

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



A Report to the 81<sup>st</sup> Texas Legislature from the  
**Texas Education Agency**

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



Presented to the 81<sup>st</sup> Texas Legislature from the Texas Education Agency

Submitted to the Governor, Lieutenant Governor, Speaker of the House of  
Representatives and the members of the Eighty-first Texas Legislature

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Robert Scott  
Commissioner

December 2008

The Honorable Rick Perry, Governor of Texas  
The Honorable David Dewhurst, Lieutenant Governor of Texas  
The Honorable Tom Craddick, Speaker of the House of Representatives  
Members of the 81<sup>st</sup> Texas Legislature

It has been twenty years since the first *Long-Range Plan for Technology, 1988-2000* was adopted. We have seen so many changes in the technology as well as the opportunities brought to our students, educators, parents, and community as a result of this technology. The latest plan—*Long-Range Plan for Technology, 2006-2020*—was adopted in 2006. This plan 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 engaged and contributing member of our emerging global 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, required the State Board of Education to develop a long-range plan for technology and for us to provide biennial reports to the Governor and Legislature on the progress of this plan. The first progress report associated with this plan documents the State's progress and accomplishments in meeting recommendations from September 2006 through August 2008. Identified in the report are the various collaborations and activities initiated by Texas public schools, regional education service centers, and the Texas Education Agency to work toward the goals outlined in the plan.

With so many new technologies, the vision of the Long-Range Plan is possible in more ways than ever imagined. The teaching and learning process now has a wide variety of options, including expansion of learning extended into the home and into the broader community, development of virtual relationships among learners, and learning through online and other distributed learning environments.

I hope you will find the efforts described in this report as moving forward and positively impacting our schools and preparing our students with the 21<sup>st</sup> Century skills that are needed to succeed and thrive in our global society.

Sincerely,

Robert Scott  
Commissioner of Education

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## Table of Contents

Letter from the Commissioner.....	iii
Executive Management.....	iv
Table of Contents.....	v
Introduction.....	1
Interim Report on the Texas Technology Immersion Pilot.....	9
Interim Report on the Texas Virtual School Network.....	27
Progress in Teaching and Learning.....	38
Progress in Educator Preparation and Development.....	100
Progress in Leadership, Administration and Instructional Support.....	117
Progress in Infrastructure for Technology.....	130
Progress by Education Service Centers.....	140



# Introduction



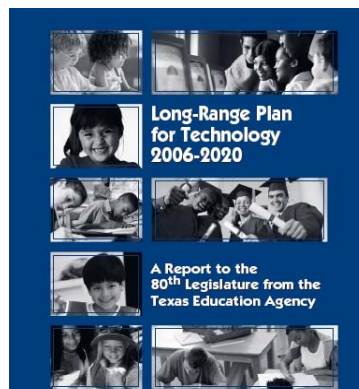
devices such as digital phones, digital cameras, iPods, and laptops are common in everyday lives. Gaining 21<sup>st</sup> Century skills is important for today's students and educators. The focus on the necessary pedagogy to embrace new technologies has become increasingly apparent. Professional development has focused on how it can impact teaching and learning.

Schools have embraced new learning opportunities because they build capacity for the future. Teachers are becoming mentors and are providing their expertise to other educators. This concept has expanded because leadership within schools provides support for these efforts. Campus administrators are learning the value of building capacity to increase student achievement through the use of technology.

The first *Long-Range Plan for Technology, 1988-2000* was adopted twenty years ago. This plan was one of the first in the nation, and it set the course for educational technology in Texas. While the plan was written many years ago, it was progressive in its direction and recommendations for the use of technology in schools. Through the twenty years since its adoption, capabilities of software and hardware have changed, the Internet was introduced, and numerous new technologies have brought many opportunities for education.

The latest *Long-Range Plan for Technology, 2006-2020* was adopted in 2006. The reporting period for this Progress Report on the *Long-Range Plan for Technology, 2006-2020* is September 2006 through August 2008. During that time, new technologies have emerged to provide numerous opportunities for lifelong learning for Texas students, teachers, administrators, and parents. Handheld

The growth of online learning, digital content, curriculum and student management systems, and online professional development has made a significant difference in how schools implement the recommendations of the *Long-Range Plan for Technology, 2006-2020*. The goal must be to prepare young citizens to work and thrive in the 21st Century and to effectively interact in a global marketplace. These goals must include educating all stakeholders to support a positive learning environment that embraces success.





Legislation passed during the 80<sup>th</sup> Legislative Session that impacted educational technology is described within the progress report, including the Virtual School Network (Senate Bill 1788), Internet Safety (House Bill 3171 and Senate Bill 136), Technology-Based Supplemental Pilot Program (House Bill 2864), and Technology Literacy Assessment Pilot (House Bill 2503).

This progress report highlights legislatively mandated programs that were implemented through the 2006-2008 timeframe. The programs are the Technology Immersion Pilot (TIP) and the Texas Virtual School Network (TxVSN).

The interim report on the Technology Immersion Pilot (TIP) covers the progress made through the third and fourth years of the pilot implementation. There is evaluation data available that includes successes and lesson learned.

The interim report on the Texas Virtual School Network provides details regarding the implementation of Senate Bill 1788 passed by the 80<sup>th</sup> Legislature which called for the Commissioner of Education to establish the Texas Virtual School Network (TxVSN) to provide additional opportunities and options for Texas students through access to online courses.

Then, there are four sections devoted to progress in meeting the recommendations in the *Long-Range Plan for Technology, 2006-2020* in the areas of Teaching and Learning; Educator Preparation and Development; Leadership, Administration and Instructional Support; and Infrastructure for Technology.

Data from the Texas Campus and Teacher STaR Charts provides insight into the progress of schools, teachers, and students in meeting the recommendations of the plan.

The final portion of this progress report is a summary of the wide array of services provided by the twenty regional education service centers (ESCs) and their work to implement the recommendations in the Long-Range Plan. Each center provides a variety of programs and technology professional development to support teaching and learning, certification opportunities, and other services to their schools. The regional networks are the primary providers of Internet access, videoconferencing, and distance learning to school districts.

The successes of the state's educational technology initiatives impact students and educators. These programs provide resources and best practices to education stakeholders. How Texas chooses to utilize technology is a challenge that can best be met by using the recommendations of the *Long Range Plan for Technology, 2006-2020* and teaching lifelong learners that technology is an effective tool and its use will lead to a successful life in the 21<sup>st</sup> Century.

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### **Student Voices**

To conclude the Introduction section of the progress report, the NetDay Speak Up 2007 survey data is provided. The survey results paint a picture of how Texas students and teachers are using technology.

Project Tomorrow, a national education nonprofit group, facilitated the NetDay Speak Up 2007 survey. The annual project's purpose is to collect and report the unfiltered feedback from students, parents, and teachers on key educational issues and report the quantitative survey results to participating schools and districts online and free-of-charge.

Surveys were available for students K-2, 3-5, 6-8, and 9-12. Schools selected the survey according to the grades taught on their campus.

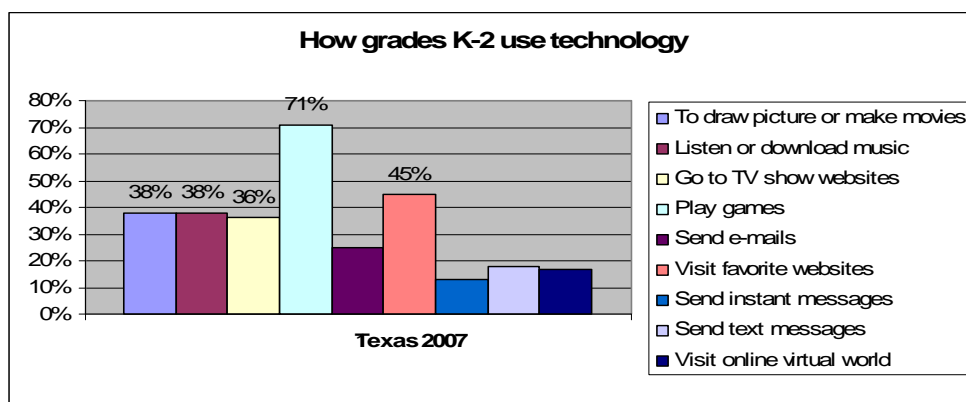
This Student Voices section includes the responses to some of the questions from this comprehensive survey. These responses give insight into the use of

technology in schools and at home. They will set the stage for this first progress report on the *Long-Range Plan for Technology, 2006-2020*.

### Grades K-2

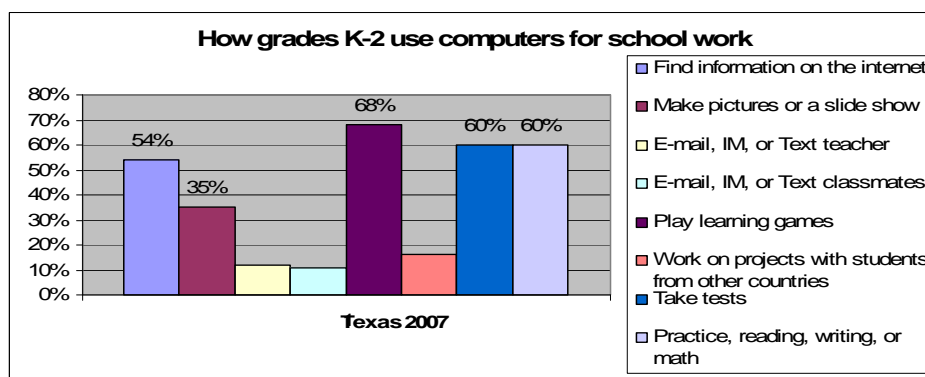
Two thousand two hundred sixty-three Texas students from grades K-2 participated in the NetDay Speak Up 2007. Of these students 61% reported that they had a computer at home with Internet access which they used, compared to 20% with no computer use and 16% with computer but no Internet. Desktop computers were the most commonly used

(58%), with video games (47%) and hand held games (46%) also scoring a high percentage. Cell phones, laptop computers, and MP3 players/iPods were also frequently reported. The K-2 students indicated that they used technology primarily to play games (71%), visit favorite websites (45%), draw pictures or make movies (38%), and to listen to or download music (38%).



When questioned about the use of computers for school work, the K-2 students reported that they most often used computers to play learning games (68%); take tests (60%); practice reading, writing, or math (60%); find information on the Internet (54%); and make pictures or a slide show (35%).

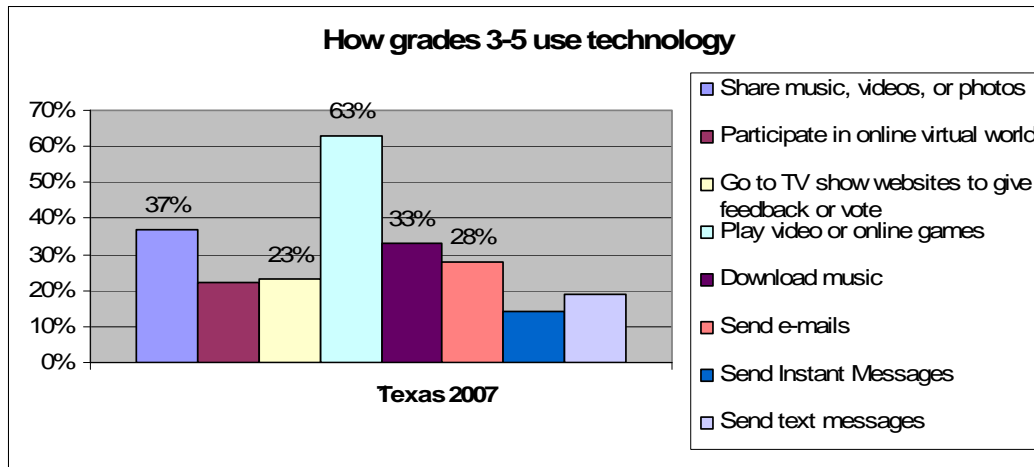
about what they “thought would help kids learn.” The most common answer reported was laptops for each student to use (58%). This was followed by using the Internet at school (56%), time everyday to work on the computer (52%), and interactive white boards in every classroom (52%).



### Grades 3-5

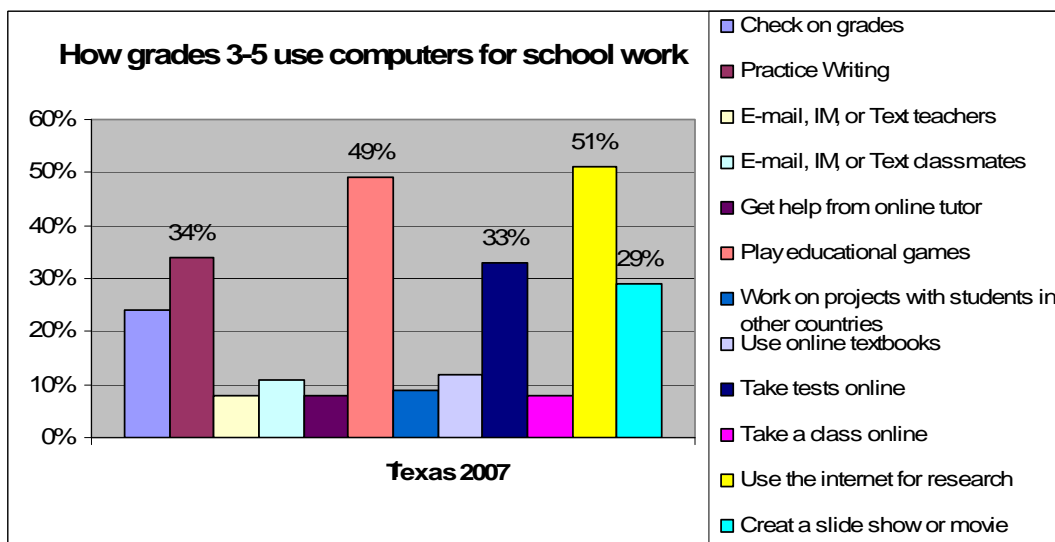
A total of 16,913 Texas students from grades 3-5 provided responses for NetDay Speak Up 2007. The information provided indicates that this age group is actively using technology in many aspects of their day to day life. The most common activity reported was playing video or online games at 63%;

sharing music, videos or photos came in second at 37%. Other activities included downloading music (33%), sending e-mails (28%), going to TV show websites to give feedback or vote (23%), and participating in online virtual world (22%).



In relation to school work, the students surveyed indicated that they most often used the computer to access the Internet for research (51%). Students also reported that they used the computers at school to play educational games (49%), practice their writing

(34%), and create a slide show or movie (29%). Responses given for why students did not use computers at school included computers are not always available, computers do not always work, and computers were only used in the computer lab.

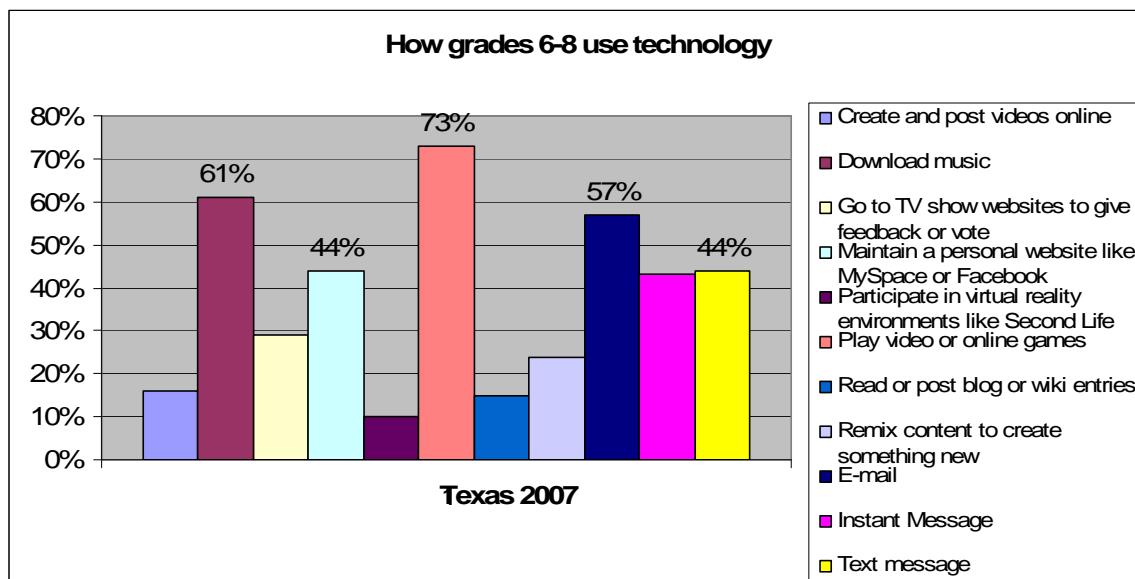


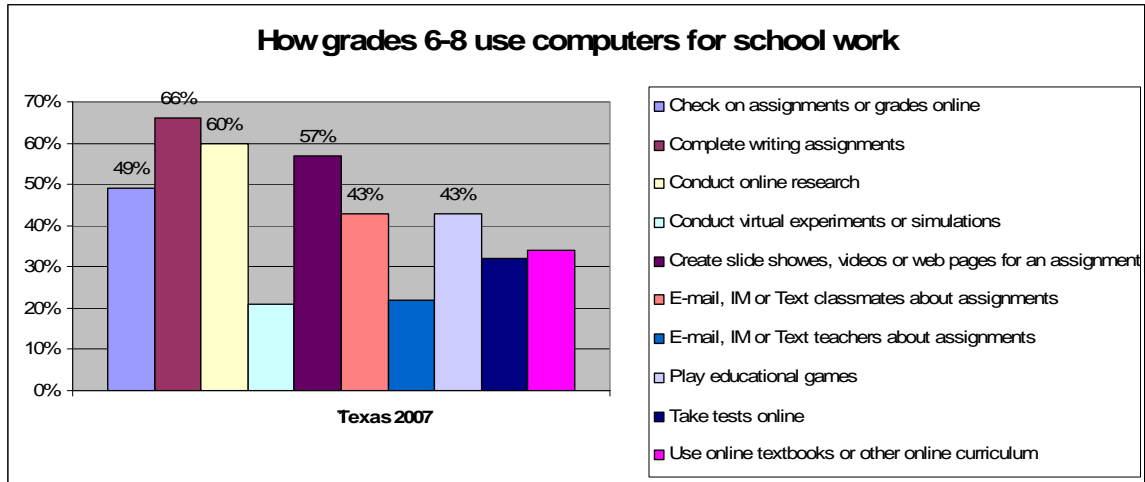
## Grades 6-8

As students reach the middle school level, the use of technology both within the classroom and at home becomes an integral part of student life. Technology enhances what can be achieved in the educational setting and provides the students with a new level of connectivity to learn and communicate. NetDay Speak Up 2007 questioned 18,386 6<sup>th</sup>-8<sup>th</sup> grade students to learn more about their perceptions of technology and how it is used. When asked "What types of electronic devices do you have access to for your own use?", the following responses were provided: music or video device (MP3 player/iPod), game player, simple cell phone, and personal computer. Forty-three percent of the sample reported other, which indicates that the type of technology being used by our students is continuously growing. The most common activities listed while using technology included playing video or online games, downloading music, e-mail, text message, and maintaining personal websites like MySpace or Facebook. Of the students questioned, 67% had a computer at home with fast Internet access and 13% had a

computer with slow access. Further, 20% reported having no computer in the home.

The responses from this survey indicated that technology is being used for school work in various areas. Sixty six percent reported using technology to complete writing assignments, and 60% used technology to conduct online research. Other areas with high scores included creating slide shows; videos or web pages for an assignment; checking assignments or grades online; playing educational games; e-mail, IM, or texting teachers about assignments; and using online textbooks or other online curriculum. When questioned about what schools could do to make it easier for the students to work electronically, responses highlighted the need for use of personal laptops and the ability to access school projects from any computer. Additionally, it was reported that unlimited Internet access and provision of tools for students to communicate with classmates would also be helpful to students to work electronically.





