of one T1 connection. ESCONETT also has connectivity to The University of Texas – Pan American, University of Texas – Brownsville, South Texas College, Texas State Technical College – Harlingen and TETN. Region One and the member districts use ESCONETT for a variety of services including:

- high speed Internet access via minimum T1 connection to Gig fiber connections;
- distance learning support including concurrent enrollment;
- email services, including anti-spam services;
- ability to integrate voice, video, and data traffic on the network over Ethernet and ATM
- training of school district personnel in technical areas, such as, Microsoft, Computer Forensics and Cisco Networking Academy;
- facilitating access to normally costly services, content, and software at greatly reduced rates;
- content filtering services for school districts at a reduced cost;
- technical support on network design, implementation and maintenance for schools whether on the ESCONETT network or part of another Internet Access provider;
- video streaming services from Region One ESC, as well as other third parties;
- application services for migrant students;
- web hosting services for school districts;
- Disaster Recovery Services to all school districts;
- email archiving services all school districts;
- VPN services to requesting school districts; and
- reporting services for student related information.

Region 2 Education Service Center
Corpus Christi, Texas • 361-561-8400 • www.esc2.net

The Region 2 Education Service Center's (ESC 2) mission is to be a c atalyst for change resulting in student improvement and efficiency and economy of operation. We promote educational excellence for all students throughout our region and state. Every district within the region is provided both instructional and non-instructional assistance. State and local initiatives are promoted and implemented within the region. The primary focus of our organization is student achievement, and we impact student achievement by offering relevant professional development for teachers, administrators, school board members, parents, and other clientele.

Region 2 Education Service Center serves 42 independent school districts two common school districts and seven charter schools in an 11-county area as diverse as Texas. The ESC 2 currently serves approximately 107,000 students and 14,982 educators and staff in the Texas Coastal Bend.

In addition to prescribed "core" services and various statewide initiatives, regional education service centers may design and implement a v ariety of services of interest to districts, charter schools, and campuses. The ESC 2 offers more than 85 specific programs to assist school districts. These programs are highly specialized and relate to a full range of public education functions.

In 2009 a bout 71% of Region 2 students were Hispanic, 24% White, and 4% African-American. The percent of economically disadvantaged (eligible for free or reduced lunch) students increased almost 8 per centage points since 1995 to 62.1% in 2009. Included in the region is the largest working ranch in the world, the sixth busiest port in the U.S., two major U.S. Navy bases, and a national seashore.

Teaching and Learning

Needs assessments and contact meetings have yielded the districts' continuing need for proper training and support for teachers as they learn to use technology tools in their classrooms. Workshop attendance trends support the need for more advanced and innovative training sessions. Region 2 has strong, well-respected Assistive Technology services, Vision Services, Autism Services, and others to serve special needs students, their parents, and their teachers.

School Library Cooperative. The ESC 2 r egional librarian provides in-services with librarians/media specialists and library paraprofessionals, hosts regular regional meetings, provides K-12 educators with training on the use of the state funded K-12 Databases, provides schools with technical support for library issues via telephone assistance, and manages the school library cooperative which allows on-site professional library assistance for a multitude of tasks and issues.

ePlan, STaR Chart Assistance. Region 2 provides training and assistance to all districts and charter schools in the effective planning for technology tools that will meet the learning needs of all students and enhance the teaching and learning processes.

Region 2 monitors the online systems for the region, trains ePlan reviewers, and distributes and trains districts in the effective use of STaR chart data.

Educator Preparation and Development

The ESC 2 Instructional Technology Team continues to monitor and revise workshop sessions based on expressed and data-driven needs. Our primary requests are for on-one's-own-time, just-in-time professional development. In 2003-2004 Region 2 was approved to offer Technology Applications Certification for grades 8-12. Forty-eight educators survived a rigorous 20 Saturdays and five days of professional development in June that year. The course was recorded for online attendance after two years, and has trained teachers from across the state and even from other states. Only one student has failed to pass the TExES exam on the first try. Additionally, the Team has moved all "basic skills" workshops to the online systems (http://online.esc2.net and http://mrooms.esc2.net) and now offers integration training sessions based on data driven needs in core content. The Team successfully collaborates with core content consultants to ensure research-based, effective sessions. Courses and meetings conducted via videoconference continue to grow in both number and scope. Courses for high school, dual and

concurrent enrollment credits allow students to have opportunities equal to those in larger and less remote areas. In 2009-2010, twelve campuses with 184 students enrolled in dual credit distance learning courses at ESC2. Seventeen dual enrollment courses were delivered. We facilitate collaborative events, student presentations, language courses where ESL students connect with students learning their home language. We bring experts and community members in to meet with students. We connect students the Texas State Aquarium and Connect2Texas for content. Other connections include Gulf Coast Council presentations, various regional advisory group meetings, CSCOPE, and SMART Board training sessions.

Leadership, Administration, and Instructional Support

Districts have additionally asked for programs and services that will enable them to more effectively plan and as sess student learning. To that end, Region 2 continually researches programs and possibilities, and has joined several ESC consortia that enable the offering of cost effective applications such as the following:

DMAC Region 2 of fers access and t raining in the Data Management and Assessment Consortium. This low-cost system, created and maintained by Region 7 programmers, enables districts to analyze state and local student assessment data, including TPRI and benchmark assessments, to manage the alignment and sequencing of TEKS-based curriculum, to communicate with parents, and to create customized personal graduation plans and Intervention plans for students, to manage teacher appraisals, and to write District and Campus Improvement Plans—all online.

The **CSCOPE Curriculum Developer** is a template-based online curriculum tool that houses a comprehensive, customized, user-friendly curriculum support system. The curriculum components of CSCOPE are based on best practice models from top researchers. Lessons are all aligned with the TEKS/TAKS and each lesson meets the highest standards of rigor and relevance. The curriculum is developed statewide by ESC core content consultants, master teachers, and university professors. Region 2 assists with the writing/editing of both the mathematics and science curriculum.

INOVA Process Region 2 offers the INOVA Process and training. This product teaches schools to use data to improve long-term instructional effectiveness. It contains a longitudinal profile of individual student, campus and district and trains teachers to match the data to specific interventions and monitor their effectiveness.

Infrastructure

The Coastal Bend Network, CoBeNet, is a sophisticated and complex wide-area network (WAN) developed by ESC-2. The network includes approximately 36 school districts, 2 charter schools; Nueces County; and San Patricio County Appraisal District. The ESC works with the Texas State Aquarium to deliver interactive instruction to school districts via CoBeNet. The network is continually improved to provide security and redundant paths for Internet service. CoBeNet features state-of the-art equipment for transmission of voice, data, and video. A Cisco VoIP phone system has been installed on the local-area network (LAN) with capabilities of future growth for the wide-area network (WAN). The average network traffic is currently 50 to 60 m egabits per second. ESC-2's MIS staff maintains the network and provides technical support and troubleshooting.

The MIS staff has continued to upgrade equipment for higher performance and is considering doubling its video capacity. Connection options for supported districts include T-1, fiber, and wireless. In anticipation of the need for increased bandwidth, MIS upgraded its bandwidth from 70 Mbps to 700 Mbps, expandable to 1.5 Gbps. This traffic was routed across two ISP connections for improved performance and redundancy.

Region 3 Education Service Center (ESC-3), an ISO 9001:2008 Certified Management System since 2005, serves the Crossroads of South Texas. It is centrally located between San Antonio, Corpus Christi, Houston and A ustin. ESC3 provides programs, products, services and support to 40 school districts and one charter school in 11 counties. 58,356 students attend schools in primarily small rural districts. Victoria County, the only metropolitan area in the region, is the smallest metropolitan area in the state and contains the largest district in the region comprised of 14,071 students. Four districts have student populations in the range of 2,098 to 3,994 and eight districts are within the student population range of 1,195 to 1,753. The remaining 28 districts serve less than 905 students per district, with five of those serving a population of less than 100 students. Demographics for the region are: 60.1% - economically disadvantaged; 8.9% - African American; 50.5% - Hispanic; 37.8% - White; 1.2% - Asian/Pacific Islander and 0.3% - Native American. As the districts have faced the challenges of declining enrollment, the reliance upon Region 3 for support in providing and maintaining technology equity for all students has increased. All districts in Region 3 participate in at least three technology services provided by ESC3, with 100% participating in Instructional Resources and 99% in the regional network (NET3).

Teaching and Learning

The Region 3 Education Service Center:

- Maintains instructional technology support through Title II, Part D SSA programs focused on modeling and mentoring technology in the classroom. Teachers have access to 9 t echnology checkout labs including: laptops, digital microscopes, eInstruction Classroom Performance System, AlphaSmart lab, SmartBoard, eInstruction ChalkBoards, Garmin Global Positioning System, digital cameras, and a v ideo editing system. Each checkout includes model teaching incorporating Technology Application TEKS into their classroom. Title II, Part D also offers in collaboration with CTE a y early Technology Academy for Girls.
- Provides Discovery Education Streaming instructional resources to every classroom in the region. The program replaced the video checkout library in 2003 and use continues to increase as teachers participate in

monthly training offerings. Dual enrollment coursework continues to expand bringing opportunities to students from the two community colleges within the region. As of the end of 08-09, there were 40 c ourses delivered to 1564 students at 15 campuses in the region.

- Promotes Read Across America via video conferencing involving students and community members sharing in the value and diversity of reading. The local regional program began in 2000 and i s now involved in multi-regional projects in Texas.

Educator Preparation and Development
Region 3 Education Service Center:

- Promotes collaborative projects between instructional technology and content specialists offering teachers hands-on applications of technology in all areas. 49p percent of all workshops offered at the ESC use instructional technology strategies to improve student achievement.

- Encourages ESC3 staff use of distance learning technologies in delivering professional development to teachers across the region. As of 08-09, 100% of the staff employs distance learning technologies in their program offerings.

- Provided portable video conferencing equipment to facilitate classroom to classroom (teacher to teacher) mentoring projects to partner a new teacher with a master reading teacher throughout the year. The initial project included six campuses across the region and is expanding across the state. These systems also allow teachers the opportunity to extend learning by participating in video conferencing programs with a variety of content providers (i.e.: NASA, Indianapolis Zoo, various authors and experts).

Leadership, Administration, and Instructional Support
Region 3 Education Service Center:

- Provides 33 districts Management Information Services (MIS) through support of student and/or business operations with RSCCC support. An additional two districts outside of the region are served in the MIS area, including state PEIMS support. Continues to provide free of charge, statewide access and support for interactive assessment tools: Teacher

Self-Report, PDAS, Principal Appraisal and Superintendent Appraisal.

- Promotes E-Rate participation to all districts in the region through regular listserv communications, training programs and bi-monthly technology meetings. E-Rate provides an average of 74% discount on telecommunications and Internet access across the region resulting in $2,577,030 funding to 38 districts in 08-09.

- Facilitates bi-monthly regional technology meetings through face-to-face, on-site and video conferencing offerings to maintain effective and efficient technology resources across the region for all stakeholders.

- Provides technology planning support to maintain 100% of districts with current TEA certified technology plans.

Infrastructure
Region 3 Education Service Center:

- Manages the regional network, NET3, providing Internet access, video conferencing and voice-over-IP to 39 districts in Region 3. The network has doubled the total bandwidth provision each year as participation and utilization has increased across the region. The H.323 technology, incorporating wireless cross-LATA transmissions, has afforded growth at no cost increases to the districts over the past five years. In fact the cost was reduced for 2009-2010.

- Implements open-source technologies for web services to continue to provide required resources to districts at nominal expense.

- Supplies web and email hosting services to 14 districts.

region4® Educated Solutions **Center   Houston,   Texas   •   713-462-7708   •**
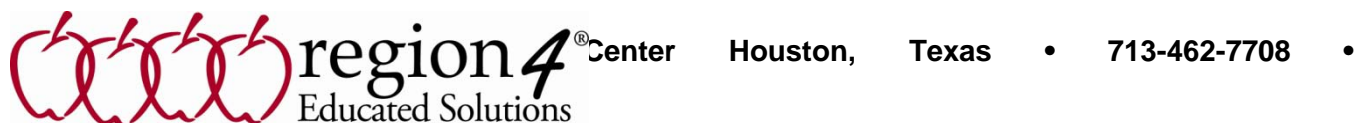
The Region 4 Education Service Center serves the largest student and professional population in the State. Region 4 consists of 54 independent school districts and 48 state approved charter schools in seven counties in the upper Texas Gulf Coast area. Region 4's educational community includes over 1,076,115 students, which represents almost one-fourth of the state's total student population, and 88,707 educators.

While geographically one of the smallest regions in the State, Region 4 reflects one of the largest ranges of district diversity. Districts span in size from a total enrollment of 79 students to more than 202,000 students, the largest in the state, and seventh largest in the nation. Within Region 4, 56.66% of the school-aged children qualify as economically disadvantaged.

Region 4 has redefined ESC in order to express its core values of excellence, service and children. These values inspire their core vision to revolution education to inspire and advance future generations.

Teaching and Learning
Region 4 Education Service Center:
- Provides administrative, financial, and quality control for the Texas Virtual School (TVS), a statewide consortium of 14 Texas ESCs, providing Internet based TEKS-aligned curricula and highly qualified instructors for secondary students.
- Provides Blackboard support for state, national and international programs in alternative teacher certification, gifted and talented teacher certification, assistive technology programs, and online teacher programs.
- Administers one of ten statewide programs that are approved to offer required online teacher approved training for authorized course providers who are listed in the Texas Virtual School Network (TxVSN) catalog.
- Offers the Comprehensive Curriculum, Assessment, and Professional Development system (CCAP), an online, comprehensive instructional tool that integrates all of the educational components critical to student success: assessments, curriculum and instruction resources, professional development, student special populations management, and a data warehouse.
- Coordinates and provides training for statewide initiatives including the Texas

Math and Science Diagnostic System (TMSDS) and the EBSCO K-12 Databases.
- Provides Discovery Education streaming services to participating districts in the region.

Educator Preparation and Development
Region 4 Education Service Center:
- Provided alternative certification preparation through distance education for 53 areas of certification.
- Trained 2960 candidates through distance education in the domestic alternative certification program.
- Trained more than 954 candidates for EC-4 Bilingual Generalist through distance education at sites in Mexico and Puerto Rico.
- Co-hosts, in partnership with TCEA Area 4, an annual K-12 Technology Applications Conference that highlights the individual talents and achievements of area teachers.
- Provides assistive technology training.
- Supports the regional assistive technology lab.
- Customized staff development activities provided for districts and campuses to meet specific curriculum and staff development needs.