In an attempt to further understand the issues that students perceive to prohibit the use of technology, the study asked the following question, “Besides not having enough time in your school day to use technology, what are the other major obstacles you face using technology at your school?” The most prevalent answer given was that schools

filter or firewalls block websites needed by students (42%). Additionally, teachers limiting the use of technology; rules against using technology at school; inability to access person e-mail, send e-mail, or IM classmates; and slow/not functioning Internet access were also listed as obstacles.

### Grades 9-12

The final group surveyed in the Net Day Speak Up 2007 was grades 9-12, which was comprised of 8,917 Texas students. High scores for MP3 players/iPods and downloading music were a predominant theme within this group, as with the other student populations. Eighty two percent of the students questioned reported that they owned a MP3 player/iPod, and 76% reported that downloading music was a regular activity involving technology. Other electronic devices used often by the students included simple cell phones (66%), personal computers-desktop (66%), and gamer players (63%). Activities also popular with this group were e-mailing (69%), maintaining a personal website like Facebook or MySpace (67%), playing video games (63%), and text messaging (60%).

Grades 9-12 reported that completing writing assignments was the most common use of technology in the classroom (75%). Conducting online research came in second at 74% and creating slide shows, videos, or web pages for an assignment was third at 61%. Other popular classroom activities listed by the students include: checking grades online; e-mail, IM, or texting classmates about assignments; and using online textbooks/online curriculum.

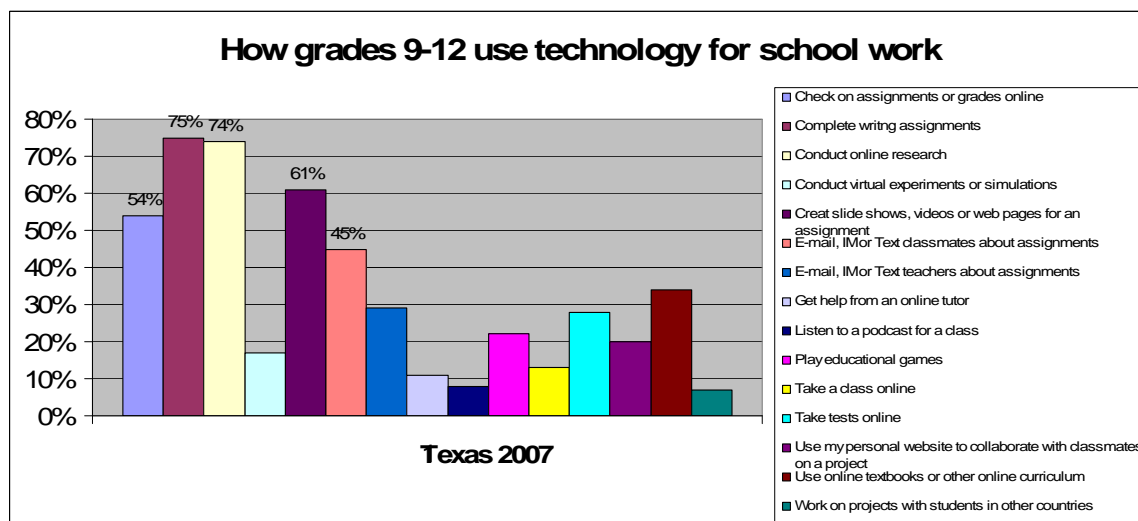
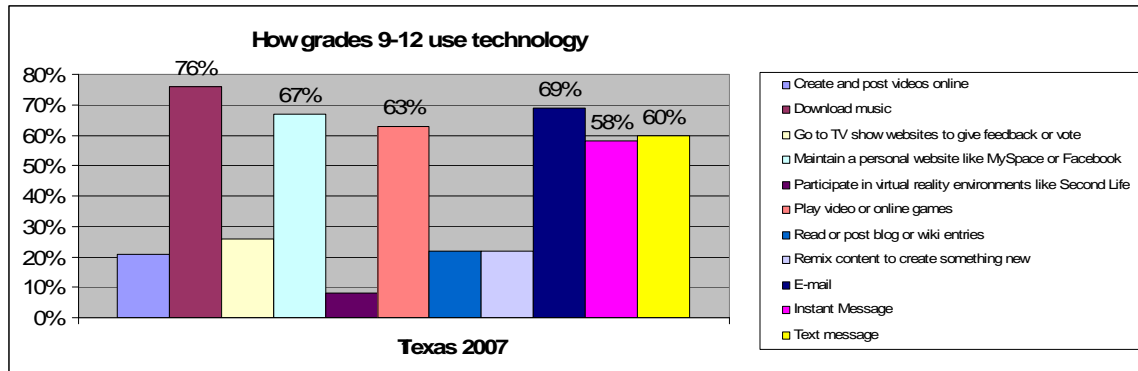
This population was also questioned about what their school could do to make it easier to work electronically. The following responses were provided: allow use of personal laptop (67%), unlimited Internet access (59%), access to school projects from any computer (56%), provide tools for students to communicate with classmates (48%), and provide access to software



applications from any computer (at school or home, 48%).

To gain further insight on this topic the students were then asked, “Besides not having enough time in your school day to use technology, what are the other

major obstacles you face using technology at your school?” Fifty-seven percent of students reported that filters or firewalls prevented their use of technology. This was the most common response for grades 6-8 as well.



## Parent Survey

Two thousand three hundred thirty-three parents from Texas were questioned for Net Day Speak Up 2007. Mothers were the predominant respondents at 83%, with the most common student group represented being grades 6-8 at 45%. Of the parents questioned, 56% identified themselves as being an average tech user (“skills the same as most adults I know”). Thirty seven percent stated they were an advanced tech user, and only 7% marked being a beginner tech user.

In regards to Internet access in the home, 89% had a computer with DSL or cable access. These numbers are very similar to national trends.

The parents in the survey reported that the activities that they do regularly using technology include sending e-mail/IM/text messages to child’s teacher or other adults (94%), downloading music (55%), e-mail/text with children (52%), creating or listening to podcasts

or videos (43%), and creating multimedia presentations like PowerPoint (43%). Parents reported using the following online tools to obtain information and/or communicate with their child's teacher or school: e-mail (83%); school website (71%); access to class website (40%); and access to grades, homework, and events (33%). The reported impact of having access to these tools indicated that parents found the technology helpful in accessing and monitoring their child's education. Answers to this topic were: being better informed about school events, being better informed about their child's grades and overall achievement level, feeling more connected to the school, being better informed about homework assignments and tests, and being better able to help their child with homework.

### **Teacher Survey**

Five thousand four hundred ninety-seven Texas teachers provided responses for the 2007 Speak Up survey. Of those participating, the majority were classroom teachers (79%). Other job titles included special education teachers (6%), instructional aides (3%), curriculum specialists (2%), librarian or media coordinators (2%), and school technology coordinators (1%). Fifty-nine percent of the teachers surveyed identified themselves as average tech users. Advanced users came in second with 30%, and only 10% selected the beginner category. This indicates that today's teachers are becoming more technology equipped to meet the evolving needs of their students.

The teachers questioned in the survey reported that they most often use technology to e-mail or IM a colleague/parent (93%). Creating multimedia presentations (63%), creating or listening to podcasts/videos (37%), downloading music (35%), and playing online games (32%) were also

mentioned. These responses included: to assist with homework practice (50%), to set student objectives (47%), to create physical models or use pictures to represent knowledge (45%), to provide feedback to students (43%), and to compare, classify, and create metaphors and analogies (40%). The teachers indicated that communication skills (81%) and collaboration skills (61%) are the most important skills for a student to be successful in the 21<sup>st</sup> Century, which are encouraged in the classroom by using e-mail, IM, blogs, wikis, and other Web 2.0 tools (69%); multimedia projects; digital whiteboards (30%); and virtual fieldtrips (23%).



<http://www.netdayspeakup.org>

# Interim Report on the Technology Immersion Pilot (TIP)



Senate Bill 396, enacted by the 78th Texas Legislature in 2003 (and codified in TEC, §32.151-32.157) provided the opportunity to explore the relationship between student performance and educational technology in Texas public schools through the Technology Immersion Pilot (TIP). Through this pilot, each student and teacher is provided with a wireless mobile computing device, software, online resources and other appropriate learning technologies that have been shown to improve student achievement. Teachers still facilitate learning, but they now have the

technology to carry the act of learning beyond the classroom walls and beyond the school day. Through TIP, many lessons have been learned. The project includes a research component that not only tests the effectiveness of technology immersion in increasing student achievement in core subjects, but also examines the association between immersion and student technology use, as well as the effect on the school environment, personnel, and parent and community partnerships. TIP provides students and teachers the opportunity to integrate technology into all aspects of teaching and learning as outlined in the *Long-Range Plan for Technology, 2006-2020* and supported through the Technology Applications (TA) Texas Essential Knowledge and Skills (TEKS) and State Board for Educator Certification (SBEC) Standards. These strategies also meet the student and teacher requirements in Title II, Part D of No Child Left Behind.

House Bill 1 amended §32.153(a), (d) and §32.157(a), Education Code in the 2006 special legislative session. This amendment extended the Technology Immersion Pilot to 2011, removed the one million dollar cap per school, and allowed the use of undedicated and unobligated general revenue for the pilot.

The progress on the TIP project through the third and fourth years of implementation is included in this interim report.

## 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.

## Background Information

The traditional educational technology implementation cycle in schools typically involves implementing only one component of a district's technology plan at a time. Often, schools first build the network infrastructure and acquire computer hardware and productivity software. Then training on the hardware and software is scheduled. As teachers learn how to use the hardware and software, they begin to request curriculum resources, online assessment tools and technical support. By the time these components are implemented, it is time to upgrade the hardware and productivity tools, add more curriculum content, and plan additional professional development. This becomes an ongoing cycle and as a result, the school is perpetually behind and teachers perpetually lack the tools they need to effectively use technology as an integral part of the learning process.

However, with the Technology Immersion model, schools implement six critical technology resources all at the same time, which is different from traditional models, as part of a "technology immersion package". The six components include: a wireless mobile computing device for each student to use at home and school; productivity and communication tools; ongoing professional development for teachers and administrators; online formative and diagnostic assessment tools; and technical support. Now teachers have the tools and support they need to assess student proficiency and develop multimedia lesson plans targeted at student skill strength and weakness areas. Equally as important, students are given the same tools as teachers.

TIP creates an environment where technology becomes a partner to teaching and learning. Technology immersion allows each student direct, ongoing access to teaching both within and beyond the walls of the classroom and allows each teacher the opportunity to address individual student needs. In addition, technology immersion gives all students access to educational resources along with increased educational opportunities. The idea of immersing a campus in technology is based on research about the effectiveness of educational technology. By putting together all of the resources necessary to effectively introduce and use technology in the teaching and learning process and implementing them as a package, schools can harness the true power of technology to expand and extend learning.

## Evaluation of Texas Technology Immersion Pilot (eTxTIP)

During fall of 2003, the Texas Education Agency (TEA) was awarded a federal grant from the U.S. Department of Education to evaluate a component of this project using scientific research methods to provide evidence of the effectiveness of educational technology in K-12 education. Texas was one of only nine states to receive a grant under the federal Evaluation of State Educational Technology Projects (ESETP) program. With the grant, TEA was to help increase the capacity of state and local education agencies across the nation to design, conduct, and procure high quality evaluations of educational technology projects. The Texas Center for Education Research (TCER) served as the TEA's primary partner in the Evaluation of the Texas Technology Immersion Pilot (eTxTIP). TIP middle schools serving grades six, seven and eight were the focus of the study. The eTxTIP project has studied 44 middle schools over a four-year period (two years funded through ESETP), with 22 immersed in wireless technology and the other 22 serving as control campuses.

The state has learned a great deal through the study, including how schools with highest levels of immersion implementation had more positive results shown through the pilot. The state hopes to continue to study immersion and its effects over time as schools become more comfortable using various new technologies with students and teachers. Administrators learned what was needed to support an immersion vision and equip schools and teachers with the necessary infrastructure and bandwidth as well as professional development opportunities in order to teach using technology. Parents learned that their children were being provided with technologies that brought the world not only to their children but to them as well. Students learned that there was more they could learn about with more relevance and interest and there were resources immediately accessible when they needed them. They became more organized when everything they needed for classes and homework was on the computer or available through the Internet.

Actual research data and lessons learned are included in this interim report.



## **TIP Continuation**

In 2004, when TIP schools were funded originally, No Child Left Behind, Title II, Part D funds were used. Title II, Part D funds received in 2006 were used to provide continuation grants for the 22 middle schools in the TIP project as well as the control schools participating in the study. The continuation grants ranged from \$55,000 for a control only campus in the study to approximately \$850,000 for a large immersed campus. Title II D 2006 funded approximately \$11,400,000 for the TIP Continuation (TIPC) for the next 2 years. Immersed schools continued professional development and use of the resources in the TIP packages. Students who began TIP as sixth graders entered the eighth grade in the fall of 2006. The continued evaluation of TIP allowed researchers to follow this cohort of students for at least three years and evaluate the impact of technology immersion. Through the continuation grants, control schools continued planning efforts as well as professional development to prepare for immersion in the 2007-2008 school year. Of the 22 control schools, 17 chose to move from control to immersed over the 2 year period, and 5 chose to remain as control schools.

## **TIPC Districts and Campuses 2006-2008**

### ■ Immersed Campuses Serving Grades 6-8

Brady ISD, Bryan ISD, Charlotte ISD, Corpus ISD, Dublin ISD, Floydada ISD, Fruitvale ISD, Fruitvale ISD, Galena Park ISD, Houston ISD, Laredo ISD, McLeod ISD, Memphis ISD, Monte Alto ISD, Morton ISD, Port Arthur ISD, Newton ISD, Post ISD, Presidio ISD, Riviera ISD and San Diego ISD

### ■ Seventeen Control Campuses Moved to Immersion Campuses

Brownsville ISD, Bryan ISD, Cameron ISD, Coleman ISD, Corpus Christi ISD, Galena Park ISD, Harleton ISD, Houston ISD, Laredo ISD, Odem-Edroy ISD, O'Donnell ISD, Ore City ISD, Port Arthur ISD, Seagraves ISD, Skidmore-Tynan ISD, Timpson ISD and Wellington ISD

### ■ Five Control Campuses Did Not Move to Immersion

Cotulla ISD, Edgewood ISD, Laredo ISD, Hamlin ISD and Slaton ISD

## **Progress with TIP Continuation**

TIP continuation schools began immersion activities in the fall of 2006. Immersed campuses continued to expand on their immersion activities including teacher professional development while control to immersion schools were asked to work with a currently immersed school to aid them in implementing their new immersion programs. This began with a rollout of teacher laptops as early as September 2006 for some schools and continued through the fall and into early 2007. In fall of 2007, control to immersion schools began immersing their students. Early reports from these TIPC schools shared the same enthusiasm of students, parents, teachers, and the community as the first two years of the grant.



TIPC provided computer access for the first time for many families. Students shared computer skills with parents and other family members. TIPC

also continued to provide increased opportunities for teachers to communicate with parents, share homework assignments, class projects and samples of student work. Many TIP teachers developed websites to provide parent access to grades and information about student progress on a regular basis. Teachers reported increased enthusiasm and student engagement; increased collaboration and communication among staff, students, and parents; and increased parental involvement and community support.



The TIP team that had been available for TIP schools since the beginning of the pilot continued to provide support. This team includes TEA staff, TIP vendor partners, and TIP consultants at Region 10 Education Service Center. Each school is assigned a TIP liaison that assists with regular communication through a variety of methods such as email, phone calls, face to face meetings, videoconferencing, website updates and visits to ensure implementation fidelity.



TIP liaisons serve as a single point of contact for any questions or problems and visit schools and dialog with teachers and students. TIP liaisons also assist schools with progress reports, expenditure reports, amendments, and other grant management activities.

To provide additional assistance, TIP Leadership Institutes were held each summer and provide a valuable opportunity for all TIP schools to understand the scope of the project as well as the goals and objectives of the evaluation study. At the first TIP Leadership Institute in June 2004, detailed information was provided regarding grant requirements, data collection activities, immersion strategies and project timelines. The second institute in June 2005 focused on sharing lessons learned among TIP schools. Early reports from the first year data collection were also provided.



The third institute in June 2006 provided an opportunity for TIP teachers and administrators to present to one another. Superintendents shared leadership strategies and community involvement activities. Project directors and technology coordinators exchanged ideas on laptop management, and student technical support teams. Teachers presented lesson plans, project ideas and student work. The fourth TIP Leadership Institute in June 2007 provided detailed information regarding grant requirements, data collection activities, immersion strategies and project timelines for continuation grants. TIP partners also met with their schools to plan professional development and immersion package implementation plans. The fifth institute in June 2008 focused on sharing lessons learned among TIP schools and addressed sustainability. Many participants were encouraged when talking to other TIP schools and were eager to share policies, procedures, lesson plans, collaboration and communication tips and comments from parents and teachers. TIP participants were also eager to share improvements in student achievement on TIP campuses and the impact of TIP on their school and community.

## Findings from the Evaluation of Texas Technology Immersion Pilot

The purpose of the Evaluation of the Texas Technology Immersion Pilot (eTxTIP) was to conduct a scientifically-based evaluation at the state level to test the effectiveness of technology immersion on middle school student achievement in core academic subjects. In particular, the evaluation examines the association between technology immersion and student technology use, as well as the effect on the school environment, personnel, and parent and community partnerships. Most importantly, the research will determine the effect of technology immersion on both intermediate and long-term student achievement. Measures included technology proficiency, performance on the TAKS, student attendance and dropout rates, as well as students' personal goals and aspirations. The results of the TIP project hold great value to educational policymakers and leaders not only in Texas, but across the nation. Reports from the evaluation are located online at [www.etxtip.info](http://www.etxtip.info)

### Purpose of the Evaluation:

- To conduct a scientifically based evaluation to test the effectiveness of *technology immersion* in increasing middle school students' achievement.
- To examine the relationships that exist among contextual conditions, *technology immersion*, intervening factors (school, teacher, and student), and student achievement.

The evaluation relies on a mix of qualitative and quantitative methods, including:

- document reviews;
- site visits involving interviews, focus groups, and classroom observations;
- teacher and student technology proficiency assessments;
- technology use logs;
- student, teacher, and parent surveys; and
- school and student data from the Texas Public Education Information Management System (PEIMS), the Academic Excellence Indicator System (AEIS), and the Texas STAAR Chart.

Initial successes from TIP included:

- Increased parental involvement
- Increased collaboration and communication among staff, students and parents
- Increased community support
- Increased engagement and enthusiasm
- Fewer discipline problems

"It's difficult, but it is definitely worth the time and the effort....It's one of the most rewarding projects that we have undertaken. It's one of the few things that we do in education that we really do for the kids. We say that all the time, that we are going to be child centered. This one really is student centered. Because there is no other reason you would do it. They are the ones who benefit...It's hard for the adults. This is for them. I think that's why I love it so much...It's going to benefit all of us as they become better adults. I'm just thrilled that we're opening all of these opportunities for the kids."

–TIP Principal Comment

**More recent successes from the Year 3 evaluation report include:**

- In the third year, immersion teachers continued to grow in technology proficiency and in their use of technology for professional productivity at significantly faster rates than control teachers.
- Teachers at immersion schools had more collegial interactions on technology-related issues than control teachers, and students used technology more often in immersion classrooms.
- Cumulative evidence suggests that laptop computers and digital resources have allowed students in technology immersion schools to experience slightly more intellectually demanding work.
- Technology immersion significantly increased students' technology proficiency and reduced the proficiency gap between economically advantaged and disadvantaged students.
- Technology immersion significantly increased the frequency of students' classroom technology use and their interactions with peers in small-group activities.
- Students in immersion schools had significantly fewer disciplinary actions.
- **Technology immersion had a statistically significant effect on TAKS mathematics achievement, particularly for economically advantaged and higher achieving students.**
- **Students who had greater access to laptops and used laptops for learning to a greater extent, especially outside of school, had significantly higher TAKS reading and mathematics scores.**
- **The effects of technology immersion on reading and mathematics achievement generally became stronger over time as teachers and students became more accomplished technology users.**

The latest findings for year three (2006-2007) on the evaluation of TIP, *Traits of Higher Technology Immersion Schools and Teachers*, was published in July 2008. The report compared the schools that were the highest and lowest implementing the technology immersion model. As seen in the complete report, qualities of higher implementing schools stimulated growth toward higher levels of implementation over time. A summary of the findings is listed below. Each of the statements is described thoroughly in the complete report. The complete report can be found at [www.tcer.org](http://www.tcer.org).

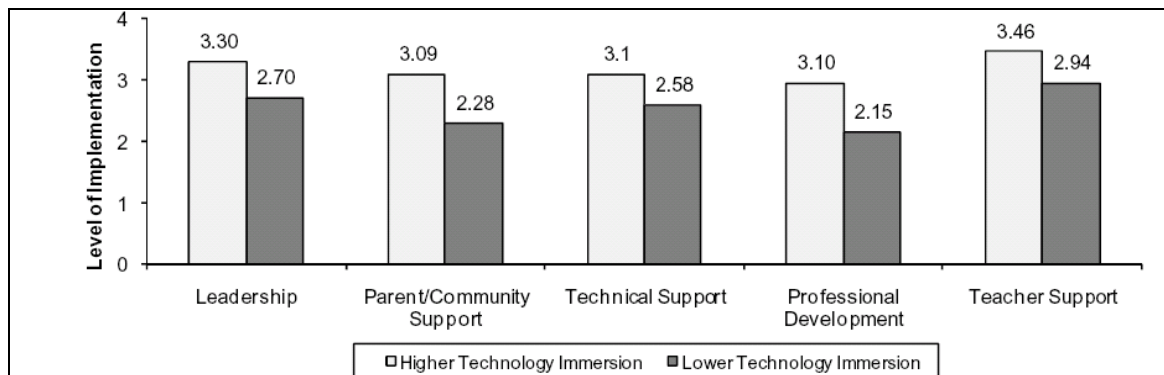
What our philosophy is...is this is all about student learning. This is about professional development, changing the way teachers teach, and helping students learn in the best and most effective way...

District administrator in the Technology Immersion Pilot

The following chart compares the mean third-year level of implementation measured on a 0 (minimal implementation) to 4 (full implementation) scale for support components by higher and lower Technology Immersion schools. Results show that

higher implementing schools had substantially higher levels of support for implementation for each of the five components, with the largest differences between groups related to support from parents and the community and the provision of high-quality professional development.

### Supports for Technology Immersion



Mean level of implementation (measured on a 0 to 4 scale) for higher and lower Technology Immersion schools across five implementation support components.

### Description of Implementation Indicators for Technology Immersion

Support for Technology Immersion
<b>Leadership</b> To what extent do teachers indicate that administrators establish a clear vision and expectations, encourage integration, provide supports, and involve staff in making decisions about instructional technology.
<b>Teacher Support</b> To what extent do teachers share an understanding about technology use, do teachers continually learn and seek new ideas, are teachers unafraid to learn about and use technologies, and are teachers supportive of integration efforts.
<b>Technical Support</b> To what extent do teachers indicate that technical problems with computers, Internet access, repairs, and material availability pose barriers to technology immersion.
<b>Parent and Community Support</b> To what extent do teachers believe that parents and the surrounding community support the school's efforts with technology.
<b>Professional Development</b> <b>Contact Hours:</b> To what extent does the duration (hours) of technology-related professional development (PD) support the integration of technology into teaching, learning, and the curriculum. <b>Classroom Support:</b> To what extent do core-subject teachers receive coaching or mentoring from an internal source, such as another teacher or technology coordinator, or an external (non-school) source. <b>Content Focus:</b> To what extent do core-subject teachers indicate that PD emphasizes curriculum, instructional methods, and lesson development in core subjects. <b>Coherence:</b> To what extent do core-subject teachers indicate that PD is consistent with personal and school goals, builds on prior learning, and supports state standards and assessments.

## Classroom Immersion

**Technology Integration:** To what extent do core teachers alter instructional practices, allocate time, integrate research on teaching and learning, improve basic skills, and support higher order thinking through technology.

**Learner-Centered Instruction:** To what extent do teachers have students establish learning goals, use information and inquiry skills, complete alternative assessments, and have active and relevant learning experiences.

**Student Classroom Activities:** To what extent do teachers have students use particular technology resources for learning in core-subject classes, such as a word processor for writing, a spreadsheet for calculation or graphing, or the Internet for research.

**Communication:** To what extent do teachers use technology to communicate with students, parents, and colleagues or to post information on a class website.

**Professional Productivity:** To what extent do teachers use technology to enhance their professional productivity (e.g., keep records, analyze data, develop lessons, deliver information).

## Student Access and Use

**Laptop Access:** To what extent do students have access to wireless laptops throughout the school year.

**Core-Subject Learning:** How frequently do students use technology resources for learning in core-subject classes.

**Home Learning:** To what extent do students have access to and use laptops outside of the school for homework and learning.

Note. See <http://www.tcer.org> for a complete report with a technical description of the measurement of implementation indicators.

## Major Findings: Traits of Higher Technology Immersion Schools

Qualities of higher implementing schools as described below stimulated growth toward higher levels of implementation over time.

### Contextual Conditions and Project Initiation

- Successful implementation depended on organizational conditions and the actions of people within contexts rather than the characteristics of higher and lower immersion schools and their districts.
- Higher Technology Immersion schools had authoritative decision makers involved in the TIP grant application process and had more time to plan for project initiation.
- Three of four higher implementing schools selected the Apple Technology Immersion package, whereas one selected the Dell package.
- Higher Technology Immersion schools had district leaders with authority and clout who

### District and School Leadership

- were strongly committed to the Technology Immersion concept, maintained a close and ongoing relationship with the middle school, worked as a team with campus leaders, and monitored classroom practices.
- Principals at higher implementing schools articulated a vision for Technology Immersion, strongly supported teachers' professional development, provided encouragement for changed practice, expressed expectations for technology use, and monitored teachers' classroom practices.
- Higher Technology Immersion schools typically had adequate levels of campus support for project implementation (at most, a campus staff-to-student laptop ratio of about 1:250).

<b>Characteristics of District and School Leadership at Higher Technology Immersion Schools</b>	
<b>District Leadership</b>	
Project leaders with administrative authority and clout	
Strong buy-in and commitment to Technology Immersion	
Close and ongoing relationship with the middle school	
District and campus leaders work as a team	
Leaders monitor teachers' classroom practices	
<b>Principal Leadership</b>	
Effective leadership transition after principal change	
Articulates a vision and goals for Technology Immersion	
Strongly supports professional development	
Provides encouragement for teachers' changed practice	
Expresses goals and expectations for classroom technology use	
Monitors teachers' classroom practices	
<i>Source:</i> Interviews with district leaders, principals, technology specialists and focus groups with teachers and students at four higher implementing and four lower implementing schools.	

### Supportive Policies

- Higher Technology Immersion schools implemented policies that reduced parents' financial risks associated with laptop damage, promoted home laptop use, and held students accountable for behavior yet advanced the use of laptops for learning.

### Parent and Community Support

- Higher Technology Immersion schools typically gained parent and community support for the project at the beginning and then continued outreach efforts—informational, educational, and financial—across years.

### Technical Support

- Higher Technology Immersion schools were generally successful at maintaining stable networks, providing ongoing technical support

that kept laptops in students' hands, and building a school culture that advanced responsible laptop care.

### Professional Development

- Higher Technology Immersion schools had stable and close relationships with vendor professional development providers. Professional development for teachers was a high priority at these schools.
- One large school provided ongoing, campus-based pedagogical support for classroom technology integration.
- Higher implementing schools held teachers accountable for participation in staff development and for the use of new practices in their classrooms. Teachers also participated in other learning opportunities that advanced classroom integration.

<b>Characteristics of Professional Development at Technology Immersion Schools</b>	
<b>Higher Technology Immersion Schools</b>	<b>Lower Technology Immersion Schools</b>
Mostly stable and close relationships with vendor trainers	Frequent changes in vendor trainers
Dedicated time for professional development, shared experiences, and needs-driven content and delivery	Training delivered for groups of teachers in brief sessions during or after the school day
Training progression from a focus on proficiency and package products to the creation of technology-infused lessons	Increased teacher comfort with technology and access to resources
Additional learning opportunities that advanced classroom immersion	Additional learning opportunities that often advanced other district priorities
Accountability for participation and classroom use	
Experiences that changed teacher practice	
Access to ongoing, campus-based pedagogical support*	
<i>Source:</i> Interviews with district leaders, principals, and technology specialists; focus groups with teachers.	
*One higher implementing school had dedicated campus support.	



## Teacher Support

- Teacher turnover was a continuing challenge at Technology Immersion schools.
- Teachers at higher immersion schools had positive attitudes and supportive collegial relationships, recognized the high priority administrators gave the project, had high-quality professional development, and grew stronger instructionally over time.
- Teachers at higher immersion schools believed laptops improved student learning.

<b>Teachers' Support for Technology Immersion</b>	
<b>All Teachers Initially...</b>	
Felt excitement mixed with apprehension	
Had no clear conception of classroom technology immersion	
Expressed concerns about TAKS scores	
Held diverse views about traditional and innovative practices	
<b>Teachers at Higher Technology Immersion Schools...</b>	
Had positive attitudes and supportive collegial relationships	
Recognized the high priority administrators gave the project	
Had high-quality professional development	
Believed laptops improved student learning	
Grew stronger instructionally over time	
<b>Teachers at Lower Technology Immersion Schools...</b>	
Had uneven leadership	
Had very high turnover rates	
Were resistant to change	
Faced serious technical barriers	
Believed laptops had negative effects on students	
Linked laptops with lower TAKS scores	
<i>Source: Interviews with district leaders, principals, and technology specialists; focus groups with teachers and students.</i>	

## Student Experiences

- 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 some higher implementing schools used laptops extensively for learning at home.
- Teachers at higher immersion schools encouraged students' use of laptops outside of school by engaging students in projects or assignments that motivated them to continue working outside of class.
- Students at higher implementing schools believed laptops had improved their learning by making schoolwork more interesting and fun, providing immediate access to diverse informational resources, improving their technical skills, and allowing them to get better grades and prepare for the TAKS test.
- Students at higher immersion schools believed laptops helped them personally to be more organized and efficient, more responsible, and better prepared for the future.

## Major Findings: Traits of Higher Classroom Immersion Teachers

Findings below describe attributes of higher implementing teachers, including their characteristics, immersion supports, nature of Classroom Immersion, student effects, and observed practices. Again, note that the full description of each statement is found in the complete report at [www.tcer.org](http://www.tcer.org).

### Teacher Characteristics and School Context

- Higher Classroom Immersion teachers included a mix of White, Hispanic, and African American teachers, who were often mid-career professionals (6 to 15 years experience).
- The school's implementation fidelity was the contextual condition that seemed to most influence teachers' instructional practices.

### Supports for Classroom Immersion

- Higher Classroom Immersion teachers had principals that emphasized technology's positive value for students, allocated time for planning technology-integrated lessons, and monitored classroom technology use.
- Higher Classroom Immersion teachers either participated in more professional development or they assimilated more information from training. They also took part in a variety of locally sponsored staff development opportunities.
- Higher implementing teachers said participation in professional development had positively affected their technical proficiency, ability to use technology, self-confidence, creativity, and lesson development.

### Nature of Classroom Immersion

Five key elements of Classroom Immersion: *Professional Productivity, Communication, Classroom Activities, Technology Integration, and Learner-Centered Instruction*

- Higher Classroom Immersion teachers used technology tools for a wider and more sophisticated range of productivity and communication activities.
- Higher implementing teachers had students use laptops more often and in more innovative ways.
- Few teachers assigned homework of any kind, although most said work that was not finished during the class period was often completed at home.
- Higher immersion teachers believed laptops facilitated instructional variations, allowed a more student-centered approach, and broadened the curriculum. They also believed an emphasis on the TEKS prepared students for the TAKS, and self-direction and project-based learning promoted student achievement.

### Teachers' Beliefs about Technology Integration and Learner-Centered Instruction

#### Higher Classroom Immersion Teachers

Instructional variations are easier with laptops  
Laptops allow a student-centered approach  
Laptops broaden the curriculum  
Emphasis on TEKS prepares students for TAKS  
Self-direction and project-based learning promote student achievement

#### Lower Classroom Immersion Teachers

Teaching is easier with laptops  
Change from established routines is difficult  
Technical skills are weak  
TAKS preparation is paramount  
Laptops are useful for free-time activity  
Traditional teaching activities promote student achievement

Source: Interviews with 19 higher implementing and 18 lower implementing teachers at 21 Technology Immersion schools.

## Effects of Laptops on Students

- Higher Classroom Immersion teachers believed laptops had positive effects on students' academic achievement as well as positive impacts on special student populations.

Teachers' Beliefs about the Effects of Laptops on Students	
Teachers' Shared Views	
More engaged learners	
Increased technology proficiency	
Informed opinions through reading and research	
More positive behaviors (discipline and responsibility)	
...but potential for distraction	
Higher Classroom Immersion Teachers	
Increased academic achievement	
Positive impacts on special students	
-Special Education	
-Low achievers	
-English language learners	
-High achievers	
Source: Interviews with 19 higher implementing and 18 lower implementing teachers at 21 Technology Immersion schools.	

## Observed Classroom Practices

Observations in a sample of higher and lower implementing teachers' classrooms captured teacher and student activities, student engagement, and the intellectual rigor of instruction

- Students in higher implementing teachers' classrooms, compared to lower, spent significantly more time listening to a teacher presentation or discussion, writing responses to lessons, constructing knowledge, and engaging in disciplined inquiry.
- Higher immersion teachers used technology more often for instructional purposes.
- Students in higher implementing teachers' classrooms spent significantly more time using laptops to create or make presentations and to conduct Internet research on an assigned topic.
- Students in the classrooms of higher implementing teachers were more strongly engaged in their academic tasks.
- The lessons of higher Classroom Immersion teachers were significantly more intellectually challenging than the instruction of lower immersion teachers.



## Teacher Comparison Chart

Higher Classroom Immersion Teachers	Lower Classroom Immersion Teachers
<b>Positive Value</b>	<b>Positive Value</b>
+ Prepared teachers to use TIP resources	+ In-class support from a campus instructional specialist
+ Raised awareness of available resources	+ In-class support from a vendor specialist
+ Included the development of specific lessons	
+ Included cross-curricular lesson development	
+ Learned about new technologies (interactive boards)	+ Learned about new technologies (interactive boards)
+ Choices linked to current needs	
+ Hands-on training rather than lecture	
+ Step-by-step directions that ensured understanding	
+ Access to ongoing support by email	+ Access to ongoing support by email
+ Self-selected classes beyond vendor training	
+ Attended conferences (TCEA, TIP Leadership)	+ Attended conferences (TCEA, TIP Leadership)
+ Sessions at conferences presented by other teachers	
+ Training on teaching higher level thinking	
<b>Negative Value</b>	<b>Negative Value</b>
- Repetition of vendor basics on resource use	- Insufficient time to use technology after training
- Repetition of campus training on basics	- Sessions during conference period too short
- Technical or resource problems	- Irrelevance to teaching assignment
- Insufficient opportunity to use technology after training	- Other more important priorities (TAKS, teaching methods)

*Source:* Interviews with 19 higher implementing and 18 lower implementing teachers at 21 Technology Immersion schools.

### Implications for Technology Immersion

This report provided new insights and advance understanding of how schools reached higher levels of Technology Immersion, and how teachers created technology-immersed classrooms.

- It was found that it is not just the characteristics of schools or teachers that made the greatest difference, but consistent with the immersion model, it was the supportive conditions that advanced project goals.
  - District and school leaders at higher Technology Immersion schools set the direction for school change and provided continuous supports that fostered higher levels of implementation.
  - Foremost, leaders championed the benefits of Technology Immersion for students as the justification for arduous efforts aimed at school and classroom change.
  - Notable also was the importance of continual outreach to parents who had to shoulder responsibility for individual laptops along with their children.

- Findings also point to the significance of teacher support for Technology Immersion, as teachers act as the gatekeepers to students' experiences with laptops.
  - Teachers, including veterans, who worked in schools with sufficient technical support, extensive opportunities for professional development, encouragement and accountability for changed practices, collegial working environments, and consistent messages from leaders about the importance of immersion for students grew incrementally toward higher levels of Classroom Immersion over time.
- The quality of school and classroom implementation was vitally important for students.
  - Higher levels of implementation allowed students to use laptops more often for learning both within and outside of school, to use laptops for more varied and complex assignments and projects, and to use laptops for more intellectually rigorous schoolwork.
  - Evidence suggests that these kinds of experiences improved the quality of

students learning opportunities as well as their academic achievement, particularly for special populations such as English language learners, higher and lower achievers, and special education students.

- Many students also benefited personally through greater personal organization and responsibility and preparation for college and future employment.

The complete *Traits of Higher Technology Immersion Schools and Teachers* report can be found at [www.tcer.org](http://www.tcer.org).

### TIP Dissemination

A wide variety of dissemination efforts have provided rich information about TIP and eTxTIP to educators across the state and nation through newsletters, brochures, videoconferences, websites, conference presentations, and the SETDA TAP program. Three websites, [www.txtip.info](http://www.txtip.info), [www.etxtip.info](http://www.etxtip.info), and [ritter.tea.state.tx.us/technology/tip](http://ritter.tea.state.tx.us/technology/tip) provide additional strategies for sharing the progress of TIP and its evaluation efforts.

The Texas Capitol Schoolhouse is a special two-day function held at the capitol while the legislature is in session. Students from across the state come to demonstrate their use of the laptops and other online resources to legislators, visitors, and the media during the Schoolhouse. TIP schools featured at the most recent 2007 Texas Capitol Schoolhouse included Baker MS, Corpus Christi ISD; Memorial MS, Port Arthur ISD; Morton JH, Morton ISD; and Post MS, Post ISD.

The TEA and its partners provided ongoing assistance to participating schools to support implementation fidelity, data collection, and grant reporting activities. There is considerable interest in the Technology Immersion Pilot and the evaluation study. More school districts in Texas are planning similar immersion projects. The Agency continues to receive numerous inquiries about the research design, data collection instruments and strategies, and results. The TEA is currently planning to continue funding immersion related grants to continue to explore the effects of technology immersion on student academic achievement.

### The TIP and eTxTIP Toolkits

A product of the first 2 years of the TIP grant, the TIP Toolkit, a Tool for Planning a School Technology Immersion Program was released in

July 2006 and all TIP immersed and control schools were provided a copy to aid them in their grant continuations. The toolkit provides an overview of the TIP project and factors to consider before implementing a technology 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



Lessons learned from the Technology Immersion Pilot include the importance of having a leadership team as well as planning for curriculum alignment, mentoring, personnel changes, community involvement, school policies, disaster planning, vendor requirements, and additional equipment needs.

Recommendations are provided regarding six critical components of immersion: a wireless mobile computing device, productivity, communication and presentation software, online instructional resources, online diagnostic assessment tools, professional development, and technical support. The TIP Toolkit is available on the TEA TIP website at [ritter.tea.state.tx.us/technology/tip](http://ritter.tea.state.tx.us/technology/tip).