Leadership, Administration and Instructional Support

Region 4 Education Service Center:

- Provides The Cooperative Purchasing Network (TCPN) to assist in purchasing technology equipment.
- Facilitates meetings for the multiple technology advisory groups by disseminating information, providing best practices presentations, and providing networking and collaboration opportunities.
- Sponsors workshops presented by TEA personnel on a wide-variety of topics including Discipline/Chapter 37 and the Student Attendance Accounting Handbook.
- Performs reviews of PEIMS data and processes with a focus on c apturing all available state funds.
- Develops web based administrative applications for tracking and managing resources (facilities, staff, time and effort, scheduling, etc.); tracking & managing Professional Development Records for Educators; and running reports in real time leveraging industry-leading technologies & programming languages including ASP.NET, C#, SQL SERVER, JAVA SCRIPT, AJAX, and Crystal Report.
- Develops web-based applications targeting Educators.
- Develops Custom Applications. Custom applications include an Automated Course Review system, e-Learning tracking system for on-line professional development or any business domain, and an onl ine fee based payment application.
- Performs technology audits on districts to support district efforts in continuous improvement. Audit reports identify district strengths and opportunities for improvement in any aspect of technology use requested. Report also includes fiscal impact statements for each recommendation and a prioritized rank of all recommendations to assist with implementation.
- Conducted over 500 i ndividual course reviews, analyzed materials and assigned ratings for courses proposed for the Texas Virtual Schools Network (TxVSN.)

- Provides support for the Texas STaR Chart and E-Plan systems.
- Facilitates training for E-Rate support.

Infrastructure

Region 4 Education Service Center:

- Provides Internet access through ESC4.Net to 17 districts, individual campuses, charter schools, and private schools.
- Provides Internet content filtering for ESC4.Net districts. The filtering service is customizable to meet the individual needs of each district.
- Provides disaster recovery data back-up services to districts in the Gulf Coast area.
- Offers router maintenance, spare equipment and technical assistance to ESC4.Net districts.
- Maintains expertise to assist schools and districts in network management, network design, Internet connectivity, and har dware and software support.
- Maintains e-Registration and onl ine credit card payment to allow customers to register for professional development electronically via the web.
- Operates a regional videoconferencing network hub through which student and educator content is exchanged. Current membership in VC4U includes 24 di stricts representing 483 campuses are members of the Region 4 Videoconferencing Network (VC4U).
- Offers virtual data center services through Region 4's state-of-the-art data center. Co-location and managed services are available providing districts the opportunity to lower the cost of operating their data center and i ncreasing the security and expertise available.
- Provides network development assistance for LEA local area networks.

Region 5 Education Service Center
Beaumont, Texas • 409-838-5555 • www.esc5.net

Education Service Center, Region 5, services 30 public school districts and 6 charter schools throughout the southeast Texas area, which includes Hardin, Jasper, Jefferson, Newton, Orange, Tyler, and a portion of Galveston counties. These counties are primarily rural areas. We have approximately 80,000 students with 54% white, 30% African American, and 13% Hispanic. According to our TEA Snapshot, 56.7 % of our students fall under the category of economically disadvantaged. Our average student attendance rate is 95.2%, and our school districts work very hard to sustain a high graduation rate which is presently 83.7. The average years of experience among the teachers in our districts are 13.0 with 30.7% of teachers with 5 or fewer years of experience. Seventeen percent of our teachers have obtained advanced degrees.

Teaching and Learning

Region 5 ESC is continually striving to meet the needs of its local school districts and provides annual surveys for input. Our workshop training focuses on assisting districts with implementing the Technology Applications TEKS for all K-12 curriculum areas.

Our service center provides professional development training for teachers and administrators through the use of our three computer lab classrooms. We have a Windows compatible lab as well as a Mac lab. We also provide technology training for our ESC staff to enable them to keep up with the ever-changing technology tools. Our distance learning lab is used for interactive training with our school districts through professional development courses and shared instruction classes with electronic field trips. This lab also provides dual credit classes offerings in partnership with universities.

Our iPod Touch mobile lab offers the flexibility for onsite training as well as training at our ESC location.

We are currently offering Spanish courses through interactive video conferencing for school districts who are not able to find certified teachers for shortage areas. We currently have 4 certified Spanish teachers at our ESC location who provide year-long Spanish instruction for 500+ students for our school districts and others in Texas. Our courses for the 2010-2011 school year will include Spanish I, II, III, and IV. We also offer Elementary Enrichment to school districts who would like to begin this language experience with their younger students for grades K-5.

Educator Preparation and Development

Region 5 ESC staff strives to stay abreast of the most current technology trends to provide our school districts with the latest technology integration opportunities. We provide a wealth of workshops and training opportunities for educators and administrators.

Our Administrators' Academy is a multi-day training opportunity for our area administrators. Each day is filled with new and upcoming technology ideas and trends that the administrators can take back to their

perspective campus for training and implementation by their staff.

Our ESC provides online professional development courses for educators who are not able to leave the classroom. Through the use of Moodle, we are able to offer courses throughout the school year for teachers and administrators who cannot afford to be out of the classroom.

Our annual Technology Integration Conference usually held in August prior to the new school year focuses on technology integration for all curriculum areas. Our goal is to offer technology integration training opportunities for every employee at our school districts. Attendees will have a chance to talk with vendors and other knowledgeable educators who will provide a presentation on various topics of interest at the conference.

Our annual textbook fair offers teachers and administrators the opportunity to come and view textbooks which are up for adoption for the upcoming school year. We invite all textbook vendors and encourage them to set aside time to present the information concerning new textbook adoption to all of our attendees.

Leadership, Administration, and Instructional Support

The South East Texas Telecommunications Education Network (SETTEN) provides us with the opportunity to broadcast programs at districts' request and is used as a medium for broadcasting meetings between our districts as well as other State organizations.

This network has given us the opportunity to broadcast information and updates to school board members or school administrators within

their own community, saving time and money for the ISDs as well as the ESC.

Region 5 ESC staff provides training for school districts in regard to writing their technology plans, and assistance with applying for E-Rate funding, or securing other funding.

Infrastructure

SETTEN provides 5100 educators with email, Internet access, and video-conferencing. We continue to provide a collaborative E-Rate application for all schools connected to the network. Instructional and administrative training, network monitoring and support, and comprehensive event scheduling are all provided through support from the Service Center.

Video conferencing has played a major role in giving our school districts the flexibility for attending trainings, meetings, etc. Districts are able to save on travel costs for their employees and continue to be involved in shared instruction, dual credit courses which allow their students to gain college credit through a high school course, as well as any relevant training opportunities. This allows them to be more efficient and effective in their operations.

School districts are realizing the need for more bandwidth related to their network connections with the use of emerging new technologies such as online courses and IVC classes. These new instructional opportunities provide another alternative for professional development training. We want to make sure that our school districts have the appropriate tools necessary to be able to provide quality services to their students and teachers. Our goal is to provide the best products and services that our districts will need.

Education Service Center, Region VI
Huntsville, TX • 936.435.8400 • www.esc6.net

Education Service Center, Region VI (ESC VI) is located in beautiful southeast Texas in the piney woods, 60 miles north of Houston. ESC VI encompasses 12,400 square miles that includes 15 counties, 56 school districts, and various private schools serving over 168,000 students and over 23,900 teachers and staff. The region is rural, richly multiethnic, and reflects the trend of growing diversity that is common in much of the state. More than 49% of the students are eligible for free or reduced-rate lunches. Nevertheless, the districts in ESC VI are consistently increasing the achievement levels of their students as measured by the TAKS tests. A varied economy includes agriculture, petroleum, energy, forest, manufactured products, universities (Sam Houston State and Texas A&M Universities) and the state prison system. Recreation and tourism are important in the region which includes the Sam Houston and Davy Crockett National Forests, part of the Big Thicket National Preserve, Lake Livingston, Lake Conroe, and several other area lakes.

Teaching and Learning

ESC VI assesses the needs of its students and staff annually and offers a wide variety of services to support the efforts of its districts to improve student performance. The catalog of services includes support for each state technology initiative and for additional needs expressed by regional district personnel. Services in the area of teaching and learning are designed to provide support and training in such a way as to empower districts to implement and integrate technology resources.

ESC VI, along with six school districts, was awarded a $965,000 Target Tech in Texas (T3) grant to stimulate the use of educational technology to improve teaching and learning. Grant funds are being used to assist schools in providing 21st century classrooms. ESC VI hired a new Technology Integration Specialist to assist with the training for these school districts.

The Safety Education department developed and implemented a new online Driver Education course offered via the Texas Virtual School Network. Since the spring of 2010, 272 students have enrolled in the course. The department has sent additional teachers through the web Instructor Certification Course in order to accommodate the growing need for more sections of the course to open in the future. The Adult Education department uses English for All, GED and Pre-GED Connections, California Distance Learning Program and Sed de Seber to teach adult learners in GED prep and English as a Second Language.

The Distance Learning Program at ESC VI provides extensive video services to 52 video-enabled districts located in 15 counties across the region by providing professional development for educators

and enhanced education opportunities for students. Examples of such activities have included concurrent enrollment classes, high school to high school course sharing, virtual field trips, special distance learning student activities and collaborations, and statewide videoconferencing events.

A snapshot of the ESC VI Interactive Videoconference program offerings for the 2009-2010 school year reveals that more than 1800 educators participated in 164 professional development workshops, 56 virtual field trips and special events were broadcast to over 14,279 students on 78 campuses, 48 dual-credit courses were delivered to 846 students on 32 campuses, and 111 students received high school credit instruction on 7 campuses. One special event was

the Third Annual Barbara Bush Reading Event held in partnership with the George Bush Presidential Library and Museum. Mrs. Bush read a portion of a book called "Mr. President-A Book of U.S. Presidents" and then answered questions from children via videoconference. Coordination of this state-wide event was handled at Region VI and more than 26,000 kids across the state participated in the event and received a free copy of the book.

Educator Preparation and Development

Professional development programs for educators address a variety of technology needs through various delivery models. Regional workshops, Train the Trainer workshops, project-based program support, technology integration training, and grant-

required training have assisted hundreds of educators to gain skills. These programs encompass the Internet, multimedia, and ot her resources, integration of technological resources into the curriculum, and development of technical skills to support those resources. Examples include:

- Texas Math & Science Diagnostic Systems
- Labquest-Vernier Probes
- Graphing Calculators
- Online Databases & Video Streaming
- Digital Storytelling
- Online book studies using Moodle
- Technology integration into curriculum using Smart Boards, iTouches, iPods, iPads, Web 2.0 software, blogs, wikis, and videoconferencing

The programs reach teachers, technology staff, librarians, administrators and policy/decision makers. Technical training, such as A+, Microsoft Administration, and Cisco training continues to be offered by technical certified ESC staff. New training is developed as needed. Online resources for teachers and a dministrators including WebCCat, NovaNET, and CSCOPE are made available to ESC VI districts.

Leadership, Administration and Instructional Support
Administrative support that is offered by ESC VI includes: information dissemination, conferences, on-site consulting and training, assistance with bidding and purchase cooperatives, administrative software and services and other cost-effective services. Many of these services would not be readily available to schools in rural areas otherwise. PEIMS services are offered to schools as well. Both student and administrative software is used to perform administrative and support services. Training for business managers, data processing staff, and adm inistrators is provided. To support these services, ESC VI maintains on s taff two Technology Integration Specialists, a Li brary Integration Specialist, and a Distance Learning Specialist. Additionally, all instructional specialists participate in training and in distance learning delivery opportunities. Districts have access to certified IT Specialists regarding Wide Area and Local Area Networks that include Microsoft, Cisco, and Novel certifications.

Infrastructure
Each year the number of districts with a communications infrastructure has increased.

CommNet, the regional network in ESC VI, includes more districts each year that are directly connected for Internet access, e-mail services, and distance learning. ESC VI Information Technology staff provides design, installation and configuration, cooperative purchasing, maintenance, and training to support technology and connectivity at the campus, district, and regional levels. ESC VI is a resource for districts seeking infrastructure enhancement via technology grants and E-Rate.

CommNet is designed to link all school districts serviced by ESC VI into one communications network capable of simultaneously handling Internet access, computer data transmissions and videoconferencing. Regional Connectivity includes one full T-1 circuit and the equipment for Internet access in the district. Districts can then extend this connectivity to campuses by creating a district wide area network (WAN) and c ampus-wide networks with local area networks (LAN). Regional Connectivity provides the following capabilities:

- Internet
- E-mail; Spam/Virus e-mail filtering
- Web hosting
- Access to the Texas Education Telecommunications Network (TETN)
- Access to the Internet2 Consortium
- Access to Blinn College, Sam Houston State University, and Angelina College via NetNet
- Maintenance and support on all District Internet Routers
- Network design consultation

In the beginning, CommNet consisted of a net work of 19 school districts. Bandwidth for each district consisted of 256 Kps to ESC VI. The Internet pipe consisted of two T1s totaling three Mps which was shared by all 19 s chool districts. Today CommNet consists of 39 s chool districts plus ESC VI as the hub site totaling 40 sites. Each district has at least one full T1 circuit connected to ESC VI which translates to a data transfer speed up to 1.5 Mps. The current Internet bandwidth is up t o 100 Mps which is shared by all 40 sites.

Region 7 Education Service Center (ESC-7), located in Kilgore, Texas, provides services to 96 districts and 9 charters in 17 counties. Most of the region's school districts are rural and include 164,625 students and 24,774 professional educators and support staff. 56 per cent of the students are economically disadvantaged. TAKS student achievement scores show continuous improvement each year and are above the state average.

Region 7 ESC provides an array of technology training and support services to implement the *Long-Range Plan for Technology, 2006-2020*, through regional and local technologies. Region 7 assists teachers and administrators in meeting Technology Application TEKS proficiencies by providing training for teachers and administrators for technology integration into the curriculum. The following lists contain examples of activities available through ESC7.

Teaching and Learning

Region 7 Education Service Center:

- Distributes information and training related to the integration of technology into districts' improvement plans, best practices for technology planning, and use of technology in teaching and learning through workshops, advisory meetings and planning meetings, newsletters, e-mail, and the Region 7 website.
- Develops instructional materials and services such as DMAC Solutions, the SBEC approved Principal Assessment, TCTP training for business professionals becoming classroom teachers, and the online Teacher Technology Competency survey.
- Region 7 is facilitating a T3 grant from TEA. To date, we have purchased 1,126 iPod Touches, over 100 Macbooks, and an extensive amount of teacher presentation equipment for participating schools. Our schools have begun a curriculum redesign process that will include the use of iPods and Podcasting into the curriculum.
- Provides permanent and mobile labs for training. A special education training lab is equipped with many assistive technology devices and offers a software library. A new science lab using the latest technology, including videoconferencing, was completed last year and is in almost constant use.

- Provided technical assistance and training for 104 districts on ePlans, STaR charts and E-Rate.
- Instructs educators on the use of technology in order that it may seamlessly facilitate the learning process that supports the acquisition of the TEKS as demonstrated on the TAKS.
- Collaborates with curriculum specialists to provide tools and resources enabling educators to identify and teach the Technology Application TEKS that are embedded into their core curriculum.
- Added a new position of "Technology Integration Coordinator" to collaborate with specialists to support their use of technology in the delivery of curricula through a variety of instructional methods.
- Provides Discovery Education video-on-demand student and teacher resources, including videos, teacher tools, digital media, professional development enhancements, and administrative tools.