An evaluation of the Texas Technology Immersion Pilot toolkit exists as a tool for evaluating a school technology program. The purpose of the toolkit is to provide 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.

TEA participates in the State Educational Technology Directors Association (SETDA) Technical Assistance Project (TAP). SETDA TAP



includes other states that also received an evaluation grant and provides opportunities for collaboration among states. TAP also includes virtual roundtables with other ESETP participants and provides opportunities to share information about the project with other states. Through the SETDA TAP program, presentations on TIP and eTxTIP have been shared at conferences including the National Educational Computing Conference (NECC), the National School Board Association's Technology and Learning Conference (T+L), the Consortium for School Networking (CoSN); the Association of Supervision and Curriculum (ASCD), and the Association for Educational Research (AERA). In addition, TEA has presented at the Texas Association of School Board (TASA) Midwinter Conference, the Texas Computer Education Association (TCEA) state conference and many other meetings.

The Education Service Center Region 10 serves as the Title II, Part D statewide technical assistance center for Texas and also supports TIP schools by providing TIP Liaisons to each participating campus, assists with the facilitation of the TIP Leadership Institutes, and works closely with the TIP vendor partners. The assignment of TIP Liaisons to TIP campuses has become a valuable tool in this project.

### TIP Schools Showcased

Articles about TIP have appeared in publications including Converge Magazine, T.H.E. Journal, eSchoolNews, The Heller Reports and Threshold Magazine and others. The following lists schools that received various recognitions in the news.

#### Brady ISD, Brady MS

- THE Journal – *Immersed in Learning*, by Anita Givens, July 2007
- eSchoolNews – *States: Ed Tech is Raising Student Achievement*, July 1, 2007

#### Bryan ISD

**Texas' Bryan Independent School District Receives CoSN TEAM Award for Exemplary Leadership in Education Technology.** *Award Celebrates District's Use of Technology to Transform Learning*

- The department won the **CoSN TEAM** award this year - TIP was a part of this award <http://www.cosn.org/about/awards/team.cfm> Washington, DC (**March 10, 2008**) – The Consortium for School Networking (CoSN) today announced the winner of its annual TEAM Award – Bryan Independent School District (ISD) in Bryan, TX. The award, which

was presented during CoSN's 13th Annual K-12 School Networking Conference in Washington, DC, celebrates the achievements and contributions of the team of educators at Bryan ISD who have successfully leveraged education technology to impact teaching and learning.

- Bryan's Eagle News – *Technology immersion takes center stage at Bryan school* By ARENA WELCH, Eagle Staff Writer, March 26, 2007. See [http://209.189.226.235/stories/032607/schools\\_20070326018.php](http://209.189.226.235/stories/032607/schools_20070326018.php) **Stephen F. Austin MS** immersed campus and the control campus **Sam Rayburn MS** is mentioned as beginning its immersion activities.
- Bryan also presented to the Bryan Rotary Club, and Leadership Brazos this year, and Jennifer Bergland has presented to a group in Washington, D.C. about the TIP project.
- Stephen F. Austin students and teachers presented at the **Texas Capitol Schoolhouse** in 2006.

#### Cameron ISD, Cameron MS

- Cameron Herald - *Looking smart: Students issued laptops*, by Jeffery Benzing, Staff Writer, October 12, 2007 <http://www.cameronherald.com/articles/2007/10/12/news/news03.txt>

#### Coleman ISD, Coleman JH

- Special to the Reporter-News, *Coleman 8th-graders receive laptop computers*, By Billie Mercer, September 18, 2007

#### Corpus Christi ISD

##### Baker MS

- San Antonio Business Journal - *Texas schools receive computers, training from Dell*, November 29, 2004 <http://www.bizjournals.com/sanantonio/stories/2004/11/29/daily6.html>
- eSchoolnews – February 24, 2005
- THE Journal – *Technology Immersion Turns Around Texas Middle School*, by Linda L. Briggs, March 2008 News <http://www.thejournal.com/articles/22283>
- eChalk Webinars – April 12, 2007 & December 4, 2007
- Caller -Times Sunday – *eChalk Links Kids, Parents, Schools*, By Adriana Garza, July 22, 2007 <http://www.caller.com/news/2007/jul/22/e-chalk/> sent by Sally Ann Lewis, Consultant, Achievement Solutions, Pearson
- Teachers and students presented at the **Texas Capitol Schoolhouse** in 2007.

#### **Cullen Place MS**

- San Antonio Business Journal - *Texas schools receive computers, training from Dell*, November 29, 2004  
<http://www.bizjournals.com/sanantonio/stories/2004/11/29/daily6.html>

#### **Floydada ISD, Floydada JH**

- Hesperian Beacon Article - *Grant Gives Wireless Laptops and Software to All FJHS Students*, By Darwin Robinson, May 27, 2004  
<http://www.hesperianbeacon.com/052704news.htm>
- eSchoolNews - "Savvy Educators Reveal Secrets of Reform" on page 17, September 2007
- Government Technology Magazine – *Floydada upgrades, gets citywide Wi-Fi - Government Technology* January 22, 2007 *High-Tech Learning - Government Technology* July 5, 2007
- THE Journal – *Immersed in Learning*, by Anita Givens, July 2007

#### **Fruitvale ISD, Fruitvale MS**

- Government Technology Magazine – *Tip the Scales*, July 7, 2006

#### **Galena Park ISD, Woodland Acres MS**

- Houston Chronicle - *Galena Park pupils get take-home laptops*, By Doug Dodson, Houston Chronicle Correspondent  
[http://www.chron.com/CDA/archives/archive.mpl?id=2004\\_3833612](http://www.chron.com/CDA/archives/archive.mpl?id=2004_3833612) December 9, 2004
- eSchoolNews – December 13, 2004

#### **Laredo ISD, Memorial MS and Cigarroa MS**

- San Antonio Business Journal - *Texas schools receive computers, training from Dell*, November 29, 2004  
<http://www.bizjournals.com/sanantonio/stories/2004/11/29/daily6.html>

#### **Monte Alto ISD, Monte Alto MS**

- Converge Magazine - *Texas students experience one-to-one computing with the Texas TIP Program*, By Liz Wallendorf,  
<http://www.convergemag.com/story.php?catid=232&storyid=106912> March 13, 2008

#### **Newton ISD, Newton MS**

- Newton Co News - September 9, 2004 at the Chamber of Commerce meeting. Newton County News website. ([www.newtonnews.com](http://www.newtonnews.com))
- Jasper News - *Walking Newton's Halls*, By Sherrie Leach, Assistant Superintendent of Newton ISD  
[http://www.jaspernewsboy.com/news/2007/0815/honor\\_roll/092.html](http://www.jaspernewsboy.com/news/2007/0815/honor_roll/092.html) August 15, 2007

- Teachers and students presented at the **Texas Capitol Schoolhouse** in 2007.

#### **Port Arthur ISD**

##### **Wilson (formerly Memorial) MS**

- Teachers and students presented at the **Texas Capitol Schoolhouse** in 2007.

#### **Post ISD, Post MS**

- Texas Monthly Magazine as one of **Texas BEST Schools** Dec 2007  
From Mr. Marlin Marcum, Superintendent – November 29, 2007  
Congratulations to Post Middle School, students, and MS teacher, Tonya Dunn, for being named in Texas Monthly magazine as one of Texas' BEST SCHOOLS. This honor was given to Post Middle School because for the past three years their students consistently scored higher on the TAKS Writing test than their counterparts at other schools around the state.
- Teachers and students presented at the **Texas Capitol Schoolhouse** in 2007.

#### **Presidio ISD, Franco Middle School**

- San Antonio Business Journal - *Texas schools receive computers, training from Dell*, November 29, 2004  
<http://www.bizjournals.com/sanantonio/stories/2004/11/29/daily6.html>

#### **Riviera ISD, De La Paz Middle School**

- San Antonio Business Journal - *Texas schools receive computers, training from Dell*, November 29, 2004  
<http://www.bizjournals.com/sanantonio/stories/2004/11/29/daily6.html>

#### **San Diego ISD, Bernarda Jaime Jr. High**

- San Antonio Business Journal - *Texas schools receive computers, training from Dell*, November 29, 2004  
<http://www.bizjournals.com/sanantonio/stories/2004/11/29/daily6.html>

#### **Floydada ISD, Floydada Jr. High**

- Individual Certificate was awarded to: **Jerry Vaughan, Superintendent, Floydada ISD** for all his many efforts to promote and showcase the successes of their TIP program. See <http://www.eschoolnews.com/surveys-awards/tech-saavy-superintendent-awards/index.cfm?i=52254&page=5>  
Accomplishments at Floydada ISD by Jerry Vaughan:  
In November, 2007, I was invited to speak about the TIP program to SEDTA in

Washington DC. That was a great honor for me personally and FISD to be able to talk about the success of the TIP program.

In February, I was selected and recognized as one of 10 "Tech Savvy" superintendents by eSchoolNews and received the award at AASA conference in Tampa Florida. This was a direct result of the TIP program at Floydada JR. High and a lot of hard work by a lot of people in FISD. I was just fortunate enough to receive the award. The nominations for the award came from one of my Board members and Jeri Hodges. I am grateful to them for the nominations!

In April, Floydada High School was selected as one of 18 "APPLE DISTINGUISHED CAMPUS" in the nation and the only one in TEXAS! This is a direct result of the TIP program, because we expanded the immersion from FJH to FHS and I believe we are the only one to do so with local funds.

In April, I was able to represent the TIP program at the Apple Leadership institute in San Francisco, CA. I was invited to sit on a panel of superintendents and educational leaders that focused on 1:1 learning and technology. I was able to speak and talk about the TIP program to an international audience.

We have hosted several "Apple Days" at FISD this year. We have had visitors from 30 school Districts from across Texas and Arkansas. Of those Districts, 14 have implemented or are in the process of implementing 1:1 programs.

The formation of the West Texas Apple Coalition started this past fall with approximately 150 teachers from 6 area school Districts coming together for professional development and sharing. It continued with additional training and sharing in the spring. Next year, Floydada ISD, Childress ISD, Clarendon ISD and Wellington ISD have set 2 "common days" in their respective school calendars for professional development and sharing by teachers involved in 1:1 learning. This is a tremendous effort by a group of school districts that is a direct result of the TIP program. We will be joined by Ballinger ISD and Quanah ISD and Memphis ISD on a limited basis as they roll out their Apple 1:1 programs next fall. (Memphis is one of the TIP campuses but is also expanding to the high school level I understand.)

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### **Participating TIPC Schools**

**Brady ISD** is a small rural school district located near the center of the state in McCulloch County. Brady Middle School serves 274 students and 24 teachers. Brady started its immersion in 2004.

**Brownsville ISD** is in a central city community in Cameron County that serves 48,857 students and has a middle school participating as a control campus that began immersion activities in 2006. Faulk Middle School serves 931 students and 73 teachers.

**Bryan ISD** is a large school district located in Brazos County. Stephen F. Austin Middle School serves 910 students and 70 teachers. SFA started its immersion in 2004. Bryan also has another middle school, Sam Rayburn Middle School that serves as a control campus that began immersion activities in 2006. Sam Rayburn Middle School serves 1240 students and 81 teachers.

**Cameron ISD** is in a Non-metro community in Milam County with an enrollment of 1,638 students and has a middle school participating as a control campus that began immersion activities in 2006. Cameron Middle School serves 344 students and 29 teachers.

**Charlotte ISD** is a small school district located in Atascosa County. Charlotte Middle School serves 116 students and 13 teachers. Charlotte began its immersion in 2004.

**Coleman ISD** is in a Non-metro community in Coleman County serving 1,025 students and has a middle school participating as a control campus that began immersion activities in 2006. Coleman Junior High School serves 203 students and 21 teachers.

**Corpus Christi ISD** is a large urban school district located in Nueces County. The port city resides along the coast of Corpus Christi Bay. Baker Middle School serves 884 students and 57 teachers, whereas Cullen Place Middle School serves approximately 547 students and 34 teachers. These 2 campuses started immersion in 2004. Two additional middle schools that served as control campuses began immersion activities in 2006. Those are Haas Middle School serving 512 students and 33 teachers and Hamlin Middle School serving 759 students and 43 teachers.

**Cotulla ISD** is located in a central city suburb community of La Salle County. Frank Newman Middle school serves 230 students and 25 teachers and they are serving as a control only campus.

**Dublin ISD** is a medium sized school district located in Erath County. Dublin Middle School serves 267 students and 24 teachers. Dublin began its immersion in 2004.

**Edgewood ISD** is in a major suburban area in Bexar County near San Antonio that serves

12,873 students and has a middle school, Truman Middle School with 410 students and 34 teachers serving as a control only campus since 2004.

**Floydada ISD** is a small school district located outside the Lubbock area. Floydada Junior High School serves 197 students and 20 teachers. Floydada Junior High started its immersion in 2004.

**Fruitvale ISD** is a small rural school district located in Van Zandt County. Fruitvale Middle School serves 91 students and 12 teachers. Fruitvale Middle School started its immersion in 2004.

**Galena Park ISD** is a large urban school district located in Harris County. Woodland Acres Middle School serves 495 students and 37 teachers. Woodland Acres immersed in 2004. Another middle school, Galena Park Middle School with 921 students and 67 served as a control campus that began its immersion activities in 2006.

**Hamlin ISD** is in a rural community in Jones County. Hamlin Middle School has 107 students and 9 teachers serving as a control only campus since 2004.

**Harleton ISD** is in a rural community in Harrison County that serves 624 students and has a middle school, Harleton Junior High with 161 students and 11 teachers serving as a control campus that began its immersion activities in 2006.

**Houston ISD** is the largest district in the state and is located in Harris County. However, Kaleidoscope is a district charter school with 120 middle school students and 6 teachers and has been immersed since 2004. Another district charter school, Briarmeadow Charter School has 110 students and 6 teachers serving as a control campus that began its immersion activities in 2006.

**Laredo ISD** is a large urban school district sprawling more than 13.83 square miles, located in Webb County. The district is steeped in history and tradition. Immersed since 2004, Joaquin Cigarroa Middle School serves 1,406 students and 100 teachers along with Memorial Middle School serving 868 students and 54 teachers. Another middle school, Lamar Middle School serves as a control only campus since 2004. Lamar Middle has 1,330 students and 84 teachers.

**McLeod ISD** is a small school district located in Cass County. Immersed since 2004, McLeod Middle School serves 123 students and 13 teachers.

**Memphis ISD** is a small rural school district located near Lubbock in Hall County. Immersed since 2004, Memphis Middle School serves 116 students and 11 teachers.

**Monte Alto ISD** is a small rural school district located in deep South Texas right on the border

of Mexico. The district is bordered by farmland all around. Located in Hidalgo County, and immersed since 2004, Monte Alto Middle School serves 163 students and 11 teachers.

**Morton ISD** is a small school district located outside the Lubbock area in Cochran County. Immersed since 2004, Morton Junior High School serves 84 students and employs 10 teachers.

**Newton ISD** is a medium sized school district located in Newton County, the easternmost county of the state. The town is located along the Sabine River of East Texas. Immersed since 2004, Newton Middle School serves 265 students and 26 teachers.

**O'Donnell ISD** is a rural school district in Lynn County that serves 373 students and has a middle school serving as a control campus and began its immersion activities in 2006. O'Donnell Junior High serves 58 students and 9 teachers.

**Odem-Edroy** is a non-metro school district in San Patricio County that serves 1,175 students and has a middle school serving as a control campus and began its immersion activities in 2006. Odem Junior high has 245 students and 24 teachers.

**Ore City** is a non-metro school district in Upshur County that serves 817 students and has a middle school serving as a control campus and began immersion activities in 2006. Ore City Middle School has 203 students and 13 teachers.

**Port Arthur ISD** is a large school district located in Jefferson County. Woodrow Wilson Middle School serves 632 students and 42 teachers and has been immersed since 2004. Another middle school Stephen F. Austin Middle School served as a control campus with 634 students and 34 teachers and began immersion activities in 2006. Both schools will continue in TIP in 2006 but were removed from the evaluation study due to the devastation of Hurricane Rita. Students did not have access to laptops for the 2005-2006 school year.

**Post ISD** is a small school district located in Garza County. Post Middle School began immersion in 2004 and serves 187 students and 22 teachers.

**Presidio ISD** is a medium sized school district located in Presidio County. Franco Middle School began immersion in 2004 and serves 310 students and 22 teachers.

**Riviera ISD** is a small school district in South Texas within Kleberg County located on U.S. Highway 77 fifteen miles south of Kingsville. De La Paz Middle School began immersion activities in 2004 serves 114 students and 8 teachers.

**San Diego ISD** is a medium sized school district located in Duval County. Bernarda Jaime Junior High began immersion activities in 2004 and serves 327 students and 20 teachers.

**Seagraves ISD** is a rural school district in Gaines County that serves 589 students and has a junior



high school serving as a control campus that began immersion activities in 2006. Seagraves Junior high serves 119 students and 15 teachers.

**Skidmore-Tynan ISD** is a rural school district in Bee County that serves 373 students and has a middle school serving as a control campus that began immersion activities in 2006. Skidmore-Tynan Junior high serves 173 students and 16 teachers.

**Slaton ISD** is a rural school district in Lubbock County that serves 713 students and has a middle school serving as a control only campus. Slaton serves 284 students and 24 teachers.

**Timpson ISD** is a rural school district in Shelby County that serves 568 students and has a middle school serving as a control campus that began immersion activities in 2006. Timpson Middle School serves 131 students and 13 teachers.

**Wellington ISD** is a rural school district in Collingsworth County that serves 555 students and has a middle school serving as a control campus that began immersion activities in 2006. Wellington serves 114 students and 17 teachers.

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### **Benefits of Continuing Technology Immersion**

Texas Education Code (TEC), Chapter 32.151 established the TIP program until 2011. The Texas Education Agency will continue to document progress in immersion schools—the schools in the original TIP project, those immersion schools that have been awarded as part of the Vision 2020 grants, and any future schools that are designated as technology immersion schools. The agency may include the review of the pilot in the comprehensive annual report that covers the 2010-2011 school year. Longitudinal studies are essential for assessing the impacts of interventions on academic achievement, especially with technology immersion. Significant achievement effects emerged in the third year project and data from year four reports will be documented. Original TIP schools must determine how they can sustain as

immersed schools as their grant funding discontinued.

Data from the evaluation study has shown that students' use of their laptops for home learning (i.e., homework in core-subject areas and learning games) was the strongest implementation predictor of both TAKS reading and mathematics scores. Results highlight the important role individual laptops play in promoting ubiquitous learning and equalizing learning opportunities.

### **Benefits of Technology Immersion**

#### **Student Effects**

- Ownership
- Responsibility
- Self-esteem/pride
- Technology proficiency
- Motivation/engagement
- Habits of mind
  - Organization
  - Information seeking
  - Self-pacing
  - Creativity
  - Degree of control over work
- Academic achievement
- Extended learning time
- Differentiated learning
- Equitable opportunity
- Preparation for the future
  - High school expectations
  - Higher education and career

#### **Classroom Effects**

- Efficiency
- Pressure for classroom technology use
- Greater classroom-to-classroom consistency

While this data from the evaluation study has shown positive gains with immersion, schools and others involved with the immersion project will need to make important decisions as they move forward.



# Interim Report on the Texas Virtual School Network



Research shows that online learning provides the interactive, collaborative, and self-paced learning environment that helps students gain the skills needed to succeed in their pursuits following graduation—in the workforce and in higher education.