Educator Preparation and Development

Region 7 Education Service Center:

- Establishes and maintains partnerships with software and hardware vendors, colleges and other education service centers to provide support for local technology initiatives.
- Offers professional development related to technology integration into TEKS, teaching and learning, instructional management, professional development, and administration.
- Provides professional development via distance learning, distributed learning website resources, and on-site staff development.
- Provides training and technical support for Moodle, an online course management system.

- Identifies websites suitable for student research and data-gathering that can be found in various locations at http://www.esc7.net.
- Offers Alternative Teacher Certifications through the TPCP program correlated with the Technology Application TEKS to insure the integration of these skills in the core curriculum in order to facilitate the success of all students on the TAKS.
- Correlates all staff development offerings with the SBEC standards for technology in an effort to promote the recommended competencies of current classroom teachers.
- Correlates all professional development offerings to the SBEC standards as well as the Technology Application TEKS.
- Facilitated a RUS grant providing video conference equipment to 7 districts.
- Provides 21st century technology trainings such as podcasts, blogs, wikis, online learning, and emerging technologies.

Leadership, Administration and Instructional Support
Region 7 Education Service Center:
- Assists schools and districts with data disaggregation and effective district and s chool improvement planning.
- Facilitates the accurate and timely delivery of PEIMS data to TEA through web based Edit Plus system.
- Trains districts/charters in overall PEIMS data collection requirements in order to meet data submission requirements.
- Provides training and technical assistance in the operation of the web-based Edit plus system including troubleshooting file transfer issues.
- Provides training and support for TREx, a web-based software application designed for the exchange of electronic student records.
- Provides software training in the use of the RSCCC financial and student accounting management systems.
- Provides software support for RSCCC including telephone and email helpdesk support, distribution of releases, and troubleshooting software related problems.
- Facilitates training for administrators on TEKStar, DMAC Solutions, Internet use and management.
- Provides technical assistance and support to ESC7Net districts on distance-learning resources and training.

- Provides support for TETN video conferences to ESC staff as well as connecting school districts for meetings from TEA, other regions and between districts.
- Implements online registration for participants to register for workshops.
- Provides online resources for posting and/or searching job vacancies in K-12 education.

Infrastructure
Region 7 Education Service Center:
- Maintains the telecommunication infrastructure for the regional network, ESC7Net, for 49 Region 7 ESC school districts, colleges, charter schools, and private schools, using an IP backbone for data, voice, and video services.
- Recently upgraded the WAN infrastructure by building gigabit backbone from Kilgore to Dallas while integrating open source elements (Open BSD, Open BGP) to drive down costs and increase availability.
- Provides assistance to schools and di stricts in technology planning, network management, network design, technology integration, Internet connectivity, distance learning, videoconferencing, hardware and s oftware support.
- Provides forums for regional collaboration through advisory committees, grant writing, and planning meetings.
- Provides spam filtering and virus protection for over 6,000 e-mail accounts on the ESC7Net WAN. A dded a " daily digest" report to allow users to view and release quarantined mail.
- Maintains E-mail Archive service for districts and charter schools.
- Has recently added on-site technical support services for districts and charter schools
- Is an active member of TETN Plus.
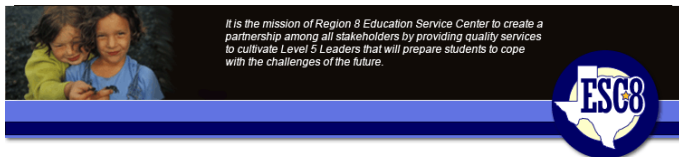
It is the mission of Region 8 Education Service Center to create a partnership among all stakeholders by providing quality services to cultivate Level 5 Leaders that will prepare students to cope with the challenges of the future. ESC 8, which currently serves 47 public school districts in Northeast Texas has 56,966 students that include 58% White, 21% African American, and 17% Hispanic. In addition to training and technical assistance for superintendents, principals, diagnosticians, special education directors, and teachers, Region 8 ESC also offers continuing education for board members, cafeteria workers, bus drivers, nurses, counselors, and paraprofessionals. Innovative programs by our staff members throughout the years include but are not limited to CSCOPE Implementation Guide development and training, Superintendent and Principal Academies, Curriculum Alignment and Planning, Executive Committee Monthly Meetings with Superintendents, Brain-Based Research Training, Assistive Technology Training, and creation of a Regional School Board Organization. Many of these programs have subsequently been replicated and implemented by other Education Service Centers around the state. ESC 8 continues to develop entrepreneurial programs that will lead to our financial stability.

Teaching and Learning
Region 8 provides districts with a systemic curriculum process to affect vertical alignment, instructional delivery, and assessment to impact student performance. District curriculum embodies this process in CSCOPE (www.cscope.us), developed by The Texas Education Service Center Curriculum Collaborative that includes a team of ESCs that represent all areas of the state. CSCOPE lessons incorporate technology within the lessons and additional opportunities for learning using technology are also implemented via Distance Learning, video streaming, and online research databases. Currently, the CSCOPE assessments are being entered into DMAC so that teachers will have a way to track student performance on the assessments. Technology planning assistance is provided to districts to aid them in planning for future technology initiatives that will improve student performance.

Educator Preparation and Development
Region 8 ESC is dedicated to becoming a level five organization through focused research, study and dialog to impact the continuous improvement of ESC 8's culture, standards and action. All staff participates in Professional Learning Communities for book studies and professional growth.

Region 8 defines Professional Development as providing training that is research based using planned agendas, objectives, and activities resulting in skill development and continuing education credits. All Professional Development planning must pass a rigorous Strategic Planning Process. This process ensures that training is provided based on a proven need and is evaluated post-delivery to make sure the service conformed to requirements and met customer expectations. Professional development has traditionally been offered face to face; however, as 21st Century learning technology skills are being taught to teachers for classroom implementation, we are using them at the ESC as well. Online PD opportunities are opening up with the use of Moodle and Project Share, a TEA initiative for professional development. These online delivery systems are being used for follow-up training as well as for new courses being developed.

Rather than providing technology training in isolation it is chiefly delivered through many of the workshops offered, modeling what is expected in our district classrooms by supporting the systemic curriculum process. Each semester online professional development in technical certification courses are offered to teachers and staff using LearnKey. Districts belonging to the CTE Cooperative and Consortium also have access to the curriculum to use with their students and all staff. The STaR (School Technology and Readiness) Chart is a teacher tool for planning and self-assessment that is aligned with the *Long-Range Plan for Technology*. Data from this tool is reviewed to aid in planning for technology-specific training where needed.

Leadership, Administration and Instructional Support
It is the vision of Region 8 Education Service Center to create a State-Wide Systemic Culture to sustain a high performing learning community. In following our goal of developing, delivering and maintaining strong professional development programs for school administrators focused on systemic planning, the ESC has developed the SNAP Tool (Systemic Navigation and Planning Tool). This web-based planning tool takes district/campus and even ESC staff through the planning process including the Comprehensive Needs Assessment. This resource assists in the collection and review of data and alleviates many of the time consuming activities traditionally associated with the needs assessment process. It also provides a process by which districts analyze the data to create their district and campus plans. Each of the plans is based on the systemic plan for the district based on the district's vision, mission, core beliefs and established goals.

Region 8 is a regional partner of DMAC, a web-based software suite designed to assist educators in the development and management of curriculum and assessment data in Texas schools. Training and technical assistance is provided for DMAC, Technology Planning, the ePlan system, STaR Chart data gathering and E-Rate. Regular meetings as well as email updates to district contacts help keep them informed of changes in state and federal regulations, technology grants, technology training as well as provide local network management assistance. The ESC 8 technology staff works closely with the instructional staff to provide the support they need in

delivering quality training to districts. The entire ESC staff models technology skills for the district personnel in their ability to effectively use the technology at the ESC as well as the portable technology devices when delivering on-site training and technical assistance. The Information Services team works closely with district technology and business office personnel so that districts will meet PEIMS and PET submission requirements to TEA. TREX training ensures districts will have the skills needed to transfer student records and t ranscripts. D istricts also receive quality support and training for RSCCC and electronic grading and attendance management systems. Currently, RSCCC is a client-server application. D uring the 2010-2011 school year, the system will begin migrating to a web-based application. Completion of migration is scheduled for the end of the 2010-2011 school year.

Infrastructure

Employees of ESC 8 are provided with the technology tools with which to do their job. Support is provided via an online support ticket system. E SC 8 pr ovides video conferencing to deliver college level courses to students through an agreement with NET.net, colleges and universities throughout northeast Texas. Statewide and point-to-point video conferencing meetings are also established through TETN (Texas Education Telecommunications Network), saving time and travel expense as well as increasing the collaboration among the ESCs. R egion 8 is the home of the Northeast Texas Regional Education Telecommunications Network (NTRETN), a c onsortium of public non-profit education institutions to provide internet services. T he Wide Area Network is made possible through a partnership of NTRETN and Trillion Partners of Austin, Texas who constructed and manage the largest high-speed wireless broadband network in Texas encompassing 51 school districts and R egion 8 E SC. N TRETN staff trains and provides technical assistance for firewalls, filters and bandwidth reporting tools and provides an online support ticket system for the WAN subscribers. With the increased demand for video conferencing, the network added another MCU bringing us to 40 ports to better support more dual credit and college credit classes, as well as allow for desk-to-desk meetings for consultants and administrative staff with school staff and other ESC 8 personnel. ESC 8 has two state-of-the-art computer labs, each capable of providing training to 24 participants with a one-to-one computer ratio. A dditionally, wireless notebook computers are available for use in conference rooms. E ach meeting room is equipped with a presentation station for instructor use. Public kiosk computers are available for visitors to check their email and do quick internet searches.

ESC 8 i s collaborating with the other ESCs of Texas to form an intranet (called TETN Plus) which will connect them to the LEARN network and provide for access to Internet 2. T his will provide access to districts to participate in higher learning and take advantage of Web 2.0 tools. It will also provide a platform through ESCs can

share their products and services to a wider audience of members.

Quotes from our districts:
From Rick Hale - 11th Grade Math – Jefferson High School: *Technology is a beautiful thing and when used appropriately can make teaching in the classroom much more interesting. This year I had numerous technologically innovative systems installed in my classroom. These allowed me to open up possibilities that were not available before. I received a new computer, document camera, Mimio Interactive White Board, Mobi pads, "Clickers", and a projector. Being raised in the technological generation made incorporating the tools into my classroom almost seamless, though, as with any technology, glitches are bound to surface.*

The Interactive White Board and Mobi pads (to a lesser degree) are tools that I used daily. They allowed me to save all of my lessons and if needed print them out for students. Combined with the document camera being run through my computer I was able to take a picture of any document I needed and then annotate on top of it. Also with the software available with this technology it provides the capability to take pictures of a website or just a piece of one giving me the ability to bring in material that wouldn't have been possible previously.

The technology not only opened doors for me but sparked interest in the students. Kids that once were afraid of presenting their work on the board showed an eagerness to show what they had accomplished. Some would even volunteer to work problems at the board just to use the technology. The CPS (Classroom Performance System) and student response devices have also allowed the use of competition in the classroom which was a big hit with the students. They now come to class keen to begin the competition against their classmates.

Overall, the technology has broadened the horizons of my classroom and has allowed me to be a more efficient teacher. It has also introduced sparks of interest in the students that is much needed in mathematics. It is a valuable addition to the classroom and adds more depth to the teacher's repertoire.

From Crystal Gregory, Jefferson ISD: *Although every year brings with it excitement, this year has been particularly exciting because of all of the technology I have been able to incorporate into my classroom lessons. Our district received stimulus money that allowed it to provide new items for our classrooms. Some of the things I received were a Mimio Interactive System, Mobi pads, a document camera, and a laptop. These items have allowed me to energize and captivate my students. I am able to bring the lessons "alive" for the students and allow them to become active participants in their learning. They have enhanced my lessons and kept my students constantly engaged. I have really enjoyed seeing how eager my students are to begin our lessons with all of our new technology!*

REGION 9 WICHITA FALLS TEXAS | **EDUCATION SERVICE CENTER**

301 Loop 11 • Wichita Falls, TX
940-322-6928 • www.esc9.net

Region 9 Education Service Center (ESC-9) serves 38 public school districts and one charter school in 12 counties with a student population of almost 39,000. The ESC 9 service area encompasses 10,417 square miles of north central Texas, including urban and rural districts with diverse student populations. Approximately 49% of the students served in this area are identified as economically disadvantaged. The Region 9 ESC is committed to serving the educational needs of its communities. The Technology Department of ESC 9 is also committed to providing school districts within its service area with educational technology services that will improve student performance by enhancing efficiency, effectiveness and performance of students, teachers and administrators. ESC 9 provides an array of technology services and trainings to implement the *Long-Range Plan for Technology*, *2006-2020*. Because of its importance, the districts within Region 9 have invested local revenue to enhance their existing technology programs, in the absence of other revenue streams that were once available. The commitment from these schools, which are facing additional financial burdens in the area of technology such as on-line assessment, has allowed ESC 9 to continue its commitment to support student achievement and to enhance classroom instruction through the integration of technology.

Teaching and Learning

Services in the area of teaching and learning are designed to provide support and t raining in such a way as to empower districts to implement and integrate technology resources. Efforts to provide leadership to districts for long-range technology planning include yearly seminars focused on the development of campus and district technology plans. ESC 9 also provides:

- Professional development, training, and assistance in the integration of technology into the curriculum including the implementation of the Technology Application TEKS.
- Virtual field trips coupled with Internet activities and other resources for curriculum integration.
- Online resources such as Student Tutorials, Facts on File, and on-demand video streaming (UnitedStreaming).
- Concurrent/dual enrollment distance learning courses through a collaborative effort between campus-based sites and colleges and universities.
- Training and assistance on technology planning tools including ePlan and STaR Chart and on the effective use of STaR Chart data.
- Training on CSCOPE – a comprehensive curriculum alignment product in which lessons are all aligned with the TEKS/TAKS and eac h lesson meets the highest standards of rigor and relevance.
- Training and assistance on Project Share.
- Providing assistive technology devices including professional development and training for implementation in the classroom.

Educator Preparation and Development

Professional development is an important aspect of the ESC 9 Technology Department. Our technology training labs are used extensively for planning, developing technical skills, and e nhancing integration of curriculum and technology. In addition to conducting regularly

scheduled workshops, technology specialists travel to districts to provide custom-developed, on-site training and technical assistance. In addition, we are also offering online coursework for professional development credit, which saves on travel, time, and out of classroom expenses. Also, this department, in conjunction with the local chapter of TCEA, provides a semi-annual Technology/Media Conference. This event showcases emerging technologies and provides opportunities for sharing effective methods of use. Our distance learning network continues to be used to offer professional development in various subject areas to Region 9 district personnel. Twenty two portable distance learning systems provided through an RUS Grant have enhanced delivery capabilities from our ESC to our districts, adding to the existing distance learning classroom units already in place. Region 9 ESC's portable distance learning unit is used by education specialists to aid in the delivery of professional development from any location in our facility. These sessions have included academic planning meetings, technology training, school board training, accountability training, LPAC training, special education training, trainings with our science collaborative, and follow-up training sessions. The ESC 9 Technology Department continues to monitor and revise workshop sessions and develop new training based on d ata-driven and expressed needs from district personnel.

Leadership, Administration, and Instructional Support

ESC-9 offers training and on-site assistance to school district personnel for PEIMS reporting requirements and resubmission of PEIMS data. In an effort to equip school district business managers with best practices, ESC 9 provides technical assistance to school district personnel on financial management techniques. ESC-9 continues to provide training on RSCCC financial and student software applications.

Training is also provided for DMAC and Eduphoria, software products that enable users to disaggregate TAKS

and benchmarking data according to selected performance and/or demographic criteria. Technical training is provided to district staff members in the areas of server administration, network infrastructure, and network security. Region 9 ESC staff assists districts with securing grant funding and in applying for E-Rate discounts. Technology planning support and peer review of technology plans is provided so that 100% of our districts continue to have current TEA certified technology plans. ESC-9 also provides workshops and technical assistance for librarians on library management techniques, book buying and repairing, and curriculum integration of the library resources. Region 9 E SC's Technology Purchasing Cooperative allows our districts to acquire cost effective technology.

Infrastructure

The Net9 project commenced on J anuary 16, 1998 as a connectivity solution designed to provide an affordable method of Internet access for school districts in Region 9. To date, the Net9 project has 37 di stricts, Notre Dame Private School, ESC-9, two colleges, and 1 university connected to this network to provide Internet access and distance learning services. Region 9 ESC is the regional videoconferencing network hub allowing districts to operate more efficiently and effectively by sharing of staff in critical need areas such as Spanish and by allowing students to gain credit for college courses while still in high school. R egion 9 s taff also provides assistance to our districts in network design/implementation/troubleshooting, hardware purchasing assistance, and T-1 line purchasing and monitoring.

School districts connected to Net9 also receive the following services:

- Web hosting
- Virus protection
- Content filtering
- SPAM filtering
- Distance learning scheduling
- Help desk support
- On-site technical support

Quotes from our districts:

Woodson ISD does not have a local foreign language teacher but has been able to offer Spanish I and Spanish II classes via distance learning. Our students have been successful and have received quality instruction through this interactive medium.
Danny Bellah, Superintendent

Region 9 ESC and Olney ISD work as partners to prepare our graduates for success with higher education opportunities. Presently Olney students can earn up to 32 college hours utilizing our distance learning connection to Region 9 ESC, and we have plans to expand the offerings in the upcoming school year.
Tom Bailey, Superintendent

Region 9 ESC's Net9

REGION 10
EDUCATION SERVICE CENTER
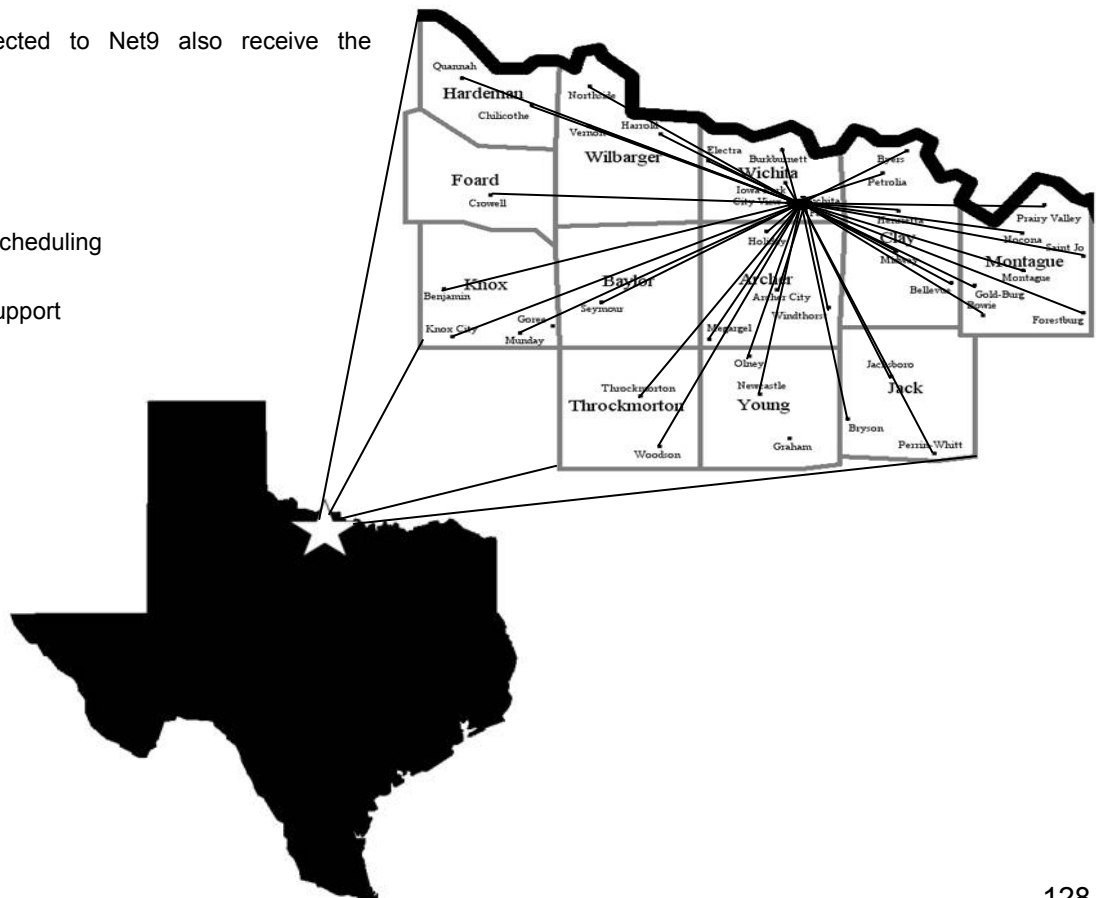
Richardson, TX ▪ 972-348-1700 ▪ www.region10.org

10 Education Service Center serves 80 public school districts and 53 charter schools in eight North Texas counties. Our region has 720,767 students with 53% of those students identified as economically disadvantaged and 46% at-risk. Our diverse student population is 20% African-American, 39% Hispanic, 35% Anglo, and six percent in other categories. School districts range in size from a single campus district of 147 students to a district with 157,174 students. Region 10 provides services to support 92,907 district staff members, which include teachers, support staff, campus and central administrators.

Teaching and Learning

- Texas Virtual School Network (TxVSN) is operated by Region 10 in collaboration with Harris County Department of Education. Central Operations oversees course registration and student enrollments; ensuring the eligibility of virtual school providers; posting a list of approved electronic courses; and coordinating reporting requirements.
- Region 10 manages the Texas Mathematics and Science Diagnostic System, a web-based TEKS-aligned diagnostic assessment system that helps educators gain fast, easy, and regular access to diagnostic data on students' progress in order to accurately adapt instruction and use resources to meet student needs.
- Region 10 provides Vision 2020 Grant support and implementation assistance to schools and vendor partners at immersion sites throughout Texas. This grant provides funds for technology immersion and virtual learning to districts across the state.
- Students and teachers have access to over 9,000 educational videos and 71,000 video clips for use in instruction through Discovery Education Streaming a TEKS-aligned online library service. Colonial Williamsburg and Immersion Presents offers students lesson enrichment through virtual field trips.
- The Assistive Technology team supports districts in the evaluation of need for assistive devices for students with disabilities. It provides on-site technical assistance for classroom personnel and students in the use of these devices.
- The Technology Olympics is offered annually for students with visual impairments. Students compete in events that demonstrate their proficiency in the use of screen readers, Braille devices, and other tools.
- The VI Preview Center for teachers and parents offers the best and newest teaching and learning technologies for visually impaired students.
- Region 10 offers Special Education teachers the Implementation training for use of the Palm Pilot for 3-TIER Reading and the Computer for 3-TIER Mathematics.
- Region 10 collaborates with Texas colleges and universities to provide dual credit and advanced academic coursework to district students and staff by videoconferences. Thousands of hours of dual credit courses, virtual field trips, graduate degree programs and professional development are delivered each school year.
- Region 10 partners Pearson Digital Learning (NovaNET) Student to provide online core subjects to school districts.
- The Online Learning Center provides media enriched, interactive student content based on specific TAKS objectives. Units in math, science, social students and English contain learning objectives, tutorials, interactive activities and assessments so students and teachers can track student progress.
- The TaRGET American History project is dedicated to training Texas social studies educators in Teaching and Relating Great Episodes and Topics in American History.

Educator Preparation and Development

- The Technology Specialist Institute (TSI) is a two-year program that enables teams of teachers to return to their campus and model technology integration. The TSI focus is core content integration and applying technology applications. TSI is provided in a face-to-face format and augmented by online modules.
- WebCCAT is an online bank of performance-based assessment items aligned to the TEKS for grades 3-11 in English Language Arts, Mathematics, Social Studies and Science. This user-friendly tool lets teachers create assessments for student in order bring data-driven decision making to the classroom level.
- Region 10 offers online modules for required annual training and updates, including Copyright, FERPA, Sexual Harassment, Section 504, Blood-borne Pathogens, and Diabetes Type II.
- Region 10 partners with two universities to offer by videoconference an Educational Administration Master Degree program for district staff earning principalship certification.
- Region 10 provides training and support for CSCOPE, a comprehensive, customized, user-friendly curriculum support system.
- iCAT is an online vertical and horizontal alignment tool created by Region 10 to provide districts with curriculum clarifications and performance descriptors to facilitate discussions and planning for gap analysis, curriculum development and a lignment of expectations and instructional practices.

- Region 10 provides leadership for the Technology Application Teacher Network, offering teachers statewide training and online resources to implement technology applications in the K-12 classroom.
- Region 10 is a partner with the United States Holocaust Museum to offer online resources and interactive training by videoconference to teachers at ESC and school district videoconference sites statewide.
- Region 10 is an Intel® Teach Affiliate for Texas providing administrative leadership training and professional development for teachers, training them on how to integrate technology into their lessons, promoting problem solving, critical thinking and collaboration skills among their students.

Leadership, Administration, and Instructional Support

- EMPOWER Educational Data Warehouse is available to school districts for making decisions more effectively and ef ficiently that impact student performance. The service allows districts to integrate, analyze and report key operational and ac ademic data from across multiple sources; provides longitudinal data storage and reporting capacity for public school districts; enables queries both within the district and among multiple districts for comparability purposes; and empowers district decision-makers to make informed decisions.
- Region 10 developed the Accountability Reference Tool so administrators can quickly and efficiently see federal and state accountability references that were only accessible by reading multiple manuals. Users can easily see data sources that drive the accountability and compliance reports.
- The Division of Information Services offers a f ull range of software applications for student and business including RSCCC, Infinite Campus and Prologic TEAMS.
- Region 10 assists district staff in training and implementing PEIMS as well as support with revisions.
- Region 10's Teacher Job Network offers a job database service to districts that allows applicants to search and apply for all professional educator positions.

Infrastructure

- Region 10 network services to districts include Internet, email, web hosting, DNS, filtering, access to online instructional tools and a broad range of videoconference service including access to TETN.
- The Wireless Internet Consortium, lead by Region 10, provides 20 Mbps Internet service to 38 member school districts.

Region 10 Videoconference Network
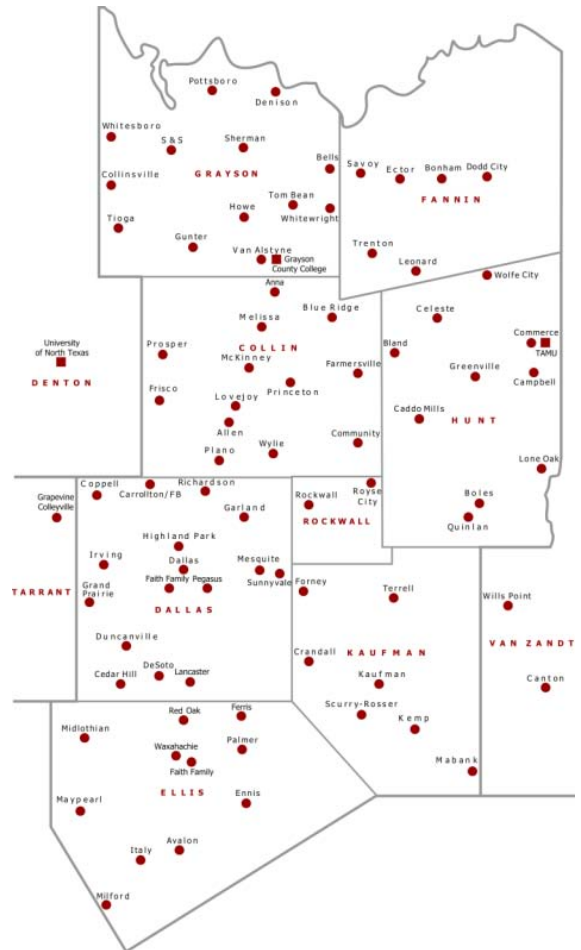
Education Service Center Region XI
Fort Worth, Texas
817-740-3600
www.esc11.net

Education Service Center Region XI serves 94 pu blic and charter school districts, and 27 pr ivate schools. 531,304 students were enrolled in the public and c harter school districts in 2009-2010. The ten-county region includes urban and suburban schools with more than half the districts being located in rural and remote communities serving farming and ranching communities. 47% of the districts are considered rural and many times distances and local district funding limit their access to quality educational resources. Implementation of the *Long-Range Plan for Technology*, 2006-2020, is helping to overcome some of the economic and distance limitations in the region.