According to the International Association for K-12 Online Learning (iNACOL) report, *A National Primer on K-12 Online Learning*, the number one reason school districts cite for offering Internet-based courses is that the courses are otherwise unavailable. Many schools in rural or poorer urban districts find it difficult to recruit and retain highly qualified teachers, especially in the areas of advanced mathematics, science, and language courses. Online courses can meet specific needs, such as gifted students seeking opportunities for Advance Placement or accelerated learning at their own pace or homebound students needing access to more curriculum choices. Many Texas districts and schools in other states are realizing the potential of online learning by providing students with unparalleled equity and access to high quality education.

Some of the benefits offered by online learning include:

- Expanded curriculum options available to students, including courses required for the Recommended High School and the Distinguished Achievement Graduation Plans
- Advanced Placement
- Accelerated study
- Credit recovery
- Expanded access to qualified teachers
- Alternative educational opportunities for diverse students, including gifted or accelerated students, at-risk students, migrant students, dropouts, pregnant students, incarcerated youth, elite athletes and performers, and students who may not be able to attend regular school because of injury, illness, or involvement with other activities
- Alternative learning methods and opportunities for students whose needs are not being met through traditional instruction in a traditional classroom setting
- Schedule flexibility for students with schedule conflicts or who may be working during the regular school day
- Flexible pace for students who need to work at a faster or slower pace
- Electives for which qualified teachers are not available locally
- Opportunities for students to prepare for today's technology-rich real world experiences in the workplace and post-secondary education
- Educational experiences to address the needs of today's technology-savvy students
- Professional development for teachers and other educators
- Mentoring opportunities to teachers

*"For far too long, access to a high quality education has been too closely tied to the student's zip code. Online learning allows equitable access to educational opportunities to students across the entire state."*

Susan Patrick, North American Council for Online Learning



The TxVSN serves as a statewide course catalog for Texas public school districts and open enrollment charter schools. All courses offered through the TxVSN are provided by academically acceptable or higher school districts, recognized or higher open-enrollment charter schools, public or private institutions of higher education, or education service centers. All high school courses are led by an instructor who is Texas-certified in the course subject area and grade level and who has completed TxVSN approved professional development on methodologies for effective online instruction.

Each course in the catalog is reviewed for alignment to the course Texas Essential Knowledge and Skills (TEKS) and the International Association for K-12 Online Learning (iNACOL) National Standards of Quality for Online Courses. Once reviewed by TxVSN Course Review and approved by the Texas Education Agency, TxVSN Central Operations enters into an agreement with the course provider so that courses may be added to the catalog. The catalog

displays the course description and objectives, associated technology specifications, course schedule, assessments, costs, and other relevant data for each TxVSN course. School personnel and students may review the TxVSN course catalog options to select courses that best meet students' needs.

During the 80<sup>th</sup> Legislative Session, Senate Bill 1788, now codified into Texas Education Code (TEC) Chapter 30A., established a state virtual school network to provide online courses for Texas students. The Commissioner of Education is directed to administer the network and ensure high-quality education for students who are receiving instruction through the TxVSN. Legislation set forth the operational, course evaluation, and professional development requirements.

A request for proposal process identified TxVSN partners to work under the direction of the Texas Education Agency:



Education Service Center (ESC), Region 10 in collaboration with Harris County Department of Education, serves as TxVSN Central Operations. Central Operations coordinates course registration and student enrollments, ensures the eligibility of virtual school providers, provides a list of approved electronic courses, and coordinates reporting requirements. Development of these key elements of the network began during summer 2008.

Region 4 Education Service Center (ESC) conducts the review of electronic courses to be offered through the network to ensure that all courses meet or exceed the Texas Essential Knowledge and Skills (TEKS), as

well as the rigorous online course standards developed by the Southern Regional Education Board (SREB) and endorsed and adopted by the International Association for K-12 Online Learning (iNACOL). The review process for high school courses began in summer 2008.

Five professional development providers train educators to deliver online instruction through the TxVSN. These five providers are Education Development Center, Inc; ESC Region 4; ESC Region 11; Harris County Department of Education; and Texas A&M University Center for Distance Learning Research. Professional development

providers began delivering training during 2008.

The TxVSN is a supplemental rather than diploma-granting program. A student's home district will continue to award credits and a diploma and remain accountable for the student's academic progress. The TxVSN will work in partnership with the home district to meet student needs.

TxVSN courses will be available for Texas students in time for the spring semester 2009. Information on how to become a TxVSN provider district is posted online at [www.TxVSN.org](http://www.TxVSN.org), along with the process to submit courses for review. Information on courses available via the TxVSN will be posted in fall 2008. The district TxVSN contact will authorize enrollment of students in TxVSN courses.

A request-for-applications (RFA) also was issued to build the capacity of districts to participate in the state virtual school network by providing federal NCLB Title II, Part D funds (Vision 2020 grant) to districts to fund students taking online courses offered via the TxVSN, professional development for teachers teaching online courses, professional development for on-site facilitators and administrators, and other related activities and expenses.

Information about TxVSN is available at [www.txvsn.org](http://www.txvsn.org). The link to SB 1788 is <http://tlo2.tlc.state.tx.us/statutes/docs/ED/content/pdf/ed.002.00.00030a.00.pdf>.

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### **TxVSN Central Operations**

ESC Region 10 in collaboration with Harris County Department of Education was selected to serve as TxVSN Central Operations. Central Operations has coordinated the course registration and student enrollments; ensured the eligibility of virtual school providers; provided a list of approved electronic courses; and coordinated reporting requirements. These key elements are designed to ensure course offerings during spring 2009.

Central Operations established the Texas Virtual School Network Advisory Council to gather stakeholder input and assist with recommendations for the implementation of

the network. Advisory council membership is comprised of Texas educators, professional developers, technology leaders, and experts in K-16 education as well as the field of online learning. The TxVSN Advisory Council has played an integral role in bringing the voice of Texas students to the TxVSN planning and implementation process. The first Advisory Council meeting occurred in Austin, Texas in June 2008.

In the summer of 2008, hardware and software were purchased to develop the online registration system. During the development stages of the student registration system, electronic courses were under review. ESC Region 4 was selected to serve as a TxVSN partner to conduct the review of electronic courses to be offered through the network. Central Operations worked closely with ESC Region 4 to identify Provider Districts.

Central Operations completed course registration in September 2008. Students were able to view approved courses by title, grade level and subject matter, and pre-register for classes online. Based on the information provided in the student online registration accounts, the network sends the on-site coordinators, the school counselors, an e-mail message confirming that the student has registered for a particular class. Counselors review pre-registrations to determine approval for the online course. The TxVSN Student Course Request (SCR) serves the dual purpose of cataloguing online courses that students would like to take each semester as well as surveying students' future online course interests. The completion of the SCR does not obligate the school or students to take an online course through the TxVSN. The Site Coordinator and Purchasing Approver are the only ones allowed to finalize a student's registration.

Marketing and outreach efforts began in August 2008 to assist with the implementation of the Texas Virtual School Network. Central Operations established those communication efforts to facilitate the delivery of online courses and provide information to stakeholders. Mailings to high school counselors, presentations at conferences and multiple information sharing sessions over videoconference

directed at the Education Service Centers were among the marketing and outreach

efforts.

<b>Counselor Survey Responses</b> <i>Survey released October 24, 2008</i>	
Data will be compared and contrasted to student course survey data to drive course solicitation from providers.	
What is greatest student academic needs that TxVSN course can meet?	<ul style="list-style-type: none"> <li>• Course acceleration</li> <li>• Provide foundation and elective courses not offered locally</li> <li>• Providing scheduling flexibility for students</li> </ul>
Top 10 courses counselor want to included in the TxVSN Catalog:	<ul style="list-style-type: none"> <li>• Algebra I A/B</li> <li>• Computer Science I A/B</li> <li>• English I A/B</li> <li>• Medical Terminology</li> <li>• Communication Applications, Creative Writing, Technical Writing (tied)</li> <li>• French II A/B</li> <li>• Geometry A/B</li> <li>• Biology I A/B</li> <li>• German II A/B</li> <li>• IPC A/B</li> </ul>
Top concerns reported about enrolling students in online courses	<ul style="list-style-type: none"> <li>• Budget to pay for courses</li> <li>• Student Access to technology / internet</li> </ul>
Do counselors believe AP courses should be included in the catalog?	<ul style="list-style-type: none"> <li>• 50% yes</li> <li>• 50% no</li> </ul>
For counselors requesting AP courses, what subject area is most needed:	<ul style="list-style-type: none"> <li>• Science</li> </ul>

Student registration (at the close of this progress report—August 2008) had not produced substantial numbers primarily due to the fact that courses were not yet available until November 2008. The HelpDesk reports that a high volume of school districts and open enrollment charter schools are inquiring about participation in the Texas Virtual School Network. Potential receiver districts are conducting purposeful planning and looking at district policies related to online courses before registering students. This effort is supported by the network to ensure successful participation within the TxVSN.

In the next school year, Central Operations will increase their course offerings for grades 9-12. Courses will be selected for review based on the results from the Onsite Coordinator and student survey responses. The goals for the Texas Virtual School Network are to provide courses that benefit students and assist school districts and

open enrollment charter schools with options to supplement instruction.

#### **TxVSN Online Course Quality Process**

As the Texas Virtual School Network administering authority, the Instructional Materials and Educational Technology (IMET) Division identified the establishment of standards for online courses as one of its first steps in implementing this legislation. TEC §30A.102 requires the administering authority to evaluate electronic courses submitted by a provider school district or school to be offered through the network. TEC §30A.103 requires the SBOE to establish objective criteria for an electronic course to ensure alignment with the essential knowledge and skills and authorizes the Commissioner to establish additional quality-related criteria for electronic courses. The SBOE has rules in place in TAC §74.23 that require all distance learning courses to meet or exceed the



Texas Essential Knowledge and Skills for that course.

Courses offered through the TxVSN will be provided by TxVSN provider school districts or schools. Consequently, only TxVSN provider school districts or schools may submit courses to the TxVSN for evaluation and approval. Potential provider districts may submit courses that they have developed independently, or they may submit courses developed by a third party. A course is considered to have been developed independently by a school district, open-enrollment charter school or public or private institution of higher education (defined by TEC §61.003) as outlined in TEC §30A.105(d)(1-6). Provider districts will be responsible for instruction and for ensuring that teachers teaching courses offered through the TxVSN meet the eligibility requirements: that they are certified under TEC Subchapter B, Chapter 21 to teach that grade and course and that they have completed the professional development required by the TxVSN prior to teaching courses offered through the network.

Through an RFP process, Region 4 ESC was selected to conduct the review of courses for the TxVSN. During the summer of 2008, the first round of online courses for grades nine through twelve was reviewed for inclusion in the network. Courses are reviewed for 100% alignment with the TEKS as well as alignment with the rigorous online course standards developed by the sixteen member states, including Texas, led by the SREB and endorsed and adopted by iNACOL as the National Standards of Quality for Online Courses ([www.inacol.org](http://www.inacol.org)). To date, a total of 76 semesters of content were submitted by the first four TxVSN provider district applicants and have been reviewed by the network. A total of 29 unique course titles were included in this initial submission. Of the courses submitted, 30 half-credit courses were approved; 29 half-credit courses were approved with minor modifications; and 17 courses were not approved. The next window for provider district applications and course submission will open in mid-September 2008 and a schedule is in development for the ongoing review process for additional courses.

The quality review process is a significant service offered to Texas districts via the TxVSN. One of the common questions TEA receives from parents, teachers, and administrators across the state is how to determine if a particular course in the vast array of courses available online is a quality course that meets state standards. TxVSN's quality review process relieves Texas districts of the time and expense of analyzing online courses for TEKS alignment. In addition to alignment with state curriculum standards, there are many other factors involved in the design of a high quality online course.



As stated by SREB: "Several issues should be factored into setting appropriate standards for quality online courses. The courses must include rigorous content that is aligned with the state's academic standards and that enables teachers to adjust the scope and sequence of instruction to meet students' academic and learning needs. Ease of use is also important so students can focus on the content of the course and not be unnecessarily distracted by extraneous information or graphic displays. In keeping with what is known about the importance of interaction between students and their teacher and among students, the courses should provide as many options as possible to facilitate interaction. Assessments—both student self-assessments and teacher assessments of student progress—should be built into each course."

Review against national standards ensures the courses offered through the TxVSN meet these important quality measures. Quality of online courses is one key benefit



provided by the TxVSN to students, educators, parents, and district leaders.

The quality review process, established in TEC Chapter 30A. and implemented in the TxVSN, recognizes that:

- online courses must offer Texas students a quality educational alternative
- online courses must be reviewed against established standards in order to assure students parents, schools and the state that TxVSN online courses are of quality and that they align with state curriculum requirements (TEKS)
- review of online courses requires education experts with specialized knowledge.

The review of online courses for alignment with the TEKS and with national quality standards will help ensure that courses offered to students via the TxVSN are quality courses. The successful growth of the TxVSN depends upon the successful delivery of high quality courses coupled with high-quality instruction to meet the needs of Texas students.

The network will begin providing a limited number of approved electronic courses for grades nine through twelve in the spring semester of the 2008-2009 school year.

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### **TxVSN Professional Development**

TEC §30A.111 requires each teacher of an electronic course offered by a district or open-enrollment charter school through the network to be certified under Subchapter B, Chapter 21 to teach that course and grade level. Teachers are also required to successfully complete the appropriate professional development course authorized by the network before teaching an electronic course offered through the network. TEC §30.112 authorizes the state virtual school network to provide or authorize providers of electronic professional development courses or programs to provide professional development for teachers who are teaching electronic courses through the network.



A Request for Qualifications (RFQ) was issued to identify professional development programs for online teachers. Professional development providers were required to ensure that training is aligned with the national standards for quality online teaching. The original quality standards were developed by SREB with the assistance of knowledgeable, experienced resource persons from K-12 and post-secondary education, drawn from national and regional organizations including TEA. After extensive review and research, in partnership with SREB, iNACOL fully endorsed the SREB *Standards for Quality Online Teaching*, with minor modifications, as the source for the iNACOL *National Standards for Quality Online Teaching* available at [www.inacol.org](http://www.inacol.org). Ensuring that professional development meets national standards helps support high-quality, professional development to assure the effective use of technology and online instructional strategies. As a result of the request for qualifications process, five professional development providers were selected by TEA.

The five providers are Education Development Center, Inc., ESC Region 4, ESC Region 11, Harris County Department of Education, and Texas A&M University Center for Distance Learning Research. The application for approval to provide TxVSN-approved professional development is an ongoing process and will allow additional professional development providers to be identified as network partners.



Once the recommended professional development providers were approved in Spring 2008, TEA began working with its TxVSN partners and members of the Advisory Council to develop guidelines and policies for the TxVSN. By summer 2008, professional development providers reported that they were enrolling groups of teachers who were taking the professional development course expressly because they were interested in teaching for the network.

Funding for TxVSN professional development is administered at the local level. Texas public school districts were eligible to apply for and receive grant funding through the Vision 2020 Virtual Learning strand, and use a portion of those funds for professional development for online teaching from qualified providers of professional development. Districts and teachers interested in teaching courses offered through the TxVSN may also choose to use their own funding to pay for professional development from approved providers.

Through state and national research efforts, the following has been determined:

- quality online teaching has been recognized as a key component of quality online learning just as quality is teaching is essential in a traditional (face to face) classroom
- while quality online teaching encompasses many traditional classroom teaching skills, the shift from face-to-face to an online learning environment requires a different focus in teacher training, specific to teaching successfully in an online environment
- diversity of students in a teacher's online classroom is potentially greater since teachers are teaching statewide
- reliance upon technology in the online classroom also requires training to effectively use that technology as a teaching venue
- teachers need training in legal and ethical issues that are endemic to online courses, such as copyright, intellectual property, and plagiarism

- professional development for online teachers must be evaluated against established standards in order to assure students, parents, schools, and the state that online teachers are well-prepared to deliver quality instruction in the online learning environment via the TxVSN
- quality online teaching is integral to the state's efforts to achieve equitable access to quality online learning for Texas students

Implementing the requirements for online professional development, as specified TEC Chapter 30A., has given the Agency an opportunity to promote professional development to support the use of online and distance learning technologies, thereby meeting a recommendation for the Agency in the State Board of Education's (SBOE) *Long-Range Plan for Technology, 2006-2020*. Approximately 152 teachers have completed the TxVSN-approved professional development offered during summer 2008. In addition to the ongoing professional development sessions currently planned by the five initial TxVSN-approved professional development providers, plans are underway to release a second RFQ to solicit additional professional development providers for the network.

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### **Funding Report on Online Learning**

To date, research and experience indicate that the operating costs of online programs are about the same as the operating costs of a regular brick-and-mortar school. As reported in *Cost Guidelines for State Virtual Schools* published by SREB:

State virtual schools and traditional schools are similar in that both provide courses to meet the academic needs of the students they serve. Both need teachers to teach courses; resources for instruction; staff and a physical location to provide administrative, academic and technical support to students and teachers; and an infrastructure that supports reliable delivery of instruction.

The largest single cost for both types of schools is personnel. A traditional school typically spends between 70% and 80% 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.

Unlike a brick-and-mortar school, however, a state virtual school does not require a large, complex physical plant since students and teachers are not housed there. This eliminates the costs of transportation, cafeterias, meals, libraries, gymnasiums, utilities and many other related services of a traditional school. A state virtual school simply requires a sufficient physical location for the administration of the program, staff training and meetings, equipment and storage. (*Cost Guidelines for State Virtual Schools*, SREB, 2006)

While online programs may have some cost savings due to less need for physical classrooms and transportation, these savings are largely offset by the additional costs required for online learning. "In many ways, the hardware and software are essentially the "facilities" of an online school, much as the physical building is the facility of a traditional school. However, unlike traditional school facility funding, there is no such funding mechanism for online facilities." (*A National Primer on K-12 Online Learning*, iNACOL, 2007) Additional costs for online schools include things such as course development and/or acquisition (lease or purchase); comprehensive student support; technology-related costs including software (e.g. a course or learning management system on which to place and offer online courses, student information system, basic productivity applications, audio and video plug-ins); hardware (e.g. computers, printers, servers, bandwidth, Internet access); as well as mobile phones or long-distance phone service for teachers and staff.

Additionally, some students may need a workspace to use while taking the course or while taking proctored tests; administrators may need office space and facilities in which to meet as needed with staff and teachers. Professional development, travel for remote

staff to meet occasionally, and technology and ongoing technical support costs are typically significantly higher for online schools.



Equitable access to online learning is a key issue that is still unresolved. Online courses require, at a minimum, that the student have access to a computer, basic software, and the Internet. For students in affluent areas such access may be readily available, but for students in poor or rural areas, the hardware and Internet access are not a given. The opportunities to take online courses should be available to students across all income levels, demographic groups and geographic regions. In addition, online courses can pose challenges for students with special needs. Students with learning or physical disabilities whose academic needs can be met through online learning must be assured they will be given the opportunity to take courses in this educational environment.

A funding model that does not provide public support through state funding and relies on local districts or individuals to pay the costs for online learning, "...will likely lead to inequalities in terms of who has access to virtual courses. As more affluent school districts develop their own virtual schools, more schools rely on families to provide their own computers and Internet connectivity. In an environment where states play little or no role in supporting quality online programs, the potential for a large equity gap increases." *20/20 Costs and Funding of Virtual Schools*, Augenblick, Palaich, & Associates, 2006)

Appropriate funding for state virtual schools remains a challenge. States in which the district or student pays the fees or tuition for online courses have experienced significant barriers to growth and resistance from districts to online learning. This is understandable considering that this approach means districts must use their existing funds, which are critical to continue their current educational operations, to cover the additional costs for online learning.

To attempt to resolve this challenge, some districts offer online courses only to students who participate during the traditional day on campus in a computer lab or school library in order to meet the state attendance requirements associated with state funding. This approach defeats the concept of any time, any place learning that is one of the strengths of online learning.