ESC Region XI
Teaching and Learning

- Provides an Educational Technology Cooperative to effectively and efficiently support and assist districts through a m enu of services that they can select from to meet their needs
- Provides assistance in implementing the Technology Applications TEKS through professional development, technical assistance, appropriate videostreaming and related resources, online tools including support for the state provided online data-bases, a webinar tool that can be used for online teaching, and more
- Facilitates technical support and training for the state-provided online databases and other licensed materials, as well as traditional textbooks and digital materials
- Coordinates districts receiving courses via concurrent/dual enrollment through the region's videoconferencing network
- Coordinates districts sharing courses through the region's videoconferencing network
- Provides access to TEKS-aligned electronic field trips via distance learning from an E SC-developed Texas network of specialized providers called Connect2Texas as well as from specialized providers worldwide
- Provides a Multi-regional consortium of libraries that includes centralized online library systems, professional development, technical assistance, shared resources, library services such as cataloging, all to maximize district resources and to support libraries' uses of 21st Century resources
- Supports the TxVSN state initiative through cooperative grants that get students into courses and districts developing and providing courses

for TxVSN and s upports TxVSN through awareness and technical assistance

Educator Preparation and Development

- Provides staff development opportunities, academies, conferences, online workshops, and other opportunities annually to help educators integrate technology into the curriculum
- Coordinates a statewide SBEC-approved online Technology Applications Certification preparation program to assist districts in implementing the high school Technology Applications TEKS
- Provides an S BEC certified Master Technology Teacher certification program
- Provides a statewide, online, Education Service Centers-issued Technology Applications certification program called Texas Teacher Technology Competencies Certification (TexasTTCC), which is aligned with SBEC, ISTE, and STaR Chart standards and is provided for all teachers to be able to demonstrate their technology competencies
- Coordinates a c omprehensive statewide online Technology Applications professional development program (Teaching With Technology) that aligns with SBEC, ISTE, and STaR Chart standards
- Provides one-on-one technical assistance to individuals and committees.
- Provides assistance and training for campus librarians and library coordinators
- Provides training and staff development opportunities in the use and integration of videostreaming and other digital resources

- Uses distance learning methodologies to deliver professional development, including videoconferencing, online courses, videostreaming, webinars, and others
- Integrates SBEC and ISTE standards into all teacher and administrator preparation programs.
- Supports the state-provided Technology Applications Teacher Network (TATN)

Leadership, Administration and Instructional Support

- Coordinates a peer review process for district technology plans and recommends plans to TEA for approval to assist districts in obtaining E-Rate, NCLB, and other federal funds
- Provides technical assistance for districts' technology planning.
- Provides an annual Virtual Technology Conference (moodle.esc11.net/vtc) that brings national technology related experts to the desktops of administrators, educational leaders, and teachers
- Provides leadership and coordination/fiscal agent activities for collaboratives and grant proposals and implementations
- Provides administrators and technology staff regular updates and communications through e-mail distribution lists
- Provides a statewide group purchasing consortium for schools to be able to purchase digital resources online as part of a large group purchase that secures volume-discounted pricing(www.TETPC.net)
- Receives needs assessment information through a Technology Advisory Committee, consisting of designated representatives from each district for ESC to use to plan needed services
- Serves as the Cisco Academic Training Center and provides Cisco Academy coordination, leadership, training, and support for Region XI high schools, community colleges, and four-year universities. The CATC also supervises and supports 73 Regional Academies that are located in eight states (Texas, Oklahoma, Arkansas, Louisiana, Tennessee, North Carolina, South Carolina, and Virginia). The Cisco academy program trains more than 1,500 students in Texas annually
- Supports the state's PEIMS data collection by providing an enhanced PEIMS service and technical support
- Provides a multi-regional web hosting service, Schoolwires, to provide a robust communications and flexible web page tool for district and classroom use.

Infrastructure

- Designs, develops, operates, and manages the Region XI Telecommunications Network (RETN), which includes the infrastructure for voice, video, Internet access, and data for schools
- Provides connectivity to and coordination of RETN, TETN, Internet2, and other networks and resources to provide schools with distance-learning opportunities throughout the world via videoconferencing and distance learning
- Provides Internet access to districts and campuses, as well as network design, hardware purchasing assistance, line monitoring, e-mail services, firewall services, troubleshooting, technical assistance, Internet filtering and staff development
- Coordinates and schedules distance learning-based instruction, connecting content providers from throughout the world to schools and resources through a Cionnect2Texas program developed by the Center (www.Connect2Texas.net)
- Coordinates collaborative grant writing, grant management, and implementation for schools to be able to take advantage of distance learning opportunities, including Rural Utilities Services grants that are awarded to serve the districts and service providers
- Coordinates and maximizes the effective and efficient use of shared Chapter 41 funds to make the regional network and services affordable and accessible to all districts in the region
- Provides a broadband wireless solution for rural districts to be able to access the Internet and other resources
- Provides an automated, dynamic, and centralized data backup service where districts can backup important district files to a secure, user friendly, online, off-site backup system

Education Service Center Region 12 Waco, Texas • 254-297-1212 • www.esc12.net

The Education Service Center Region 12 provides professional training and technical assistance to more than 19,000 Central Texas educators, administrators and staff in 77 independent school districts, 11 c harter schools and 20 private schools for the purpose of improving student performance for all students. Based in Waco, with satellite centers in Nolanville, Corsicana, Hamilton and Teague, the ESC Region 12's service area spans 12 counties. Region 12 includes districts ranging in size from 71 students on a single campus to more than 36,000 students on 49 campuses. Within Region 12 approximately 54.1% of the school-aged children qualify as economically disadvantaged, and 47.4% of the districts are considered rural. ESC Region 12 c ontinues to champion the implementation of the Texas *Long-Range Plan for Technology, 2006-2020* by providing educational technology leadership, support, and services that will enhance efficiency, effectiveness, and performance of the learning community.

Teaching and Learning

ESC Region 12 provides training and support to assist districts in the seamless integration of technology throughout all content areas to improve student academic achievement. All of our activities focus on t he instructional needs of educators and the learning needs of students in meeting the vision of technology in education.

Activities/resources provided by ESC 12 to assist in this area include:

♦ Training and assistance in integration of technology into the curriculum including the implementation of the Technology Application TEKS on a regular basis through workshops, awareness sessions, technology coordinator meetings, and online activities

♦ Instructional resources and services for classroom use offered through the Instructional Media Center, the EDLINK12 Telecommunications Network, Educational Technology workshop websites, and partnerships with video streaming and online database providers

♦ Access to valuable curriculum solutions such as CSCOPE and Instructional Materials textbook providers to meet the needs of all teachers and students

♦ Access to distance learning opportunities provided via EDLINK12 for both students and teachers including training, student courses, curriculum extensions, and collaborative projects

♦ Identification and promotion of best practices and innovative services in support of technology planning and use of technology to transform teaching and learning

♦ Library media support to ensure that school libraries have the necessary resources and skills to best serve students, teachers and parents

Educator Preparation and Development

ESC Region 12 staff has worked closely with Region 12 districts to provide cost effective staff development to prepare educators for the use of technology in both a face-to-face and online learning environment. District staff members are better prepared to implement the Technology Application TEKS across all subject areas and document and report progress in integration of technology into curricula and instruction. Participation in online and other distance learning technologies for professional development has increased. Teachers and administrators are better prepared to interpret student formative data and develop supporting lessons that incorporate the use of technology.

ESC 12 activities in this area include:

♦ Thousands of regional professional development opportunities, incorporating technology integration, administration, accountability tools, provided over the past two years for teachers via distance learning and face-to-face sessions

♦ Customized staff development activities provided for districts and c ampuses to meet specific curriculum and staff development needs

♦ Administrator training on the effective use of technology for administrative and instructional purposes including the use of handheld technology

♦ Target Tech in Texas (T3) grant training designed to help K–12 teachers to be more effective educators by integrating technology into their lessons, promoting problem solving, critical thinking and collaboration skills among their students.

♦ Training provided through the Vision 2020 grant to prepare teachers to develop online courses and teach online, students to take online courses, parents to support students taking

online courses and administrators to foster a learning environment conducive to online courses.

♦ Videoconferencing used for SLP graduate classes, and training for deaf education, interpreters, Visual Impairment, TAKS-Alt, GT, Child Nutrition, CSCOPE, Virtual Learning, PEIMS, and Libraries.

Leadership, Administration and Instructional Support

ESC Region 12 understands how critical leadership is in successful technology implementation and provides assistance, training and support to promote shared leadership in vision and planning for the effective integration of technology in teaching and learning and school operations. Training for such programs as AEIS-IT and Eduphoria PDAS Software are provided to assist administrators in using modern information technology tools to analyze data for sound decision-making and c ontinual assessment of effective technology for improving student learning.

Activities/ resources provided by ESC 12 to assist in this area include:

♦ A Technology Planning and E-Rate Support Center (TPESC) which provides assistance and support to Texas public and charter schools in the development and submission of technology plans and c ompletion of the Texas Campus STaR Chart and Teacher STaR Chart.

♦ Software and hardware products for teacher and administrator access including adaptive/assistive devices for special needs students.

♦ Leadership provided for T3, RUS, Vision 2020, and other grant writing and collaborative efforts

♦ Training and technical assistance to administrators for campus and di strict technology planning, budgeting, integration strategies and research-based data-driven decision-making through the examination and analysis of data

♦ Training on how to use technology to support business services and al l aspects of school operations.

♦ Information, technical assistance and support services to district administrators in selecting and using efficient and effective technology systems to meet local, state and federal performance targets

♦ Training and assistance in implementing PEIMS.

Infrastructure

Districts in the Region 12 service area have access to current and emerging state-of-the-art technologies

through the EDLINK12 Telecommunications Network. This network managed by ESC Region 12 staff is a r egional multi-service and multi-capability Intranet wide area network with gateways to the Internet and other regional, local and statewide networks. EDLINK 12 coordinates connections with 66+ sites throughout the ESC Region 12 service area including 54 school districts, 5 charter schools, 3 ESC locations (Nolanville, Corsicana and Waco), 2 colleges (Hill College and McLennan Community College) and 2 n etworks (TETN and C TEN). This videoconferencing network experienced continued growth over the past 2 years and ga ined state and national recognition. 36,152 districts and students participated in student projects and virtual field trips. 1335 students and districts participated in high school and dual-credit classes, and 761 staff development sessions/meetings were held. National awards included the COSI 2009 Excellence in Education Technology Award and the ISTE 2009 SIGTel Online Learning Award.

Activities/services provided by this network include:

♦ High-speed Internet access, e-mail services, and videoconferencing.

♦ Videoconference events including virtual field trips, collaborative projects, teacher share, and dual-credit student courses.

♦ Opportunities for curriculum enrichment and exposure to real-world applications

♦ Access to learning experiences that would not be possible without videoconferencing and facilitation by Region 12 specialists.

♦ Assistance in hardware and software purchasing, network design, installation, configuration and troubleshooting.

♦ Technical assistance in securing E-Rate discounts to maximize the fiscal resources required for infrastructure.

Education Service Center Region XIII is one of twenty service centers that serve the Texas educational needs. We are a non-regulatory agency; our relationship with school districts is collaborative and supportive. Our purpose is to aid teachers and administrators in their role as educators of our children. We serve as a liaison between the Texas Education Agency and the local schools districts and the schools they serve by disseminating information, conducting training and consultation for both federal and state programs. Our staff is composed of knowledgeable educators dedicated to excellence in education.

Although we provide services and tools nationwide, our assigned regional area encompasses:

- **60 School districts**
- **17 Counties**
- **18 Charter schools**
- **19 Private schools**
- **8 Institutes of higher education**

Vision
Region XIII will set the standard for excellence in educational service through leadership, responsiveness to client needs, and quality products that improve student performance.

Mission/Goals
- Initiate collaboration with our clients in the development of a quality educational environment.
- Provide client-focused quality products and services in a timely and efficient manner which promotes improved performance in schools.
- Initiate collaboration with our clients to close the gap between current and desired student performance.

As an Education Service Center, we collaborate with our schools and communities to promote quality instruction in order to maximize student performance. Our goal is to achieve a high standard of excellence through leadership, responsiveness to client (district or school) needs, and quality products that improve student performance. Region XIII provides professional development in areas such as technology, bilingual education, special education, gifted and talented education, and programs for at-risk students.

Professional Development
With our professional development, educators learn real-world strategies and practical classroom-proven techniques through our face to face workshops, consulting services, in dept certification programs and on-line learning program.

The Region XIII team of outstanding educational resources understands the connection between research and the application of that research in classrooms. The Region XIII team has created online courses that are aligned with what Texas Educators need to support student success. Access to Region XIII's online courses is open using any Internet connection, anytime, anywhere.

Teaching and Learning
Region XIII takes a pr oactive role in strengthening teachers' and students' skills by fostering the development and use of technology into classrooms and instructional material. Region XIII leads in the integration of technology into teaching and learning by:

- Training personnel in 58 districts in the administration of the Epsilen environment of Project Share. Preparing trainers for the over 14,000 teachers initially registered in the system.
- Providing no-cost access to Digital Knowledge Central (online subscription to Encyclopedia Britannica, EBSCO and N ewsbank) to all public and charter schools in Region XIII (2003-present).
- Providing INTEL Teacher Training at no cost to develop technology integration across the curriculum
- Providing reasonably priced access to the video collection of Discovery Education as part of the statewide program with locally developed training for classroom teachers.
- Providing a testing center for students to take Microsoft certification exams.

Region XIII's Distance Learning Network allows districts opportunities to lessen the gap of available instruction based on district size or location and enhance the scope of student learning by facilitating both interactive video conference classes and web-based classes. A Moodle server is available for both districts and ESC staff to supplement or deliver courses. T his Learning Management System is used alongside eCampus which is used primarily for professional development. R egion XIII also uses virtual classroom and m eeting tools such as elluminate and GoToMeeting for classes and meetings.

Region XIII has actively supported the Texas Virtual School Network to provide access to students in courses not available locally. Specific courses offered through the Region XIII Distance Learning Network include Sign

Language I, II, and III provided by the Texas School for the Deaf.

Region XII continues to makes available assistive technology devices and computer access peripherals through loans to students with disabilities and offers assistive technology application training and assessments.

Region XIII holds advisory group meetings such as ViTaL (Visionaries in Technology and Learning) 3 times each year to solicit input and feedback from the districts. A new group has formed to support distance learning initiatives in the schools both through online learning and interactive video conferences.

Educator Preparation and Development
To use technologies effectively, educators must be provided quality professional development through a variety of delivery methods. Region XIII prepares educators by:

♦ Providing an alternative certification program for certified educators to obtain CTE certification via interactive video conferences.

♦ Providing training for technology integration into Gifted and Talented, ESL, Literacy, Mathematics, Science and Social Studies via the Region XIII institutes.

♦ Providing Digital Knowledge Central training.

♦ Developing and providing approximately 200 online courses for educators in a variety of areas including alternative certification, core curriculum, gifted and talented, sexual harassment, bilingual/ESL serving over 12,000 educators since 2001.

Leadership, Administration, and Instructional Support

♦ Strong administration and support is key to successful technology implementation. Region XIII supports administration and support by:

♦ Providing training and support of the teacher and campus STaR charts.

♦ Providing technical support on the technology planning process and e-plan.

♦ Coordinating the peer review process for technology plan approval.

♦ Coordinating regional technology initiatives.

♦ Providing E-Rate technical support, electronic updates, paperwork management sessions, and training sessions.

♦ Providing listserv hosting services.

♦ Providing support for AEIS-IT, a comprehensive data analysis tool for state and local assessments aligned to the TEKS and TAKS objectives.

Region XIII's data services division provides strong administration support by:

♦ Providing onsite and telephone technical support and training for two comprehensive administrative software packages RSCCC (client server) & iTCCS

(ASP). These tools allow users to manage school district finance, payroll, human resources, student and PIEMS.

♦ Providing PEIMS training for all district and charter schools.

♦ Providing new programming to support district needs.

Infrastructure
Region XIII assists districts in increasing efficiency, effectiveness, and economy of operations through a regional telecommunications network. Through this regional infrastructure, Region XIII is able to provide a variety of technology services through a safe and secure network. Region XIII's TXED network was established in 1997 and currently connects 51 Public School Districts, 2 Charter Schools, 4 Institutes of Higher Education, and 2 State Agencies (TSBVI and TSD)

Services provided by Region XIII's TXED regional network include:

♦ Internet Access with firewall protection

♦ CIPA compliant web filtering, spam and virus email filtering

♦ Video Conferencing & Video on Demand

♦ Secure data transmission

♦ Network security, intrusion detection and monitoring

♦ Technical support for district network administrator

Region 14 Education Service Center
Abilene, Texas 325-675-8600 www.esc14.net

Region 14 consists of 13 counties situated in the north central section of Texas in the heart of what is affectionately called the Big Country. Abilene, the 4th largest city west of San Antonio and Ft. Worth, offers high quality recreational and educational opportunities to residents and visitors. Region 14 ESC serves 43 LEAs including 28 small population rural districts and one charter high school. Region 14 ESC is committed to providing quality support services in an equitable and efficient manner.

Teaching and Learning

One of the Region 14 curriculum success stories of the 2009-2010 school year was the COMPILE (Collaborative On Mentoring & Planning Innovative Learning Environments) Project. Teachers with successful student achievement, a high proficiency in technology integration, and supervisor and peer recommendation designed and delivered staff development and m entoring across the curriculum. Collaborators focused on Web 2.0 applications enhancing the learning experience with a s tudent-centered, project-based approach. Target Tech in Texas (T3) grant funds provided math and s cience teachers with interactive whiteboards, handheld units, probeware, and laptops and training for those tools. Interactive whiteboards enhanced technology integration to the CSCOPE curriculum in core content areas for 34 districts in Region 14.
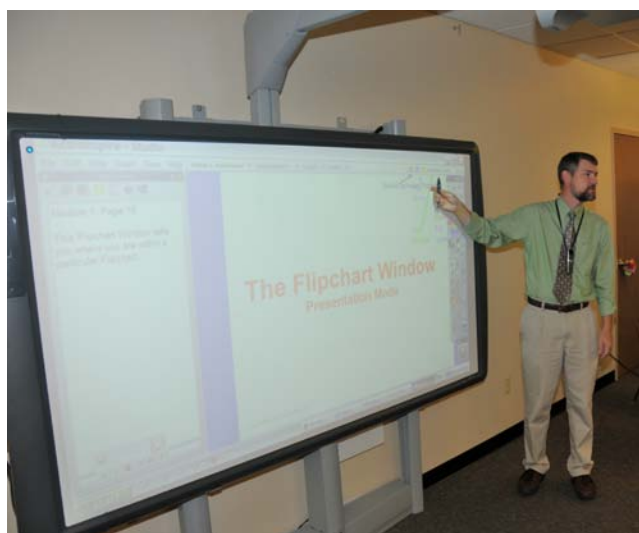
Region 14 consultant Shawn Schluetter presents whiteboard tips. June 22, 2010

Educator Preparation and Development

Distance learning opportunities vastly expanded in 2009-2010 with a RUS III grant allowing upgrades to display carts and digital 50 inch LCD monitors allowing for a pleasant learning environment.

A highly popular video Infomercial DL contest in the fall of 2009 dr ew scores of school entries and winners were selected by local TV station employees who served as judges for this rewarding real life project. Major megabit increases in bandwidth for the wireless WAN enabled smoother DL transmissions and greater numbers of simultaneous connections, enhancing the virtual field trip experience and virtual classroom classes.

Educators in Region 14 use a w ide variety of subscription web resources including Discovery Education, Gale, Ebsco and Britannica, Atomic Learning, and began using Project Share teacher webpages in the summer of 2010.

Internet access has helped our teachers meet the needs of 21st century learners. The access has also enabled teachers to gain the skills and knowledge necessary to teach 21st century learners. Teachers are able to use interactive websites as well as Discovery Education to reinforce concepts taught on their interactive whiteboards. Teachers and learners have real time access to databases that are used to teach research skills that are a requirement in the new Language Arts TEKS. Students in our district have been able to communicate with students in other states and countries via distance technologies. The technology access provided through Region 14 provides a support system to help students and teachers to master the skills necessary to be successful in the 21st century.
Cynde Wadley Curriculum Director Wylie ISD

Leadership, Administration, and Instructional Support

Region 14 pr ovides extensive support for LEA financial software and PEIMS usage. Region 14 TxEIS (formerly RSCCC) and technology department staff use cutting edge remote assistance software to reduce onsite technical support visits and cut down on gas expenses for ESC staff and client school employees.

Region 14 professional educators were unmatched in the state producing exemplary results for ePlans and Texas Teacher and Campus STaR Charts with 100% approval/completion rates for 4 consecutive years and 100% NCLB survey success.

Region 14 ESC staff retains and ex pands training offerings for the highly popular Region 14 Road Show staff development extravaganza held each August in three cities. ESC educators accelerated interactive whiteboard training exponentially as these cutting edge devices enter thousands of regional classrooms.

Infrastructure

Region 14 ESC continues to be a leading partner in the WTTC (West Texas Telecommunications Consortium). Founded in 1996, WTTC is a s trong collaborative with 55 m embers consisting of school districts, colleges and universities, libraries, museums, hospitals, and city and government agencies in the West Central Texas area. WTTC expanded bandwidth and services in 2009-2010 providing telecommunications, video conferencing, and VoIP services for more than 300 DL endpoints,

150 VOIP endpoints, and 15,000 workstations on the WTTC WAN.

A huge infusion of interactive whiteboards has also been a driving force in technology advances for Region 14 educators and students in 2009-2010.

With the help from grants and programs we have incorporated whiteboards into all of our classrooms which has added the multi-media aspect to our curriculum. In the future we are excited of the possibility of having a 1:1 ratio of computers to students. The realization of online textbooks will increase the demand for the continuing technology in all school districts.
Darrian Dover, Principal, Aspermont ISD

Region 14 Wide Area Network
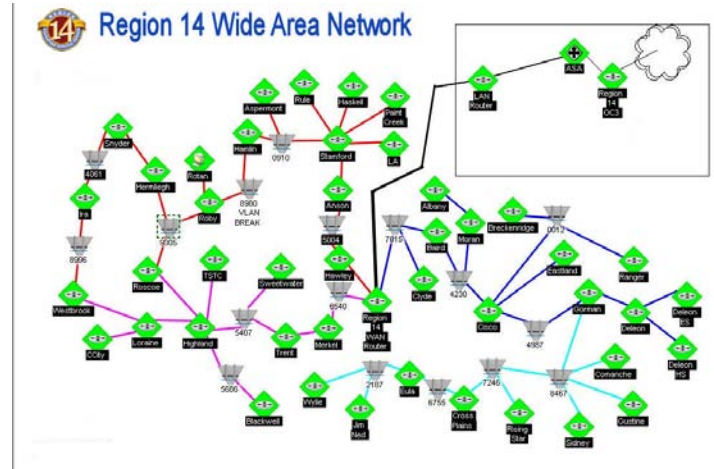
Executive Director Ronnie Kincaid (left) presents awards to principals Donna Stewart and Duane Hyde from Highland ISD, an exemplary district.

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Education Service Center Region XV
San Angelo, Texas 325-658-6571 www.netxv.net

Eighty-four percent of districts in the 18-county area served by Education Service Center Region XV are considered rural, and 60% have fewer than 500 students. Only Tom Green County is designated as urban. San Angelo is home to the largest school district in Region XV and is considered the major metropolitan area. The other 43 districts in Region XV are geographically dispersed across 25,000 square miles. Progress toward implementing advanced technology has been tremendously enhanced because of the infusion of multiple grant awards received by Education Service Center Region XV and districts within the region. The most recently awarded grant has been the T3 Grant (Target Tech in Texas). This grant centers on 5th and 8th grade science focusing primarily on student based learning. ESC Region XV continually strives to provide districts with the critical technical support and innovative methods of infusing technology into the curriculum, while continuing its commitment to increased student achievement.

Region XV Student Population Distribution
- <500
- 500-1000
- 1000-1500
- >1500
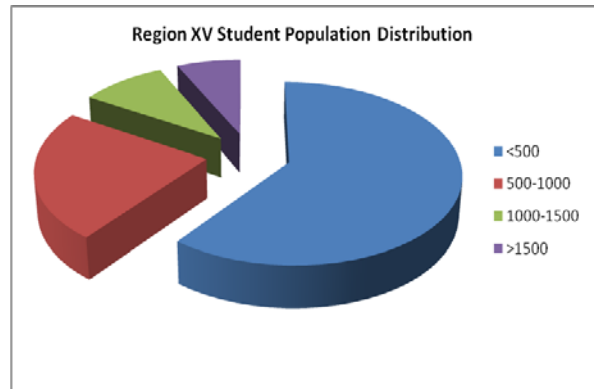
Teaching and Learning
Education Service Center XV:
- Provides training and technical assistance in the implementation of the Technology Applications TEKS through face to face workshops, listserv subscriptions, wikis, campus visits, and instructional material/curriculum support.
- Provides electronic field trips, dual credit courses, and teacher/administrator staff development via distance learning systems.
- Supports districts involved in grants that focus on the instructional aspect of technology integration. Includes encouraging presentations from teachers at regional and state events/websites, to model exemplary best practices and innovative services in the support of technology and the use of technology to transform teaching.
- Provides training and technical assistance in the area of adaptive technology devices for educational professionals working with students with disabilities. The goal is to enhance and increase functional student performance. When assistive technology is effectively integrated into the classroom curriculum, students have the tools that they need to be productive, independent, and successful learners.
- Supports Technology Application integration across core and elective courses to assist school districts developing technology integrated lessons that can show positive efforts to use technology in meeting curriculum and assessment objectives.

- Supports districts on multiple platforms by providing training on PC and Mac operating systems and applications.

Educator Preparation and Development
Education Service Center XV:
- Offers multiple technology workshops, training district instructional personnel in the use of educational software and hardware applications for the integration of technology to enhance classroom curriculum.
- Offers on-site training at LEA request, using locally available hardware, software, and network/Internet connectivity thereby providing opportunities for both incidental and focused instruction.
- Offers training and support in the implementation of Project Share to district staff for the use of staff development, portfolio creation, and networking among peers.
- Offers training and support on library media services including library automation software, online resources, eBooks, and similar products.
- Provides information regarding Technology Applications TEKS, technology integration, and other technically related areas via face to face training, distance learning, listserv subscriptions, wikis, and campus visits.

Leadership, Administration, and Instructional Support
Education Service Center XV:
- Provides adequate time for staff development opportunities to ESC personnel for the integration of Web 2.0 technologies.
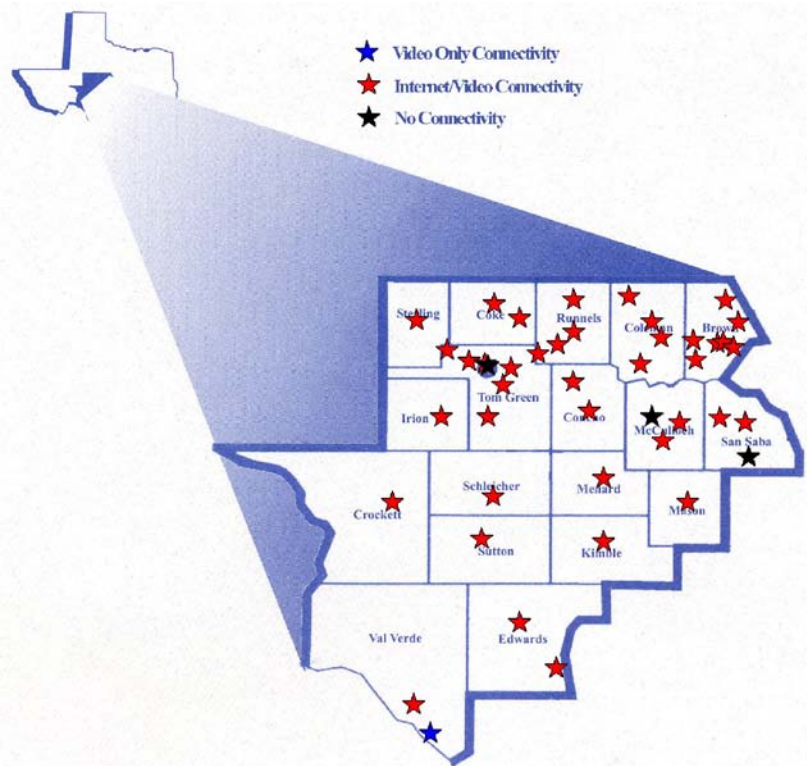
- Employs a full time technology integrator to support ESC personnel in the integration of technology, Web 2.0 technologies, and other technical areas of support.
- Assists administrators, teachers, and other instructional leaders in the disaggregation of TAKS data. ESC XV has provided the online access of data to each LEA, as well as training in the use of this software for maximum instructional benefits.
- Provides training and technical support on a variety of technology systems (eGrants, eContracts, Eduphoria AWARE!, CSCOPE, etc to meet local, state and federal performance targets.
- Offers TxEIS (Texas Enterprise Information System) training and support in the migration from RSCCC to TxEIS.
- Developed a regional technology plan and offers training to districts for technology planning, including ESC participation in local education agency (LEA) site-based decision-making committees to provide technology planning assistance; and technology plan peer reviews. All Region XV district plans have been approved.
- Provides training and awareness sessions for local district E-Rate applications.
- **Assists local school districts with grant proposals, including training and technical assistance in a variety of formats.**

Infrastructure

Education Service Center XV:

- Provides high speed Internet connectivity, web hosting, e-mail hosting, spam filtering, content filtering, and library hosting services to 39 of the 43 school districts and one charter district in Region XV through the regional network, NetXV. The other three districts are provided similar services through other providers.

- Provides distance learning, professional development, teacher sharing, and electronic field trip opportunities through interactive two-way videoconferencing to 40 of the 43 school districts in Region XV.
- Upgraded its Wide Area Network (WAN) from a traditional circuit based infrastructure to a wireless microwave based infrastructure that provides improved connectivity, scalability, and reliability to meet the growing needs of its school districts.
- Upgraded its core infrastructure and data center to provide higher availability and redundancy of services of current and future services.
- Employs four full-time personnel to offer technical support to school districts and management of the services offered.
- Provides technical training and assistance for all technical support personnel in NetXV districts. All of the districts in the region employ full-time personnel for technical support.

Region 16 Education Service Center ☐ *5800 Bell Street* ☐*Amarillo*
(806) 677-5000 ☐ *www.esc16.net*

The Texas Panhandle consists of 63 school districts and two charter schools with 220 campuses in a 26,000 square mile area. Many Panhandle residents must drive two hours or more to reach Amarillo, the largest city in the Panhandle (approximately 175,000 people). Amarillo is the economic and geographic center of the Panhandle. Region 16 school districts have an average daily attendance of about 78,000 students, with individual districts ranging from fewer than 30 to more than 29,000 students and the total regional school staff numbering more than 11,400.

Teaching and Learning

♦ Assistance with technology planning, which is a part of the Instructional Technology Planning and Training contract, has resulted in 98% of Region 16 districts having TEA approved technology plans for e-rate funding. Districts use the results of their STaR Chart to plan their staff development and hardware needs to promote student learning. Region 16 IT specialists also use STaR chart information when planning appropriate professional development for districts.