During the first TxVSN Advisory Council meeting held in June 2008, Susan Patrick, CEO of iNACOL, addressed the council, summarizing the issue of funding state virtual schools: "...State appropriations provide the necessary foundation funding to establish and support a state virtual school throughout its early stages. In twenty-four states a legislative appropriation funds the state virtual school. Typically, the level of funding appropriated is based more on what resources a state has available and less on what the actual costs are of implementing state virtual schooling effectively and equitably. This appropriation model has drawbacks such as budgetary limitations on the number of online instructors that can be hired, the number of courses that can be offered, and the number of students that can be served. This model is effective in the early implementation stages of a state virtual school because it enables the school to have a solid base of support to grow, but should not be relied on long-term..."



### Funding Recommendation

The TxVSN Advisory Council, in its small group discussions, widely agreed that "Every student should have access to TxVSN courses and this should be part of a students' right to a free education." TEA recommends that the most appropriate funding model for the TxVSN at this time is a direct appropriation to the Agency to support the early development and implementation of the network. These funds will be used to support network operations, the course review process, other associated costs, and to provide online courses to students. Districts would be expected to bear costs related to providing a TxVSN contact person who will address management and coordination issues and ensure that students are enrolled, supported, and monitored during each course. Additionally, staff in each participating school in which the student is enrolled would need to be appointed to support students with academic or technical issues. In August of 2008, the Agency requested \$9 million per year of the biennium to implement the TxVSN in an Exceptional Item Request through the Legislative Appropriations Request. The request may be viewed at <http://ritter.tea.state.tx.us/lar/2010-2011/4AExceptionalItemRequestSchedule.pdf>. Funds were used from Rider 31 to establish the initial functions of the network in FY08.



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## **TxVSN Timeline of Accomplishments**

### **April 2008**

- Awarded contracts through an RFP process to Education Service Center, Region 10 to establish Central Operations and Education Service Center, Region 4 to review online courses
- Selected 5 professional development providers for teachers that will be teaching online courses over the network
- Hosted the first Texas Virtual School Network Advisory Committee to discuss course review guidelines, campus site coordinator responsibilities, and professional development

### **May 2008**

- Established the Texas Virtual School Network Advisory Council
- Established initial policies and procedures and reporting requirements for the network
- Established TxVSN website at <http://www.txvsn.org>

### **June 2008**

- Purchased hardware and software to develop online registration system
- Developed training for course reviewers; open course submittal
- Window; and began soliciting courses for review

### **July 2008**

- Conducted training for course reviewers and began reviewing 76 semesters of content for Grades 9-12
- Programmed the online registration system for onsite coordinators and students
- Developed associated online training modules for all stakeholders

### **August 2008**

- Completed 228 individual course reviews, analyzed materials, and assigned ratings
- Developed marketing/outreach materials for dissemination
- Deployed, staging and production with the online registration system for onsite coordinators and student



## Progress in Teaching and Learning



The teaching and learning environment has changed with the use of new interactive technology and distance learning tools, and the many innovative teaching strategies that expand learning inside and outside the classroom. In addition, the movement to prepare students with critical 21<sup>st</sup> Century skills has resulted in a new emphasis on what students need to know and be able to do to thrive in these times. The use of technology has supported teaching and learning in each curriculum area by bringing a multitude of learning experiences to entice student interest and build understanding, proficiency, application, and confidence.

Through the implementation of the Technology Applications curriculum and its adopted instructional materials, technology has increasingly become an integral part of the way teachers teach and students learn. State and federal requirements for technology literacy and curriculum integration have led to a new emphasis on gaining valuable knowledge and skills and monitoring progress in meeting targeted levels of proficiency. With the growing availability of digital content, the range of existing resources continues to expand. Distance learning has proven to be a powerful tool for ensuring that students across the state have equitable access to quality education and instruction regardless of the school's wealth, size, socioeconomic status, or geographic location. In particular, online learning has provided many opportunities for educators and students to have access to current research and valuable instructional resources.

The Teaching and Learning section of the Texas *Long-Range Plan for Technology, 2006-2020* focuses on how technology can impact student achievement by providing necessary tools and resources for administrators, teachers, librarians, and students. This progress report provides the status of the recommendations and actions in teaching and learning from 2006-2008. The actions and recommendations cover technology literacy and integration, digital content, school library programs, and distance learning.

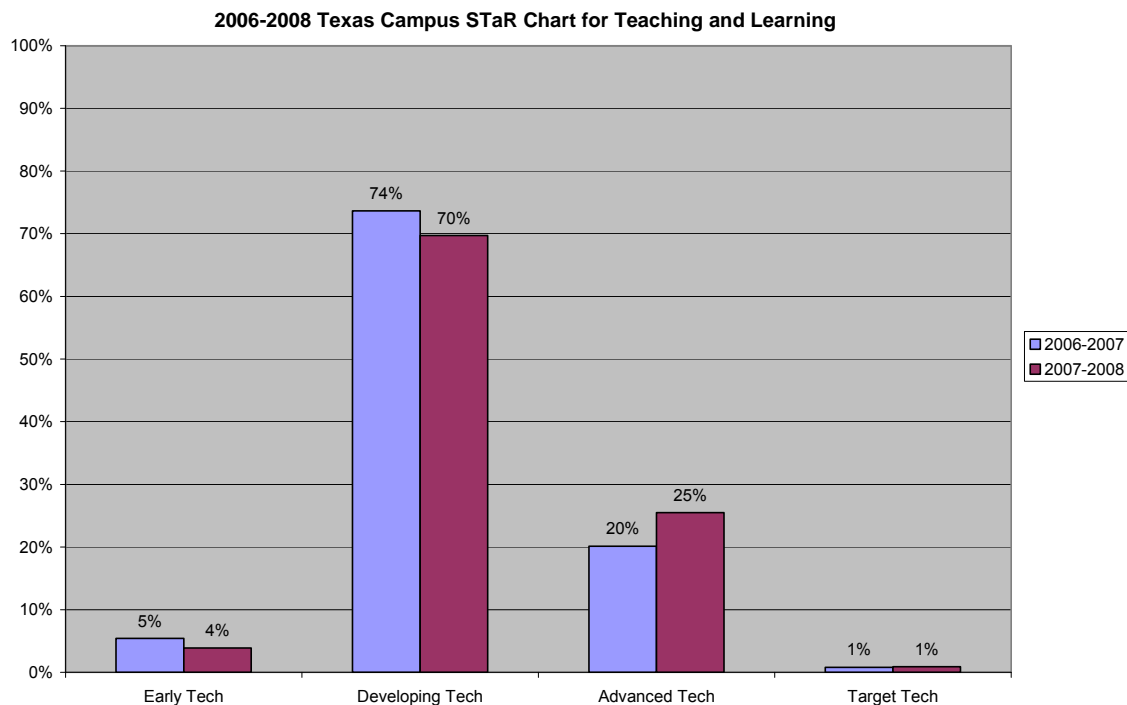
## State of the State

Texas public schools are progressing toward Target Tech in the key area of Teaching and Learning, according to the 2007-2008 data from the Texas Campus STaR Chart. The Campus and Teacher STaR chart were realigned to correlate to the State Board of Education's *Long-Range Plan for Technology, 2006-2020*. This plan was adopted by the State Board of Education in November 2006 and has guided the Agency, school districts and others in the implementation of technology.

The data shows that 2,014 campuses or 26% of all campuses are at the highest levels on the chart. That translates to 1,947 campuses or 25% of all campuses are at the Advanced Tech level and 69 campuses or 0.9% of all campuses are at the Target Tech level. In 2006-2007, those numbers were 1,561 campuses at Advanced Tech and 62 campuses at Target Tech.

At a Target Tech campus, the teacher serves as a facilitator, mentor, and co-learner. Students have on-demand access to all appropriate technologies to complete activities that have been seamlessly integrated into all core content areas. All of the Technology Applications Texas Essential Knowledge and Skills (TEKS) are met at Grades K-8. At the high school level, all Technology Applications courses are offered and at least four courses are taught.

Similar improvements were made at the Early Tech and Developing Tech levels when compared to the previous year's data. The latest data shows 5,327 campuses or 70% of all campuses are at the Developing Tech level and 298 or 4% of all campuses are at the Early Tech level.



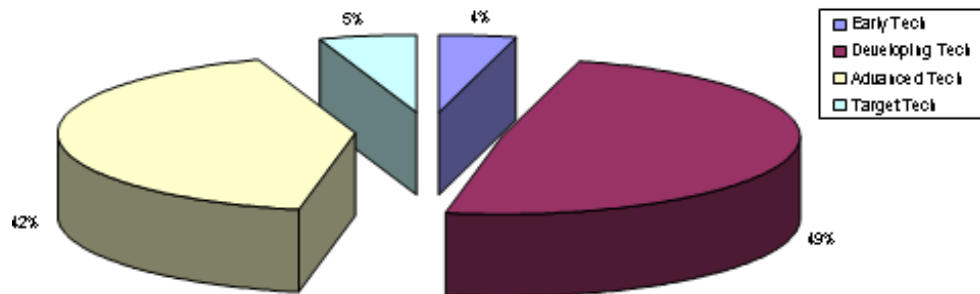
A closer look at the Campus STaR Chart in the Key Area of Teaching and Learning reveals more detailed information. In Focus Area TL 1, Patterns of Classroom Use, the data shows that 1% of campuses are at Target Tech, 17% of campuses are rated Advanced Tech, and 8% at Early Tech. The majority of campuses, 74%, are at Developing Tech for TL 1.

Developing Tech in this Focus Area means that teachers primarily use technology to direct instruction, improve productivity, model technology skills and direct students in the use of productivity applications for technology integration.

Students use technology to access, communicate and present information.

In the Campus STaR Chart, Focus Area TL 2, Frequency/Design of Instructional Setting Using Digital Content, almost half of the state's campuses, 49% are rated as Developing Tech. This means that most teachers have regular weekly access and use of technology and digital resources for curriculum activities in the classroom, library or lab. The data shows that 5% of campuses are at Target Tech, 42% are rated at Advanced Tech, and 4% at Early Tech.

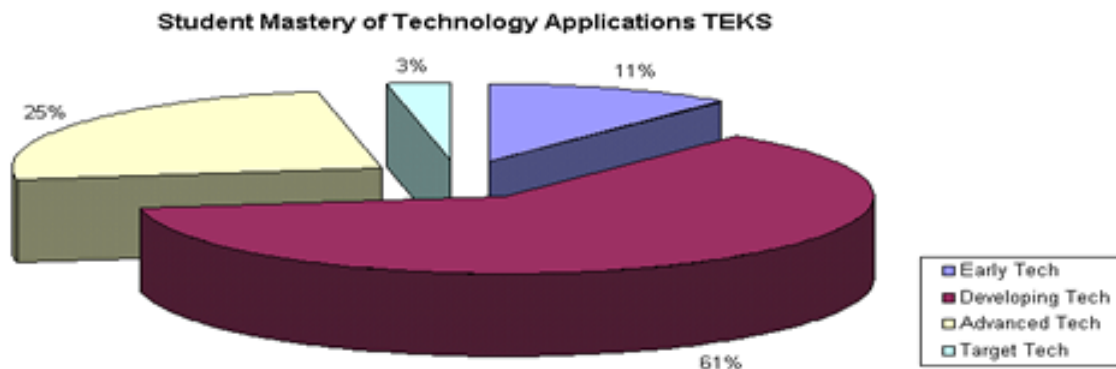
**Frequency/Design of Instructional Setting Using Digital Content**



In Focus Area TL 3, Content Area Connections, more than half of campuses, 54% are rated at Developing Tech. This means that most teachers on these campuses use technology to support content objectives. The Campus Chart also shows that 3% of campuses are at Target Tech, 40% of campuses are at Advanced Tech and 3% at Early Tech.

In Focus Area TL 4, Technology Applications (TA) TEKS Implementation (TAC Chapter 126), 70% of campuses are rated at Developing Tech. This

means on K-8 campuses, teachers are aware of the Technology Applications TEKS appropriate to content areas and regularly include technology skills in planning and implementing instruction and use the adopted Technology Applications materials. On 9-12 campuses, this means at least four high school TA courses are offered and at least two are taught. The Campus Chart also shows that 3% of campuses are at Target Tech, 18% are at Advanced Tech, and 10% of campuses are at Early Tech.



In Focus Area TL 5, Student Mastery of Technology Applications (TA) TEKS, 61% of campuses are at Developing Tech. Developing Tech means on K-8 campuses within each grade level cluster (K-2, 3-5 and 6-8), Technology Applications TEKS are mastered by up to 26 to 50% of the students. On 9-12 campuses, Technology Applications TEKS are mastered by 26 to 50% of the students as measured by integration in core classrooms and Technology Applications courses. This Focus Area also shows that 3% of campuses are at Target Tech, 25% of campuses are at Advanced Tech, and 11% are at Early Tech.

In the final Teaching and Learning Focus Area, TL 6 Online Learning, 67% of campuses are at Developing Tech. This means that most teachers customize several web-based lessons which include online TEKS-based content, resources, learning activities, and interactive communication that support learning objectives. The Campus Chart also shows that 1% of campuses are at Target Tech, 7% campuses are at Advanced Tech, and 25% of campuses are at Early Tech.

### **Technology Literacy and Integration**

Today's students are technology-savvy, feel strongly about the positive uses of

technology, and rely upon technology as an essential and preferred component of every aspect of their lives. Today's students need access to life-changing tools that are available for their use before they walk into a school building. With different expectations, these learners require a significant, immediate shift in teaching methodology.

The 21<sup>st</sup> Century learner expects content to be relevant and presented in a way that applies to the student's individual learning style. Learning no longer can be one-size fits all. It must be tailored to the individual student and accomplished through a multitude of learning resources, digital content, and multimedia resources in a variety of learning environments.

It is essential to teach the basics in which learning skills, in addition to content, are the focus. Students require skills that allow them to communicate in a technology-saturated society. They need technical as well as traditional reading and writing skills, and they need analytical skills for accessing and applying information. Problem-solving and reasoning skills must be learned so these students become critical and analytical thinkers in a digital age. Students expect these skills and new concepts to be taught with engaging methodologies and digital tools.

The 21<sup>st</sup> Century learner encounters different perspectives, different cultures, and different languages when involved in global collaborative learning. These students will develop personal skills that include the ability to self-assess their behavior, to develop and achieve goals, and to react to situations that require an ethical response. These learners use portable and personal technologies and have already become constant communicators. It is likely in the future that personal devices such as cell phones and new technologies yet to be developed will be their primary means of interaction with the digital world. As the technology improves at an accelerating rate, these learners will communicate, connect with digital content, collaborate with other learners, gather real-time data that include their current surroundings, and analyze data to fit their personal learning requirements. Portable devices will also provide real-time assessment of the learner's progress.

Successful implementation of the Texas Long Range Plan for Technology, 2006-2020 in Texas schools will result in an education system in Texas in which by 2020:

- 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, global and local social responsibility, complex decision-making, and sophisticated problem-solving.

- Learners develop the self-directed learning skills and attitudes that enable them to learn effectively for a lifetime of global citizenship.

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### **Technology Applications Curriculum**

The technology applications curriculum focuses on teaching, learning, and integrating digital technology knowledge and skills across the curriculum to support learning and promote student achievement. Digital technology refers to the use of computers and related technologies, such as mobile and handheld digital devices, digital video and graphic cameras and recorders, and probes. The curriculum provides a vertical view of expectations for students in prekindergarten through Grade 12. The Technology Applications Texas Essential Knowledge and Skills (TEKS) address the technology literacy and integration recommendations in the *Long-Range Plan for Technology, 2006-2020*, and the requirements specified in No Child Left Behind (NCLB), Title II, Part D. Educator standards for technology applications exist for all beginning teachers, as well as for teachers who want specialized technology applications certificates, and for those who want to become certified as a Master Technology Teacher. Progress in the implementation of the technology applications standards for both students and educators is documented through the Texas Campus and Teacher School Technology and Readiness (STaR) Charts.



## DESCRIPTIONS OF TECHNOLOGY APPLICATIONS TEKS STRANDS FOR GRADES K-12

### **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.

### **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 21<sup>st</sup> Century skills. The Technology Applications TEKS for Grades K-12 were adopted in 1997 and became effective in 1998. Most recently the Technology Applications Prekindergarten Guidelines were revised and approved by the Commissioner of Education in May 2008. The current scheduled beginning for the refinement and revision process of the Technology Applications TEKS is fall 2009 with the adoption date of the TEKS in November 2010.



The Plan also 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 TEKS.

In the STaR Chart-assessed modality Patterns of Classroom Use, the data showed that many campuses moved from the Early Tech level and moved to the Developing and Advanced Tech levels.

Teaching and Learning – Patterns of Classroom Use		06-07	07-08
Early	Teachers primarily use technology to supplement instruction, streamline management functions, and present teacher-centered lectures	12.28%	7.77%
Developing	Teachers primarily use technology to direct instruction, improve productivity, model technology skills, and direct students in the use of productivity applications for technology integration. Students use technology to access, communicate and present information.	71.90%	74.14%
Advanced	Teachers primarily use technology in teacher-led and some student centered learning experiences to develop higher-order thinking skills and provide opportunities for collaboration with content experts, peers, parents, and community. Students evaluate and analyze data to solve problems.	14.82%	17.04%
Target	Teachers seamlessly integrate technology in a student – centered learning environment where technology is used to solve real world problems in collaboration with business, industry, and higher education.	0.99%	1.05%

### NCLB Eighth Grade Technology Literacy Requirement

No Child Left Behind (NCLB) 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. The Texas Campus and Teacher STaR Charts assisted TEA in documenting student proficiency during this progress report timeframe. The Texas Campus and Teacher STaR Charts have provided an opportunity for school districts to develop strategies to monitor and document progress of integration of technology into curricula



and instruction. Additionally, the STaR charts assist school districts in monitoring and reporting student mastery of the Technology Applications TEKS to TEA. A new 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 additional component to the STaR Chart system, beginning in fall 2008. A recommendation in the LRPT that aligns with 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. Texas has rigorous technology applications standards and adopted instructional materials; however, it does not have a standard statewide process for assessing student technology literacy.



## 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.

#### 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 by December 31, 2006.

The growth in the Technology Applications (TA) TEKS Implementation was small as shown in the data from the

STaR Chart over the two school year period.

Teaching and Learning – Technology Applications (TA) TEKS Implementation		06-07	07-08
Early	K-8 Campuses: Teachers are aware of the TA TEKS and the adopted TA instructional materials.  9-12 Campuses: As least 4 high school TA courses are offered.	12.64%	10.25%
Developing	K-8 Campuses: Teachers are aware of the TA TEKS appropriate to content areas and regularly include technology skills in planning and implementation instruction; use adopted TA materials.  9-12 Campuses: At least 4 high school TA courses offered and at least 2 taught.	68.83%	69.65%
Advanced	K-8 Campuses: Teachers are knowledgeable and consistently use the TA TEKS as appropriate for content area and grade level.  9-12 Campuses: At least 4 high school TA courses offered and at least 4 taught.	16.43%	18.19%
Target	K-8 Campuses: Teachers are knowledgeable of and seamlessly integrate the TA TEKS as appropriate for content area and grade level.  9-12 Campuses: At least 4 high school TA course offered and at least 4 taught or included as new courses developed as independent study or innovative courses.	2.09%	2.59%

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## High School Technology Applications Standards

With specific regard to high school students, the Long-Range Plan for Technology encourages the Texas Education Agency to continue to support technology applications high school courses: both the role these courses play in teaching advanced technology knowledge and skills as well as the manners in which such courses support core curriculum content. The technology applications high school courses expand upon the K-8 standards and offer opportunities for in-depth study of technology, as a result preparing students for higher education.