♦ In 2005-06, ESC 16 joined the Texas Virtual School Initiative, a web-based learning initiative designed to meet the needs of Texas public school students and educators. Twelve ESCs are partners in this initiative, which is housed at Region 4 ESC. Rural school districts in Region 16 provided several Texas Virtual School courses for their students helping them meet graduation requirements. In 2009 - 2010, several teachers in Region 16 trained to become instructors for the Texas Virtual School Network.

♦ The Videoconference Field Trips contract pays program fees for a wide variety of videoconference enrichment programs for students and professional development sessions for teachers. During the school year of 2009-2010, three hundred fourteen videoconference Field Trips were scheduled for twenty different districts enabling 12,731 students to participate in virtual field trips which varied in content from Texas heroes such as William B Travis to live open heart surgery.

♦ Region 16 received Vision 2020 Cycle One and Cycle Two Virtual Learning Strand grants. There are two components in each grant: Professional development for online teachers and funding for tuition payment for online classes.

Cycle One began September 2008 and will end fall 2010. Two districts chose to be "provider" districts and ten teachers completed all required professional development to become "provider" teachers. They created online courses and submitted them to Texas Virtual School (TxVSN) for inclusion in the catalog for online high school classes. Courses are approved only after a rigorous review and in order to teach online, teachers completed a statewide approved professional development session. Another component of the grant was to provide payment of tuition for students taking online classes either dual credit or high school. 310 students from eight districts took 522 courses since spring 2009 with the grant paying over $60,000 in tuition. This is partial reporting at this time.

Cycle Two began fall 2009 and will end summer 2011 and has two districts participating with one district choosing to train eight teachers as "provider" teachers. Their courses will be submitted to TxVSN in fall 2010. 93 students from these districts completed 143 courses since fall 2009. Tuition reimbursement from grant funds is over $16,000. This is partial reporting at this time.

Educator Preparation and Development

♦ A variety of technology integration and technology applications workshops are offered year round as a part of the Instructional Technology Planning and Training contract. Workshops provide training in the integration of Microsoft Office products, Internet sites for teaching and learning, graphic organizer software such as Inspiration, Kidspiration, the use of Web 2.0 tools in the classroom, digital media and curriculum, digital storytelling, web authoring with Web 2.0 tools, digital graphics, desktop publishing, video editing, and multimedia software. Many workshops address the use of technology integration to promote higher order thinking skills, and are offered for Advanced Academic Services credit. Districts have 24/7 access to over 75 online interactive tutorials. Sessions include Microsoft and Adobe products and several certification courses. Registration fees are charged to non-contracting district participants to assist in funding these workshops. Region 16 administrators requested alternative delivery methods for professional development, so in order to meet these needs workshops are offered face-to-face, over videoconference, and online. We have expanded workshop delivery to On-Demand sessions which are available at any time for participants. Elluminate was recently purchased by Region 16 in order to develop and provide webinars as another alternative to face to face professional development. Podcast training and delivery are in the plans for fall 2010.

♦ Administrators are taught the use of Professional Development and Appraisal System software for

management of teacher evaluation through the Administrative Services Division.

♦ Distance learning has become a high priority for Region 16 ESC as an alternative delivery method to face-to-face workshops and meetings. Professional development delivered through the videoconference network provides a variety of training opportunities to the districts. The purchase of a Blackboard server and license as well as training for ESC consultants in the creation and delivery of online content have provided new professional development opportunities for Region 16.

♦ These methods of distance learning, funded by the EDNET 16 consortium in combination with district contracts, have allowed districts the ability to receive training without the significant cost of travel and saved hours of travel time for participants.

♦ Training of district personnel in the use of Project Share's Epsilen began in spring 2010 and continues through the summer. All schools will have their own "corner" to use in their districts to promote collaboration, communication, and creativity in classrooms. Training and support is offered by Region 16 Technology Integration and Distance Learning staff.

♦ Region 16 ESC is able to offer districts the use of Blackboard, a student learning management system, through a contract. All professional development is provided by Region 16 ESC Instructional Technology staff. This enables districts to maintain their own school communities to include online professional development, online learning opportunities for students, information for parents and community members, and teacher websites. Several of the schools in Region 16 are requiring their students to complete one online course before graduating from high school. Many teachers are developing hybrid or blended classrooms.

♦ In addition to professional development, Region 16 staff members supported the schools' use of the videoconference system by helping to coordinate K-12 classes to be taught and received in the region. This resulted in approximately 19 classes being shared among the districts on both a semester and a full year basis.

♦ Videostreaming allows teachers to access and view instructional videos via the Internet for classroom integration. Fifty-three districts contracted to receive this service in 2009-10 through Discovery Education.

♦ Librarians and teachers have access to online research resources. Region 16 partnered with Region 20 to provide additional resources through Digital Knowledge Central (DKC).

Leadership, Administration, and Instructional Support

♦ Region 16 ESC is a strong proponent and supporter of networks in the region. Technology Services staff continues to participate in and promote the planning, design, funding, installation, utilization, and support stages of the development of these networks through local district funds. The ESC promotes schools' community communication by hosting districts' web pages as a service.

♦ PEIMS data from our region has been 100% complete for every reporting deadline, and errors are reduced in number with each submission. This past year, the PID's were down to single digits for the entire region.

♦ Several divisions offer regular training to assist districts in the utilization of technologies to improve school operations, such as DMAC, Eduphoria, CLASS, Compass, School Board Training, RSCCC, and PEIMS reporting. Most of this training is funded by district contracts with the ESC.

Infrastructure

♦ As of 2009, all of the Region's 64 districts have direct connections to the Internet, and 95% of the classrooms are connected. Fifty-six entities are supplied CIPA compliant filtering. Fifty-seven districts possessing ninety-three videoconference units are supplied videoconferencing.

♦ Technology Services assists Region 16 districts with technical needs and network services including primary and secondary DNS, e-mail, web hosting, Internet filtering, remote desktop services, videoconferencing and network maintenance. The number of participants and districts obtaining these services has increased.

♦ Region 16 led region schools in developing the region16.net video and data network managed by Region 16 staff. The EDNET16 consortium uses Chapter 41 monies to maintain core network infrastructure as well as network security.

Region 17 Education Service Center • Lubbock, TX • 806-792-4000 • www.esc17.net

Region 17 Education Service Center is located in Lubbock, TX. Region 17 serves 57 districts and 6 charter schools covering a 20 county area in the South Plains of West Texas. 80,257 students were enrolled in districts throughout the region for the 2009-2010 school year. 81% of these students qualify for Title I and 61% are economically disadvantaged. The region is mostly rural with diversified agricultural economies based upon agriculture production, manufacturing, distribution of goods, and production of oil and natural gas.   The area also has an increasingly expanding medical and allied health based economy.

Teaching and Learning
- Discovery Education Streaming – Provides districts access, training and support to online, digital media resource featuring over 50,000 content specific video segments, images, audio files, animations and more.
- ITV - Programming including cooperation with local universities for dual credit opportunities and collaboration with content providers to offer virtual field trips
- School Library Media – Provide support and training, including K-12 Databases, to ensure that school libraries have the training, support, skills and resources needed to best serve their students, teachers, parents and community.
- CSCOPE – CSCOPE training and support is provided to districts. Specific training is also offered to help teachers infuse the Technology Applications TEKS into CSCOPE curriculum.
- Technology Stimulus Conference – Technology conference offered to teachers to share best practices of technology integration in the high school classroom throughout the region.
- T3 Grant – Provide oversight and support for the Region 17 T3 grant. The 10 schools are provided on-site consulting, needs-based professional development, and

mentoring of technology practices in the classroom.
- Online Learning – Districts can create courses within the ESC17 Blackboard server. Training and support is offered to districts using this service. Districts are also provided information and support to encourage enrollment in online learning initiatives through Texas Virtual School, Texas Virtual School Network, and local online learning programs.
- Cisco Academy – The networking academy consists of six local schools, and IT Essentials consists of eight local schools. Yearly site visits, an annual Cisco Academy Day, trainings for teachers, and other support are offered to these schools. Netlab is used to complete the labs for this program.

Educator Preparation and Development
- Professional Development – Various professional development opportunities, including online workshops, are offered on the implementation of the Technology Applications proficiencies across all standards. A wide variety of workshops are offered, including but not limited to the following topics: digital storytelling, web literacy, Web 2.0 tools, wikis, infusing technology into standards-based

instructions, Microsoft Office, interactive white boards, TATN and blended learning.

- Assistive Technology – Consulting assistance and professional development in helping local school districts match assistive technology solutions to specific needs of students with disabilities, ages birth-21 years. Loan of assistive technology to schools, provision of training and information for districts and parents, and interagency coordination and transition services are also offered.
- Online Programs – AEIS-IT training and support has been offered to districts to support the disaggregation of data. Migration from AEIS-IT offerings to Eduphoria Aware is in progress. webCCAT, CLC, and Tableau training and support are also offered to districts providing them with the resources needed to successfully support curriculum and instruction.
- Alternative Teacher Certification – Through a partnership with Region IV, alternative certification courses are offered online for teacher candidates. Additional training, support, and face-to-face workshops are offered to support this program.
- Technology – Training and support for district technical support is offered as needed and through monthly Technology Solutions Meetings and by request.

Leadership, Administration, and Instructional Support
- Administrator Support – Regularly scheduled administrator meetings are held to address the issues of technology planning, technology integration, funding issues and training.
- Information Management – Districts are provided with training and support in PEIMS, RSCCC, and TxGradebook to ensure proper accounting requirements are met.

Parent portal is offered to parents through TxGradebook to help them stay updated on student progress and success.
- Business Services – Districts contract with ESC17 to receive various services including payroll processing, accounts payable, and other financial and reporting functions. School funding issues and business office support is also provided.
- Educator Placement – An online database is maintained to connect district employers and job applicants within the region.

Infrastructure
- Region 17 Video Networks – Comprised of 59 districts and five institutions of higher learning, this network connects ESC17, the districts, and institutions via ITV.
- Services – internet access, web-hosting, Blackboard course hosting, email, firewall, internet and email filtering and needed bandwidth through T-1 lines and upcoming wireless WAN.
- TETN – The TETN room at ESC17 is equipped to allow personnel to attend various TETN sessions to ensure information is reaching the districts. Districts can also request a direct connection to their district through ITV.
- 24/7 Accessibility – To enhance the availability of 24/7 access to school software and services, a generator has been installed to prevent downtime in cases of electrical outages or natural disaster.
- Technical Support – Provided for servers, network best practices and security and through Technology Solutions meeting or by request.
- High Speed Internet Access – Will provide districts with additional bandwidth via wireless licensed spectrum point-to-point microwave antennas.

Region 18 Education Service Center (ESC18), located at Midland Air Terminal between Midland and Odessa in the Permian Basin, serves 33 school districts and 4 charter schools, with over 6,000 educators and approximately 75,000 students. R egion 18's highly diverse geographic area is the largest in the state, covering over 37,000 square miles in 19 counties. The petroleum and agricultural industries are the largest economic sectors. However, communities across the region have aggressively pursued new enterprises, from high tech projects to alternate energy sources such as wind energy.

Teaching and Learning

Region 18 E SC provides a wide variety of trainings to schools supporting the implementation of the Texas *Long-Range Plan for Technology, 2006-2020*. E SC 18 regularly integrates relevant technology applications into virtually all areas of professional development. Software applications, interactive whiteboards, and classroom response systems are often integrated into core content area training. Assistive technology training is provided for specialized programs and equipment for diverse learners. ESC 18 staff continues to assist districts with technology planning and E-Rate applications and the integration of technology planning into the overall district planning process. ESC 18 also offers a variety of technology-based programs to support instruction. These include Eduphoria-Aware and DMAC, web-based programs that allows district staff to more effectively analyze student assessment data to drive instruction; the CSCOPE Curriculum program that provides districts with a c omprehensive curriculum system, webCCAT, a w eb-based bank of assessment items in the four core areas for assessing student understanding; digital streaming services for more effective use of multimedia in classroom instruction, and w eb-based instructional programs for credit recovery, and adv anced coursework. In addition, ESC 18 staff is developing capacity to assist teachers in the use of the interactive capabilities of Web 2.0, as well as the potential of the Project Share (Epsilen) platform.

Educator Preparation and Development

ESC 18 works to improve educator technology skills through a v ariety of approaches. T he Technology on Wheels (TOW) vehicle owned by ESC 18 provides a remote technology environment from which to conduct cross-curricular field-based activities. The ESC also partners with local groups, such as the Sibley Learning Center of Midland (science) and For t Lancaster State Historic Site (social studies) to provide special virtual field trips for both students and teachers. An extensive educator resources section is maintained on the ESC 18 website. The ESC 18 teacher certification program incorporates a t echnology integration focus, including data analysis, curriculum planning, and c lassroom applications, as a required component of the program. The ESC 18 staff continues to develop new aspects of technology, such as interactive tools and resources on the internet. A new area of focus is development of the Project Share (epsilen) platform, including the development of electronic portfolios and virtual cohorts, as an integral part of educator preparation and development.

Leadership, Administration, and Instructional Support

ESC 18 provides a broad base of training for administration and instructional support. Training and support is provided for the implementation and adm inistrative uses of business and s tudent accounting systems and

submission of PEIMS data. As new education applications such as e-grants, e-plans, electronic submissions of applications and data, and digital records maintenance have emerged, ESC staff have learned these and provided training and s upport for administrators, federal program directors, information systems clerks, and business office staff. EDLINK 18 resources deliver training, virtual meetings, and information electronically to all groups of district personnel, at tremendous savings in time and cost. Through the EDLINK 18 Board, administrators help determine the systems and services needed.

Infrastructure
EDLINK 18 was organized in 1996 to construct and maintain an el ectronic network connecting educators and students in West Texas to the Internet. S ince its inception, this network has offered Internet access, as well as a v ariety of other Intranet services to the districts in the region. All members of EDLINK 18 connect to the hub s ite located at the Education Service Center. EDLINK 18's services include extensive videoconferencing capabilities which connect the region's schools, colleges, universities, and t he ESC. Other EDLINK 18 services include CIPA-compliant web filtering, on-site and remote help desk services, hosting of e-mail and websites for districts. The ESC18 technology team works tirelessly to provide a stable and reliable technology infrastructure and to proactively expand and adapt the system as technology changes to connect and s erve the schools in the vast region of Texas.

Students have the opportunity to attend college classes for dual credit; teachers can participate in training or attend various meetings; and community members have opportunities to take college extension courses-all through the EDLINK 18 v ideoconferencing system. The system now has the capability to connect to any other IP videoconference site in the world. ESC 18 has provided technical assistance in partnering with Community Anchor Institutions (CAI) in the area of emergency planning and response, including the purchase of compatible equipment to allow linking of units from different

organizations. The ESC is also involved in a long-range project, in partnership with local telephone companies and the Texas Lone Star Network to provide high-speed fiber connectivity to all schools in the region, as well as developing the potential for greater fiber connectivity for other community anchor institutions.
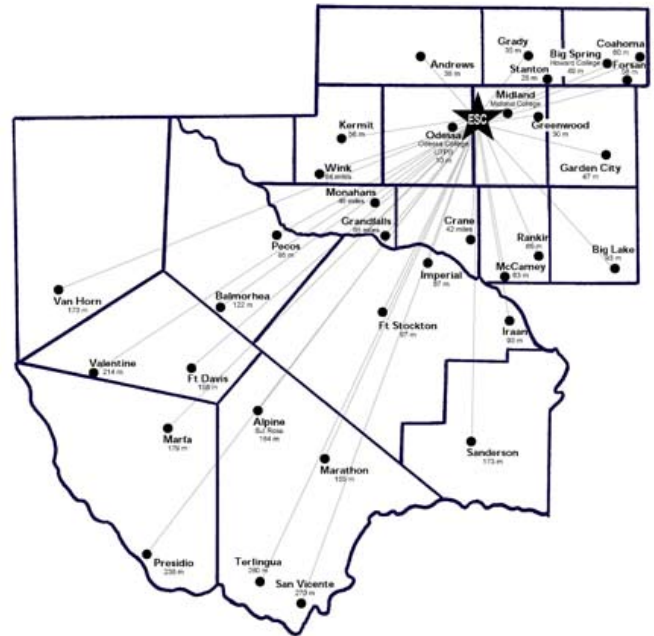
**Education Service Center
Region 19**
El Paso & Hudspeth Counties

6611 Boeing Drive
El Paso, Texas 79925-1010
www.esc19.net

Office: (915) 780-1919
Fax: (915) 780-6537

Teaching and Learning

Education Service Center – Region 19 has developed partnerships with districts, charters,
and higher education entities to provide them access to high quality tools that help use technology to improve student performance.

These tools allow teachers and administrators to evaluate their instruction, to assess student progress, and to plan interventions. Some of these tools include:

- Eduphoria Aware - Allows districts an affordable means to purchase and use software with the capability of disaggregating student performance data
- webCCAT – (web-Based Comprehensive Curriculum Assessment Tool) provides educators with a repository of questions mapped to the TEKS that can be used to create online or offline (paper) assessments of student ability in the areas of language arts, math, science, and social studies for grades 3-11
- CSCOPE - is a c urriculum support system that is fully aligned to the TEKS designed to provide a c ommon language, process, and structure for curriculum development

In addition, ESC 19 collaborates with and assists local districts and charters by:

- Providing technology planning and support to districts and c harters. Training and technical support is offered on Texas STaR charts, technology plans and E-Rate

- Responding to district/charter needs for information, orientation, and ac cess to new technologies
- Providing technical support and customized training to local districts and charters
- Providing streaming video, designed to enhance instruction, to our districts and charters at cost effective rates
- Providing districts and c harters information and awareness on T exas Virtual School Network (TxVSN)
- Providing assistance to districts and charters to ensure that teachers of students in need of assistive technology receive training and necessary support.

Educator Preparation and Development

Building on t he foundation of the Technology
Applications TEKS, the ESC engages educators and future educators in professional development designed to integrate technology for the purpose of improving student performance. Opportunities for educators to build and sustain skills include:

- Training in technology standards for beginning teachers and technology integration for all participants in the Teacher Preparation and Certification Program
- Offering customized professional development to all districts
- Provides schools with media support to ensure that schools have the necessary resources and skills to best serve their students, teachers, parents, and community

- Use online and other distance learning technologies for delivery of professional development.

Leadership, Administration and Instructional Support

The ESC technology staff meets quarterly with the technology leadership of the region's districts and charter schools to provide information and t o seek recommendations and feedback. Additionally, staff and infrastructure have provided support for (via electronic video conferencing) graduate programs in speech therapy. ESC Region 19 is a C ertified Microsoft Office testing center. Instructional staff offers Office certification training to area districts' personnel. E-Rate training is offered several times each year.

ESC 19 also provides training and technical assistance to administrators for campus and district technology planning, budgeting, integration strategies and research-based data-driven decision-making through the examination and analysis of data.

Infrastructure

ESC19 continuously improves and maintains a network that supports video, data, and Internet access for schools connected to our network. For all attending teachers and administrators, wireless access to the Internet is available in all of our facilities. Bandwidth has been upgraded in response to the needs of schools in the region.
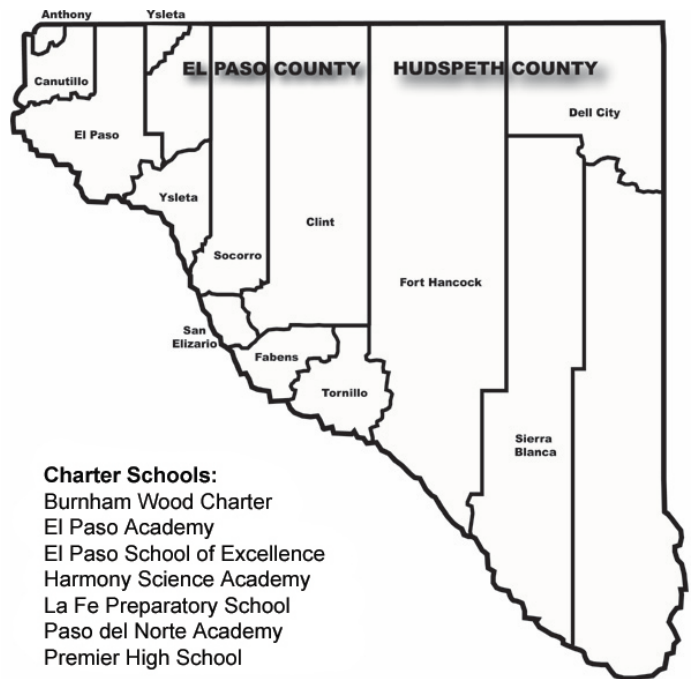Planned upgrades will allow for the support of voice as well as TETN connectivity.

ESC19 successfully maximized resources by facilitating the cooperative purchase of student and business operations software for five area districts, as well as providing direct support for the business and student information systems of one district. Through

collaboration with other ESC's all students in this region have: access to streaming video content in the classroom; access to statewide student activities through electronic video conferencing; and ac cess to data disaggregation tools and services.

ESC 19 technical staff provides technical support for the Texas e-Plan system, STaR Chart, and technology planning.

In addition, ESC 19 offers area Districts and Charter schools disaster recovery services through co-location of equipment and off-site data storage.

Charter Schools:
Burnham Wood Charter
El Paso Academy
El Paso School of Excellence
Harmony Science Academy
La Fe Preparatory School
Paso del Norte Academy
Premier High School

Education Service Center, Region 20 (ESC-20) serves 665 schools in 50 school districts, 31 charter schools and 135 private schools. The number of students enrolled ranges from 28 (Divide ISD) to 92,335 (Northside ISD) with a total of 386,258 students region-wide. Within ESC-20, 64.2% of students qualify as economically disadvantaged. Currently, ESC 20 provides districts with a wide variety of programs and services through shared services agreements and cooperatives that span the four strands of the Texas *Long-Range for Technology, 2006-2020* (LRPT) with opportunities for districts to create their own technology solutions by choosing what best meet their needs through online commitment form selections.

ESC 20 assistance and support with the implementation of the LRPT at the district and charter school level is often a challenge due to limited funding opportunities to keep infrastructure technology current and sustained professional development, a lack of alignment of campus and district improvement plans with the goals and objectives of the LRPT, limitations in the understanding of the value of technology in education, changes in staffing, and differences in the level of participation and involvement with ESC 20 programs that support the four strands of the plan.

Teaching and Learning

ESC 20 provides the following:

- Support and encouragement for student collaborative projects using videoconference technology and online communication tools that enable students to participate electronically (http://portal.esc20.net/portal/page/portal/esc20public/DISTANCELEARNING1/StudentIVC).
- Target Tech in Texas (T3) grant implementation with direct services to students in grades 5-8 Mathematics and Science classrooms at six participating campuses. Students learn how to use technology to access authoritative information, solve problems and communicate. Six technology summer camp sessions for students were conducted in June 2010. Students created online projects using a variety of technologies (http://i20online.esc20.net Courses > TEEMS-21 for Students).
- Mathematics Achievement equals Success (MAS) through a partnership with TEA, the Office of Migrant Education and the migrant departments in IL, WI, NY, AK, MT, CO, and MO. MAS provides televised classes for migrant students in grades K-8 via nationwide broadcast for six weeks each summer (http://projectsmart.esc20.net). An online student/teacher portal called MAS Space provides a safe forum for communication and collaboration (http://moodle.esc20.net/course/category.php?id=23).
- Access, technical support, customer assistance, training, and classroom implementation of state-funded K-12 Databases Program (http://web.esc20.net/k12databases) to public schools and public charter schools throughout the state through a partnership with the Texas Education Agency (TEA) and the Texas State Library and Archives Commission (TSLAC).
- Access a wide variety of online resources and services through the Digital Knowledge Central program (http://dkc.esc20.net) to more than 1,800 campuses and more than 1,000,000 students statewide.
- Access to video streaming resources including Learn360 and Discovery Education Streaming.
- Access to AEIS-IT, CSCOPE and webCCat in support of student performance and mastery of TEKS.

Educator Preparation and Development

ESC-20 provides the following:

- A "Distance Learning News" blog and monthly newsletter focusing on distance learning opportunities, collaborative project ideas and technology integration (http://altgeltvc.wordpress.com).
- Instructional technology updates at Technology Directors' meetings and via email on an as needed basis.
- Target Tech in Texas (T3) grant implementation providing ongoing, sustained, quality professional development through classroom observations, co-teaching, modeling, mentoring, facilitating, coaching, plus an online professional development community (Moodle), and traditional face-to-face training.
- Instructional Technology and Media professional development offerings that are research-based, content driven and use an inquiry-based approach to model 21st Century Skills. Offerings include Apple, Promethean and Intel training from certified professionals and a wide range of additional resources and services to support the effective and meaningful use of technology in education (http://portal.esc20.net/portal/page/portal/esc20public/InstTech).
- Professional development to integrate technology into CSCOPE lessons.
- Workshops on integrating videoconference resources into the classroom and student collaborative projects and distance learning instructor training.
- Comprehensive support services for school improvement to address the individual needs of campuses, districts or charter schools in need of improvement with technology embedded in many offerings, and solutions crafted following an initial consultation session to determine needs and goals.
- Administrative and technical support for Project Share.
- Online content in the areas of Special Education, ELPS, Head Start, Early Childhood, coaching, parental involvement, lab safety, sexual harassment, children nutrition, and alternative certification for administrators and teachers.
- Professional development workshops delivered via videoconference, podcasts and wikis for teacher alternative certification candidates.
- Webinars for professional development including 29 alternative certification candidates (twice weekly), child nutrition district staff, guidance counselors, and migrant program directors.

- Six state-funded K-12 Databases online modules (EBSCO Basics, EBSCO Advanced, Curriculum Integration, Teacher Librarian Collaboration, Britannica, and School Leaders).
- LE@D online courses on various topics through a partnership with the University of North Texas (UNT).
- Use of professional journals available in the state-funded K-12 Databases program to stay abreast of current practices and trends in education.
- LearnKey online training for ESC-20 staff and K-12 school districts in certifications, multimedia and Microsoft Office.
- A+, Certified Ethical Hacker, Cisco Networking Academy, Campus, District and Advanced Technical Support Specialist Certification and Technical Administrator training.
- Training in technology applications standards during the first year of teacher alternative certification program. Training on administrator technology standards provided to alternative certification program candidates.
- Training on data management software tools such as AEIS-IT, WEbCCAT, Eduphoria!, School Objects: Aware.
- Texas Assistive Technology annual conference
- Annual Library Resource Roundup conference for library media specialists and library leaders each fall (www.esc20.net/roundup).
- Annual Tech Fiesta conference held in April (www.esc20.net/techfiesta).
- Annual Textbook Preview event held in January

Leadership, Administration, and Instructional Support
ESC 20 provides the following:
- Target Tech in Texas (T3) grant implementation through the development of technology literacy among school administrators, and to ensure the district vision, expectation, value and assessment for the effective use of technology in support of grant activities.
- Professional development opportunities for school leaders including iPod and podcasting seminars, an academy for teachers as technology leaders and coaches, understanding social networking and cell phones in education, information literacy skills, and more.
- ePlan, STaR Chart, and E-Rate training and technical support; facilitation of Technology Plan and Technology Plan Implementation strategic planning for districts.
- An electronic newsletter containing information on grants and funding opportunities; training on e-Grants and other grant systems.
- Technical assistance via webinars to disseminate NCLB and SEDL information.
- Bi-monthly Technology Director's meetings September through May hosting guest vendors to introduce and explain new product offerings with access via videoconference for those unable to attend onsite.

- A disaster recovery template for use by districts regarding actions to take in the event of a disaster, and steps to continue business. Review of existing disaster recovery plans.
- NGS technical support.
- Collaboration with content specialists such as Reading/ELA, Science, Special Education, CSCOPE, Career & Technical Education, ELL and others regarding technology needs.
- ESC 20 representatives in distance learning workgroups, CORE group and Technology Task Force forums.
- Training to ESC 20 staff on a variety of technology needs including applications, equipment and collaborative tools.
- A data disaggregation program, and training for district leaders on access and analysis.

Infrastructure
ESC 20 provides the following:
- netVision20 consortium to provide equity of access by offering products and services including AppleCare/Dell Warranty Support, Content Filtering, Disaster Recovery Services, E-mail Archiving, E-mail Scanning, Equipment Relocation, Equipment Rental, Help Desk Ticketing, Internet Access, Laptop Tracking/Recovery, Network Security Assessment, Network Diagramming, Network Traffic Prioritization, Notification System (Hosted/Onsite), Online Professional Development (Certification, Multimedia and Office bundles) Remote Backups, Remote Support, Technical Support, Technical Training, Testing Centers (Prometric/VUE), Videoconferencing, Voice over IP Assessment, web Page Hosting and Wireless Assessment.
- Internet access with bandwidth ranging from T-1 through gigabit speed for districts to obtain Internet, video and data access. Wireless access for all workshop and conference participants.
- A virtualized server solution using storage area network (SAN) space to scale resources while expanding available space, time to production and speed of recovery.
- Connectivity to Internet-based Texas Computer Cooperative Software (iTCCS) and Regional Service Center Computer Cooperative (RSCCC) products in support of school operations.
- Access to the Texas Educational Telecommunications Network (TETN) Plus network and Internet 2.
- Access to an external video streaming server for live or archived streaming.
- Complete video production services including two fully equipped studios, two professional editing suites, satellite uplink, and live streaming capability.
- Two content management systems for development and delivery of online content (Moodle and iLearning).

ESC-20 became a Partnership for 21st Century Skills Professional Development Affiliate in April of 2010. The Partnership for 21st Century Skills is the leading advocacy organization focused on infusing 21st century skills into education.

PARTNERSHIP FOR
21st CENTURY SKILLS