Courses 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 Technology Applications courses support learning in the foundation curriculum areas by providing the flexibility to be taught in the context of English language arts, mathematics, science, and social studies. For example, journalism and newspaper can be taught as a part of the Desktop Publishing course, physics concepts can

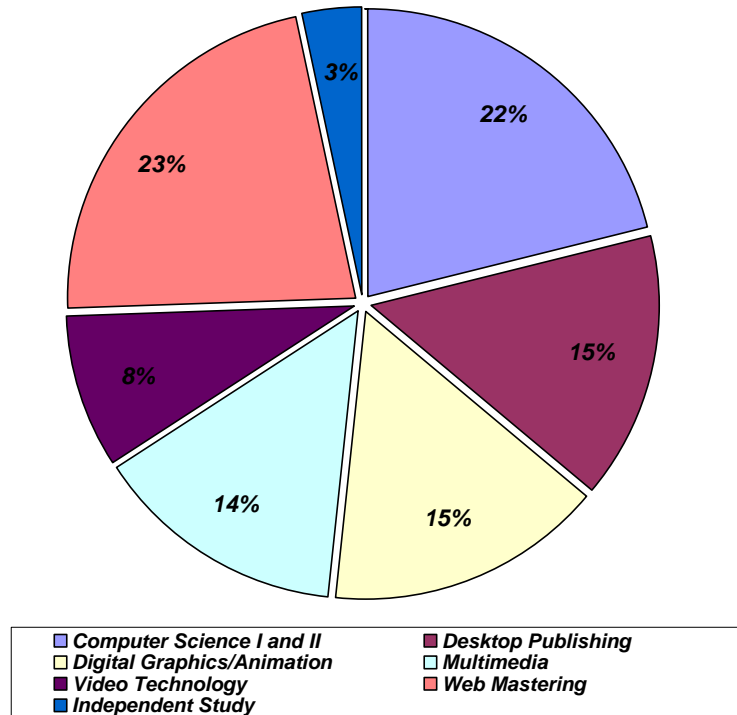


be taught as part of the Digital Graphics/Animation course, and algebra “how-to’s” can be taught through the Video Technology course. This connection with the foundation areas begins in the Technology Applications TEKS for kindergarten and continues to build ties and support the attainment of foundation-area TEKS through grade twelve.

Under 19 TAC Chapter 74, Curriculum Requirements, districts must offer at least four of these technology applications courses. There are multiple avenues for providing instruction in these courses, including distance learning and dual credit/concurrent enrollment. All high school graduation plans require one technology applications graduation credit. Through the NCLB Compliance Report, school districts are asked how many courses they are offering to students. Districts use a variety of funding sources including the technology allotment and NCLB, Title II, Part D funds to support the Technology Application courses.

During the 2006-2007 and 2007-2008 academic years, enrollment was highest in the Web Mastering course, followed by Computer Science I and II, Digital Graphics/Animation, Desktop Publishing, Multimedia, Video Technology, and Independent Study in Technology Applications.

### 2007-2008 Enrollment in Technology Applications Courses



In many schools, the Web Mastering course has become an avenue for development and maintenance of district and/or campus websites and has given students opportunities to work with classroom teachers to develop content-rich websites that can be used to support teaching and learning in the core curriculum areas.

Although enrollment in Computer Science courses (including Computer Science I, AP Computer Science I, IB Computer Science I, Computer Science II, AP Computer Science II, and IB Computer Science II) declined from peak enrollment of over 31,000 during the 1998-1999 school year through

academic years 2003-2004, in the last 4 years annual enrollment has stabilized with around 19,000 students. During the 2007-2008 school year, enrollment numbers climbed to over 19,500. Decisions by the College Board to delete one of the two Advanced Placement (AP) Computer Science exams (the AB) beginning in the 2009-2010 school year may impact future enrollment in Computer Science courses.

Data from the Campus STaR Charts for 2006-2007 and 2007-2008 showed that for Student Mastery of Technology Applications (TA) TEKS, the majority of campuses are at the Developing level.



Teaching and Learning – Student Mastery of Technology Applications (TA) TEKS for Grades K-12		06-07	07-08
Early	<p>K-8 Campuses: Within each grade level cluster (K-2, 3-5, 6-8), TA TEKS are mastered by up to 25% of the students.</p> <p>9-12 Campuses: TA TEKS are mastered by up to 25% of the students as measured by integration in core classrooms and TA courses.</p>	16.23%	10.80%
Developing	<p>K-8 Campuses: Within each grade level cluster (K-2, 3-5, 6-8), TA TEKS are mastered by 26 to 50% of the students.</p> <p>9-12 Campuses: TA TEKS are mastered by 26 to 50% of the students as measured by integration in core classrooms and TA courses.</p>	61.03%	61.72%
Advanced	<p>K-8 Campuses: Within each grade level cluster (K-2, 3-5, 6-8), TA TEKS are mastered by 51 to 85% of the students.</p> <p>9-12 Campuses: TA TEKS are mastered by 51 to 85% of the students as measured by integration in core classrooms and TA courses.</p>	20.16%	24.81%
Target	<p>K-8 Campuses: Within each grade level cluster (K-2, 3-5, 6-8), TA TEKS are mastered by 86 to 100% of the students.</p> <p>9-12 Campuses: TA TEKS are mastered by 86 to 100% of the students as measured by integration in core classrooms and TA courses.</p>	2.58%	2.67%

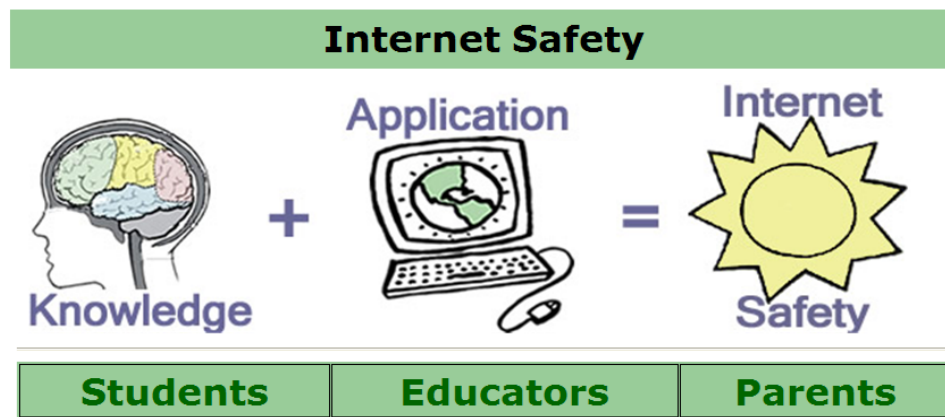
### Internet Safety

An important component of the technology applications curriculum 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 make available to school districts a list of resources

addressing Internet Safety. Resources are available on the TEA Internet Safety website:

<http://ritter.tea.state.tx.us/imet/intersafe>.

There are resources for students, educators, and parents. This website is important as more students use the Internet in the classroom and at home.



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## **NCLB Curriculum Integration**

### **Requirement**

NCLB also requires that technology be fully integrated into curriculum and instruction.

The citation follows:

...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 by December 31, 2006.

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 learning with digital technology. School districts and teachers are expected to report their progress in meeting this requirement through completing the Texas STaR Charts.

Campus STaR Charts for 2006-2007 and 2007-2008 showed that for Content Area Connections there was movement from the Early and the Developing levels toward the Advanced and Target levels of the STaR Chart.

Teaching and Learning – Content Area Connections		06-07	07-08
Early	Most teachers use technology for basic skills with limit or no connections with content objectives.	3.72%	2.74%
Developing	Most teachers use technology to support content objectives	62.27%	54.26%
Advanced	Most teachers incorporate technology in their subject area TEKS, and classroom applications of technology support the development of higher-order thinking skills and encourage collaboration.	32.30%	40.41%
Target	Most teachers and students seamlessly apply technology across all subject areas to provide learning opportunities beyond the classroom that are not possible without the technology.	1.72%	2.59%

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## **Subscription-based Instructional Materials**

Beginning in 2005-06, schools received technology applications instructional materials for Grades K-12. The instructional materials for Grades K-8 provide all students and teachers with the resources they need to gain digital technology knowledge and skills while improving learning in English language arts/reading, mathematics, science, and

social studies. The materials for high school are course specific. The LRPT illustrates the need for the Texas Education Agency to develop and provide school districts with strategies to inform and measure student mastery of the Technology Applications TEKS at grades two, five, and eight. Current strategies provided to schools are included in the adopted instructional materials for technology applications.

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### **Texas College Readiness Standards**

The Third Special Called Session of the 79th Texas Legislature passed House Bill 1, which became Section 28.008 of the Texas Education Code under the title, "Advancement of College Readiness in Curriculum." This legislation established that the Texas Education Agency (TEA) and the Texas Higher Education Coordinating Board (THECB)

<http://www.thecb.state.tx.us/collegereadiness/TCRS.cfm> work collaboratively toward the creation of college readiness standards. The statute required the formation of vertical teams comprised of secondary and postsecondary faculty from the four core content areas.

The 21<sup>st</sup> century workplace requires that students graduating from high school be prepared to acquire some post-secondary education. The state of Texas has taken the initiative to assure that its students are prepared for an ever-changing and complex future by way of the college readiness standards. The state's mission includes a decrease in the number of students requiring developmental education in higher education, decrease the number of high school graduates who need retraining in the job market, and lessen duplication of secondary and postsecondary courses.

Secondary school and higher education faculty in the four core content areas, English language arts, mathematics, science, and social studies, have worked together within teams to advance this mission. As a result, the state now has college readiness standards designed to reflect what students should know and be able to demonstrate in order to be successful in entry-level college courses.

The development and implementation of the standards has been organized

around three phases of work, with the first phase having been recently completed. The first phase was based on a number of team meetings predicated on the creation of draft standards for all four subject areas. The draft standards were adopted by the THECB on January 24, 2008 <http://www.thecb.state.tx.us/collegereadiness/CRS.pdf>. The standards are now subject to review and approval by the Commissioner of Education and incorporation into the curriculum by the State Board of Education. Two additional phases of work are now underway and fulfill the final college readiness requirements put forth under House Bill 1.

The above mentioned phases include:

- Phase 2 – Alignment of the public school curriculum with the college readiness standards (a gap analysis). The primary purpose of the college readiness standards gap analyses is to identify the gaps between the newly adopted college readiness standards and the TEKS.
- Phase 3 – Upon completion of Phase 2, the vertical teams will develop or establish minimum standards for curricula, professional development materials, and online support materials for students who need additional assistance in both public and higher education.

All materials are subject to criteria approval by the State Board of Education. The English language arts curricula and online materials must be made available to schools beginning with the 2009 fall semester, with the mathematics, science, and social studies materials respectively becoming available each subsequent fall semester.

The college readiness program establishes clear expectations for what a student needs to know in order to be successful in higher education and eventually the workplace. Higher standards equal less students requiring developmental education at the postsecondary level, that is, less duplication of secondary and postsecondary courses. Finally, the standards represent a full range of knowledge and skills that prepare students to be successful in a wide range of majors and careers.

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### **Other Online Resources to Support Teaching and Learning**

The Long Range Plan for Technology recommends the development of an online Texas Teacher Resource Center that provides students, parents and educators with technology-based resources that support and enrich the state-mandated curriculum. The Technology Applications Teacher Network (TATN) website includes resources that provide this support. In addition, the plan provides a recommendation that student performance data from district/state assessment instruments integrate with electronic curriculum resources to inform and differentiate instruction for every child. The state has provided online diagnostic tools in the area of mathematics and science—Texas Mathematics and Science Diagnostic System (TMSDS). TMSDS is a web-based TEKS-aligned diagnostic assessment system that covers Grades 3 – 8, Algebra I, Geometry, and Algebra II in mathematics and Grades 4 – 8, Integrated Physics and Chemistry, Biology, Chemistry, and Physics in science. TMSDS provides password-protected online student test-taking and other assessment security options. With TMSDS educators gain fast, easy, and regular access to diagnostic data on

students' progress in order to accurately adapt instruction and utilize resources to meet student needs. TMSDS is provided at no cost to Texas school districts and charter schools.

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### **Technology Literacy and Integration Pilots**

#### **Tech Lit Pilot Background**

Texas students are currently required by federal law 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 State Board of Education'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 adopted Technology Applications instructional materials; however, it does not have a standard statewide process for assessing student technology literacy.

During the 80th Texas Legislature, 2007, House Bill (HB) 2503 was passed and added the Texas Education Code (TEC), §39.0235 providing for the establishment of a pilot program in which participating school districts measure 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 assessment is to be administered by a school district participating in the pilot program. Learning.com's TechLiteracy Assessment product was chosen for this pilot after issuing a request for proposal. The law stipulated that the existing instrument must be administered online, align with the Technology Applications

TEKS, incorporate performance-based measures including a requirement that students perform certain technological tasks and respond to questions based on the completion of those tasks, and be designed in a manner to provide the district with an automatic report of the technology literacy proficiency of a student in a format that is compatible with the school district and state data information systems.

Sections to follow describe features of the TechLiteracy Assessment, explain the pilot study's research design and sampling process, and present preliminary findings from the analysis of assessment data collected in spring 2008.

## **TechLiteracy Assessment**

The TechLiteracy Assessment is a web-delivered assessment designed to authentically assess students' technology knowledge and skills. The participating students in eighth grade complete seven technology skill modules.

**Skill Modules.** Each module is designed to assess and report meaningful measures of student proficiency with technology tools and related knowledge and skills. The seven modules include:

- **Systems and Fundamentals.** This module assesses tasks central to the understanding and use of computer systems (e.g., creating, storing, and retrieving data; knowledge of basic computer parts and technology vocabulary; troubleshooting computer problems).
- **Social and Ethical.** This module assesses knowledge about accepted ethical norms as they relate to technology, as well as the impact of technology, past

and present, on society (e.g., understanding the basics of online safety, identifying ethical and unethical behaviors relative to the transmission of electronic files).

- **Telecommunications and Internet.** This module assesses tasks central to telecommunications, including intra- and inter-office networks, and Internet software such as browsers and email.
- **Word Processing.** This module assesses tasks central to formatting text and text/page layout (e.g., publishing, printing, and saving documents; applying layout options).
- **Spreadsheets.** This module assesses tasks unique and central to creating, editing, manipulating, and interpreting data in spreadsheet tables, charts, and graphs.
- **Database.** This module assesses tasks central to the use of common database interfaces, such as Web search engines, school library records, and specialized database design software.
- **Multimedia and Presentations.** This module assesses tasks unique and central to the creation and manipulation of graphic, audio, video, and other non-textual products by electronic means (e.g., inserting graphics and other multimedia into documents).

The TechLiteracy Assessment uses a combination of multiple-choice questions and interactive performance-based items to authentically assess students. The assessment was designed to be completed within a 50-minute class period, and the average



duration of the test is about 30 minutes. The test is not timed, so students can have as much time as they need to complete the modules. The complexity of tasks included in each module increases from the elementary level to the middle-school level.

**Scores.** The TechLiteracy Assessment yields reports at the district, school, class, or student levels. Student performance is measured in two ways:

- **Skill Module Results.** Results for skill modules indicate the number of items *correct* out of the *possible* number of items. For each middle-school module, there is the possibility of 6 items correct, and thus, an overall possibility of a total of 42 items correct (6 items by 7 modules). Skill module results provide indicators of students' strengths and weaknesses in each of the skill areas. Individual results are aggregated at the district, school, or class levels as skill module average, or mean, scores.
- **Proficiency Standard.** The proficiency standard is the scale score that a student must achieve to be deemed proficient with technology tools and concepts. This is a criterion-referenced assessment, with the proficiency standard set by a group of educational technology practitioners and independent psychometricians. The "met proficiency" standard for middle-school students is a scale score of at least 220. Individual student results are aggregated at the district, school, or class levels to produce an average scale score, standard deviation, percent of students met Proficiency Standard, and % of students below Proficiency Standard.

## Research Design

**Study Purpose and Questions.** The main research purpose of the pilot study is to determine the extent to which Texas students have mastered the Texas Technology Applications standards by the end of eighth grade, and accordingly, have acquired the technology skills necessary to be successful in the 21st Century global economy. We also aim to investigate the extent to which student mastery of technology standards varies by school characteristics (student poverty, campus size, district size, location) and student characteristics (gender, ethnicity, economic disadvantage). To answer our questions, we sought a sample of middle-school students for testing that would be representative of the state population.

**Sample Selection.** The sample size and selection process were driven to a large extent by the availability of state funds (\$30,000) to administer the TechLiteracy Assessment to a sample of approximately 3,600 students. In January 2008, the TEA released a Request for Statement of Interest (RFSOI) from public school districts and charter schools for participation in the pilot program. Participating school districts had to agree to the administration of the assessment in fifth, sixth, seventh, eighth, or ninth grade. The assessment was provided at "no cost," but districts had to have the infrastructure needed to administer the online assessment to all participating students (in one-to-three days) within the testing window of March to May 2008 and March to May 2009.

Responses to the RFSOI produced a pool of 64 schools nested within 26 districts. Districts typically were interested in assessing a variety of grade levels (mainly 6 through 8). Of the responding districts, seven (27%) were already administering the TechLiteracy

Assessment at some grade levels. As a first step in the sampling process, TEA staff and a research consultant agreed that the administration of the pilot assessment at grade 8 would produce the most useful data. Thus, our second pool included 22 districts and 56 middle, intermediate, and junior high schools that proposed testing at grade 8 or that might agree to test grade 8 students. For this sample of districts and schools, we compiled statistics on student enrollment, percentage of economically disadvantaged students, campus and

district size, location (e.g., Major Urban, Rural), Education Service Center region, and average STaR chart score. Our next objective was to select a sample of districts/schools from the pool that would represent Texas eighth graders overall. Table 1 compares the characteristics of all Texas middle schools that enroll grade 8 students ( $N = 1,407$ ) with the characteristics of our final sample of TechLiteracy Pilot districts/schools ( $N = 17$ ). Statistics are from AEIS 2007 campus and district reports.

**Table 1. Characteristics of All Texas Middle Schools (with grade 8) and TechLiteracy Assessment Pilot Sample Schools**

<b>Indicator</b>	<b>Texas Middle Schools N = 1,407</b>	<b>TechLiteracy Pilot Sample N = 17</b>
<b>District Size<sup>a</sup></b>		
% Very small (999 or less)	17.3	23.5
% Small (1,000-2,999)	18.0	17.6
% Mid-Size (3,000-9,999)	16.1	17.6
% Large (10,000 or more)	48.6	41.2
<b>Campus Size<sup>a</sup></b>		
% Small (300 or less)	28.6	29.4
% Mid-Size (301-600)	19.8	17.6
% Large (601 or more)	51.6	52.9
<b>Student Characteristics<sup>b</sup></b>		
Average number of students	614	644
Average number of students in grade 8	229	219
% Economically disadvantaged	55.5	52.8
% African American	13.9	14.2
% Hispanic	42.6	35.4
% White	40.8	48.7
% Special Education	13.9	14.4
% Limited English Proficient	7.9	9.2
% Passing All TAKS tests	70.8	71.2

<sup>a</sup> Pearson  $\chi^2$  tests for differences in size distributions revealed no statistically significant differences between groups.

<sup>b</sup>  $t$ -tests for differences between group means were not statistically significant.

Our sample selection process involved the generation of "sample options" and comparisons of the sample's characteristics with statewide distributions and averages. Our sample selection process appears to have

produced a statistically valid sample of schools, given there are no statistically significant differences between statewide and sample statistics. Our final sample also included just two of the seven districts that were administering

the TechLiteracy Assessment prior to the pilot. We excluded most of those districts because this factor could potentially bias our results. We reasoned that districts that purchased the TechLiteracy Assessment with their own funds might make students' mastery of technology skills a higher priority. We included two districts in the sample because their campuses and students contributed to a statistically representative sample.

## Preliminary Findings

Table 2 provides outcomes for the 3,221 eighth graders in 17 districts/schools that completed the first phase of testing in spring 2008. Skill-module comparisons are made with all middle-school students who completed the TechLiteracy Assessment nationwide.

**Table 2. Summary Statistics for TechLiteracy Assessment Completed by Students in Spring 2008**

	Texas Eighth Graders N = 3,221			All Middle School Students <sup>c</sup> N = 131,755
	Range	Mean	SD	Mean
Scale Score	100 - 296	216.4	37.2	--
Skill Module Score <sup>a</sup>				
Systems & Fundamentals	0 - 6	2.8	1.5	3.0
Social & Ethical	0 - 6	3.2	1.4	3.4
Telecommunications & Internet	0 - 6	3.8	1.6	3.8
Word Processing	0 - 6	3.2	1.5	3.3
Spreadsheets	0 - 6	2.8	1.6	2.9
Database	0 - 6	2.9	1.5	2.9
Multimedia & Presentations	0 - 6	2.3	1.4	2.4
Proficiency Score <sup>b</sup>				
% Met Proficiency Standard	--	59.1	--	--
% Below Proficiency Standard	--	40.9	--	--

<sup>a</sup> Each module has a possibility of 6 items correct.

<sup>b</sup> The middle-school proficiency standard is a Scale Score of 220.

<sup>c</sup> Statistics are for all middle-school students (grades 6 to 8) that completed the TechLiteracy Assessment in spring 2008. These students probably do not comprise a nationally representative sample.

## Key Findings

- The average Scale Score for the sample of Texas eighth graders (216.4) fell short of the middle-school Proficiency Standard (Scale Score of 220).
- Mean scores for most of the Skill Modules indicate that eighth graders completed about half of the six items correctly. Students had the highest module score for Telecommunications and Internet, which may reflect their personal use of technology as a communication tool.
- Just over half of the accessed Texas eighth graders (59.1%) met the Proficiency Standard needed to show proficiency with

technology tools and concepts. Thus, many of the participating eighth graders in this small pilot have not acquired the technology knowledge and skills needed to compete in a global society.

- Ten of 17 districts (59%) had an average Scale Score that met or exceeded the proficiency standard of 220.

Overall, findings suggest that districts and schools are not providing adequate

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### **Vision 2020**

The *Long-Range Plan for Technology, 2006-2020* addresses the needs of education in Texas and plants 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 hours a day, 7 days a week (24/7) appropriate to individual strengths, needs and learning styles. Students know they will be prepared to thrive in a global 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 citizens. 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 demand in order to individualize instruction. The use of digital tools and resources and 24/7 professional development opportunities transform the educators' role in the educational process. Increased communication

supports for students' mastery of technology knowledge and skills. This is preliminary data from the study after the first year's administration of the exam. After the final phase of testing in the spring of 2009, data from 2008 and 2009 will be evaluated and compiled into one legislative report which will be published in December 2009. Through this small pilot, the state will gain information on the assessment of technology literacy.

will enhance collaboration between school, home, and community.

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

The vision of this new plan is ambitious. Charting the course for educational technology through 2020 requires systematic planning and step-by-step strategies implemented over time to make the vision a reality. The recommendations for Teaching and Learning; Educator Preparation and Development; Leadership, Administration and Instructional Support; and Infrastructure for Technology implemented together will help realize the overarching vision of the plan by 2020. The plan is online at <http://ritter.tea.state.tx.us/technology/lrpt>.

Title II, Part D, Subpart 1 of the No Child Left Behind Act, (NCLB) Enhancing Education Through Technology Act of 2001, provides assistance to local educational agencies (LEAs) for the implementation and support of a comprehensive system that effectively uses technology in elementary and secondary schools to improve student

academic achievement. Texas has consistently used Title II, Part D to accelerate the implementation of the long-range plan for technology.

### **Purpose of Vision 2020**

In January of 2008, the TEA issued a Request for Application to solicit grant applications from eligible applicants to implement programs that meet the intent of Title II, Part D, Enhancing Education through Technology (EETT) addressing today's students who lack access to needed courses and improving literacy and academic skills as well as to improve technical skills, the latter of which is becoming increasingly important in our competitive global society. Students can benefit from the use of today's technology tools to enhance the learning process and to accommodate different learning styles. Teachers will need to have access to high quality, relevant, and ongoing professional development not only on the use of these technology tools, but also on how to teach using those tools in a modern, interactive, and engaging learning environment. These programs should make systemic changes in the way teachers teach and students learn by creating professional learning communities that enable their members to share best practices, discuss challenges, and develop strategies for improving instruction using technology. Successful programs should involve careful planning, supportive leadership, and data-driven decision-making. These programs must involve all stakeholders in creating and sustaining professional learning communities.

Vision 2020 grants funded under NCLB Title II, Part D, Enhancing Education through Technology will focus on the best practices from earlier pilots implemented within the state of Texas such as the Virtual School Pilot (VSP) and the Technology Immersion Pilot (TIP). Two strands are included in the

Vision 2020 grant: technology immersion and virtual learning.

The purpose of the technology immersion strand is to provide schools with funding necessary to provide

- 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
- productivity, communication, and presentation software for use as learning tools;
- online instructional resources that support the state curriculum in English language arts, mathematics, science, and social studies
- online assessment tools to diagnose students' strengths and weaknesses or to assess mastery of the core curriculum
- professional development for teachers to help them integrate technology into teaching, learning, and the curriculum
- initial and ongoing technical and pedagogical support

The purpose of the Virtual Learning Strand is to build capacity to participate in the TxVSN and provide students opportunities to take online courses through the network. Teachers planning to teach online courses over the network must complete approved professional development for online teaching. Applicants may wish to become a provider district and provide electronic courses through the TxVSN for students in that district or for students enrolled in another district or school. Applicants may wish to enroll students in online courses provided through the network from another district or school.

Virtual Learning Strand applications described plans to build capacity to participate in the TxVSN and to provide



students with opportunities to take online courses through the network. A collaborative application may include both provider and receiving districts and other eligible entities. Eligible applicants may apply for funding to build capacity to serve as: a provider and/or a receiving district as part of a collaborative of multiple entities.

Funding for Vision 2020 is provided by Title II, Part D federal funds. \$11.3M is available. A total of 96 applications were received, which included 84 applications for immersion and 12 applications for virtual learning. After a rigorous review process, 17 immersion applications and 9 virtual learning applications were recommended for funding.

Vision 2020 projects will begin on September 1, 2008 and end June 30, 2010.

**The Immersion Strand awardees are as follows:**

**Anthony ISD** is a 3A school district serving 778 students. Anthony is unique in that it is considered a rural community, yet sits midway between Las Cruces, New Mexico and downtown El Paso with accessibility from I-10, the Anthony Gap and Trans-Mountain. Although AISD is a small district, it has made a major investment in technology and associated infrastructure. The role of technology at AISD is to achieve excellence and equity in student performance. This will be accomplished by using technology to accelerate instruction especially for special populations, particularly minority students. For all students, technology is expected to stimulate creativity and curiosity as well as to assist in the development of problem-solving and higher order thinking skills. Finally, technology will be utilized to establish the levels of technological literacy and competence to provide students with the

skills that they will need in the future. Vision 2020 funds will be used to provide 254 students and 29 teachers in grades 9-12 with Apple computers to provide on-demand access at school and at home. In addition to the laptops students will use peripherals such as cameras, projectors, scanners, and appropriate software. Apple Computer will provide research-based professional development to help teachers create 21<sup>st</sup> century learning environments. Professional development from the Education Service Center Region 19 will focus on the use of an aligned curriculum. Visit the district website at <http://www.anthonysd.net/>.

**Atlanta ISD** is a 3A school district located in rural Northeast Texas, serving approximately 1900 students. Atlanta is immersing the 8th and 9th graders in all core subjects with emphasis in Math and Science using Apple laptops with the intent to engage students in learning and improve TAKS scores in these instructional areas. The school district will be using the six critical components of technology immersion as identified by the Texas Technology Immersion Project (TIP). Atlanta is using Apple trainers to provide staff development in a three phase program to assure mastery and integration of skills. The first phase of staff development focused on teacher understanding and use of the Apple operating system and software available for student and teacher use. The next phase of staff development will focus on curriculum integration in specific disciplines. Use of the third phase will be based on needs as assessed. In addition to Apple trainers for staff development AISD will be providing in house trainers for staff development and curriculum integration. AISD is providing numerous online instructional resources and online formative assessment tools. To close the gap for students without Internet access at home the Middle and High

School libraries are providing time after school and in the evening for students to have a place to work with Internet access. Visit the district website at <http://www.atlisd.net/>.

**Bryan ISD** is a 5A school district located about 92 miles north-northwest of Houston serving 14,827 students. Jane Long MS will follow in the previous TIP footsteps of Stephen F. Austin Middle School in 2004 and Sam Rayburn Middle School in 2006 by immersing at least 2 grades of their campus, grades 6 and 7 including 229 students and 29 teachers with new Apple laptops. Bryan's 1Vision website has extensive information on what they have been able to do with TIP and the students showcase their work every year at their 1Vision Showcase. Bryan is a leader in technology immersion and encourages other schools interested in moving to a 1:1 environment to visit them. See what they have been able to accomplish at <http://www.ci.bryanisd.org/1Vision/Welcome.html>.

**Carrizo Springs ISD** is a 3A school district serving 2,388 students. Carrizo Springs is 81 miles northwest of Laredo. Carrizo Springs is also forty-five miles east of the Mexican border. The Vision 2020 grant will serve 317 students, 23 teachers and 2 administrators in grades 7 and 8 by providing laptop computers, appropriate software and intensive professional development. The district will partner with Texas A&M International University to provide supportive and sustained professional development. Technical assistance will be provided by the USDA Rural Development group. The district also will partner with Southwest Community College. Visit the district website at <http://www.cscisd.net/>.

**Coleman ISD** is a 2A school district serving 991 students. Coleman is located near the geographical center of Texas, 54 miles southeast of Abilene, in a rural community with less than 5,000 residents. Previously, Coleman Junior High implemented a TIP grant providing laptop computers to all 8<sup>th</sup> grade students. To continue that effort, Coleman High School will provide Dell laptops to approximately 300 students and 37 teachers in the 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> grades. Online curriculum tools, such as Classroom Connect and eChalk, will be used in reading/language arts, mathematics, science and social studies. Utilization of WebCCat Gold will provide on-going diagnostic assessment of student progress in the core content areas to further support instructional effectiveness. Pearson Achievement will provide professional development services to all high school teachers and administrative staff. Visit the district website at <http://www.colemanisd.net>

**Coolidge ISD** is a 1A school district located 45 miles northeast of Waco, serving 299 students. Coolidge High School will be immersing 120 students, 15 teachers and 2 administrators in grades 6-12. Coolidge is a year round school. They will be using Apple MacBook computers, with the major focus of integrating technology into the curricula and instruction. They will provide intensive professional development delivered by the Apple professional development trainers. They will partner with Navarro College and Education Service Center Region 12. Software solutions will include netTrekker, an online, TEKS-aligned software that links directly to state standards and benchmarks in the core content areas of English language arts, mathematics, science and social studies. My Access writing and Explore Learning Math and Science will provide a steady flow of quantitative and qualitative measures of student

performance to benchmark individual achievement levels within classrooms. Visit the district website at <http://www.coolidge.k12.tx.us>.

**Eastland ISD** is a 2A school district located 60 miles west of Abilene, serving 1168 students. Siebert Elementary School is a U. S. Department of Education Blue Ribbon Award school. Siebert Elementary School serves approximately 624 students in grades K-5. The Vision 2020 grant will provide Apple laptop computers, Promethean interactive white boards and student response systems to 175 students and 14 teachers in the 4<sup>th</sup> and 5<sup>th</sup> grades. The focus of the project is continuous innovation with technology leading to increased student achievement. Visit the district website at <http://www.eastland.esc14.net>.

**Gladewater ISD** is a 3A school district located twelve miles west of Longview and thirty-five miles north of Tyler, serving 2,148 students who travel from inside the city limits and rural areas that reach into Smith, Upshur, and Gregg counties. Gladewater ISD, in partnership with Region 7, Kilgore College, Texas State Technical College, Agile Mind, Klein ISD, and SuddenLink, will be immersing all students (600 students and a total of 55 teachers) in Gladewater High School with laptops. The first year, all core subject teachers will receive training and laptops and during year two the remainder of the teachers will be receiving the computers. Gladewater partner, TSTC, is using a Smart Board to capture lessons as a podcast and post them on the school website. All homes will be offered discounted Internet connectivity through the SuddenLink partnership. A technology help desk /data liaison will be assigned to collect data needed to make daily decisions to improve activities and training at the high school

and provide technical assistance. Visit the district website at <http://www.gladewaterisd.com/>.

**McAllen ISD** is a 5A school district serving 24,983 students in Hidalgo County, located in the South Texas Rio Grande Valley 4 miles from the Mexico border. McAllen has entitled their project ACCESS (A Computer per Child Empowers Student to Succeed) and will focus on raising students' academic achievement in the core content areas of English language arts, mathematics, science and social studies. Lamar Academy and Covenant Christian Academy will be partners in this immersion project. Lamar Academy will immerse grades 6-8 by providing Dell laptops to 206 students and 3 teachers. Covenant Christian Academy will provide Dell laptops 32 sixth grade students and 6 teachers. Providing teachers with ongoing, sustained professional development will be key in the success of this project. Professional development for teachers will include a blended approach including online training, workshops and technology integration coaching. Visit the district website at <http://www.mcallenisd.org/>.

**New Summerfield ISD** is a 1A school district located in East Texas, in Cherokee County, serving 440 students. New Summerfield ISD is partnering with Troup ISD during this grant. New Summerfield is immersing all high school students (122 students and 14 teachers) while Troup is targeting 9th and 10th graders (150 students and 40 teachers). Training through Apple Computer has begun and all computers have been received. The districts are using their current curriculum and integrating technology as a tool. They will also be receiving data probes for science investigation lessons. The two school districts are sharing a Technology Integration Specialist to conduct workshops as well as working

1-1 with teachers on lessons and integration strategies. To see some of the podcasts already completed by Troup ISD, go to <http://troup3.troupisd.org/users/>. Visit the New Summerfield website at <http://www.nsisd.sprnet.org/education/district/district.php?sectionid=1>.

**Pearsall ISD** is a 3A school district located about 60 minutes southwest of San Antonio in Frio County, Texas serving 2312 students. Their program will follow after the San Antonio Technology in Education Coalition (SATEC) model to create an environment in math and science that increases the use of technologies in the classroom. They will do this by implementing a varied approach to professional development including workshops on teaching techniques, innovative classroom design, classroom management and improve technology skills. They have also included a regular one-to-one coaching and mentoring component for classroom teachers to ensure the techniques learned in the workshops are implemented. Approximately 189 Freshman students and 8 teachers will participate in the program. The goal is to let these students keep the laptops through the next 4 years in order to evaluate their progress with students who are not immersed. They will use tablet PCs, LCD projectors, digital cameras, camcorders, probes and sensors, professional productivity software, graphic organizers, remote cameras, and email. See their district website at <http://www.pearsallisd.org/>.

**Roosevelt ISD** is a 2A district located in about 10 miles east of Lubbock, but not based within the community per se. Approximately 85% of the 1150 students who attend schools in Roosevelt ISD utilize school transportation to get back and forth to school each day. More than 10% of the student population lives in

residential Child Protective Services facilities. The Vision 2020 grant will involve 350 students and 40 teachers in grades 9 through 12 at Roosevelt High School. The focus of this grant is on the transformation of the learning environment through the creation of authentic projects focused on real world scenarios. In addition to Apple laptop computers, students will use Vantage My Access Writing, Apex Learning Class Tools Achieve and Beyond Books, and Explore Learning Math and Science and a number of other great software packages. The vendor partner trainers will provide professional development. Visit the district website at <http://www.roosevelt.k12.tx.us>

**San Benito ISD** is a 5A school district serving approximately 11,022 students in Cameron County, located in South Texas close to the United States/Mexico border. Fred Booth Elementary will be immersing grades 3-4. Their grant program, Project Helpful Technology for Mobile Learners (HTML) will provide Apple MacBook laptops for 205 students and 11 teachers, 10 Promethean interactive whiteboards, and 10 student response systems. The focus of this grant is providing instructional resources that support immersion in the core subject areas. Additional resources include CSOPE, LightSpeed Field Exploratory tools, and Compass Learning core support software. Teachers will receive ongoing professional development through on-site technology immersion coaching, workshops from ESC Region 1 and technology conferences. Vendor partner trainers will also provide professional development related to grant activities. Visit the district website at <http://www.sbcisd.net/>.

**Santa Maria** is a 1A school district serving approximately 600 students in Cameron County, located in South Texas close to the United States/Mexico

border. Santa Maria High School will be immersing 150 students and 20 teachers, providing Apple MacBook computers to each. Their grant focus is integrating technology into the curricula and instruction. Teachers have received their laptops and training through Apple Computer has begun. Their training package includes 6 2-day sessions throughout this school year. Students will receive their laptops in January. Visit the district website at <http://www.smisd.net/>.

**Santa Rosa** is a 2A school district serving 1217 students in Cameron County, located in South Texas close to the United States/Mexico border. Jo Nelson Middle School will be immersing grades 6-7 by providing PC laptops for 186 students and 21 teachers.

Project URL (Unlimited Resources for Learning) will focus on raising student academic achievement and providing online instructional resources and classroom tools that support the state curriculum in the core content areas of English language arts, mathematics, science and social studies. Professional development will be incorporated to help teachers integrate technology into teaching. This will include sessions from ESC Region 1, technology conferences and seminars, on-site technology coaching, and vendor training from Promethean (whiteboards), Vernier (classroom tools/digital microscopes), LightSpeed, Compass Learning and others. Visit the district website at <http://www.srtx.org/>.

**Stockdale ISD** is a 2A school district serving 786 students located 40 miles SE of San Antonio. The purpose of the Vision 2020 grant is to provide 218 students, 26 teachers, 31 staff and 1 administrator with a tablet PC and state of the art productivity, communication and presentation software, quality instructional resources to support the curriculum in all academic areas and

ongoing professional development for teachers and administrators to integrate technology into teaching and learning. Education Service Center Region 20 will be an active partner in the grant activities. The district will continue to build on the progress made through a collaborative TARGET grant led by Floresville ISD. The district is in the process of building a state-of-the art high school due to open in fall of 2009. Visit the district website at <http://www.stockdale.k12.tx.us/>.

**Trinity ISD** is a 1A school district serving 1,170 students and located in southeast Texas in Trinity County, and encompasses a geographic area of 142 square miles. Trinity MS will be immersing 238 students and 15 teachers with laptops. They are building on previous grant successes with TARGET and STAR grants. Teachers will be provided with interactive whiteboards. They will develop an ongoing professional development program that encompasses technology immersion in all 4 core content areas. They will focus on using technology resources in the classroom as well as online curriculum resources and professional development. They will partner with Harcourt Connected Learning for delivery of Classroom Connect. A full time campus technology integration specialist will be made available to provide ongoing technical and pedagogical support to teachers and provide just-in-time professional development on new and upcoming technologies. Trinity intends to match funds contributed by Vision 2020 for the salary of the integration specialist. Maintenance and repair of the laptops will be done through a manufacturer supported self-maintainer program and will provide spare laptops and inventory to support their objectives. See their district website at <http://www.trinity.k12.tx.us>.



**The Virtual Learning Strand awardees are as follows:**

**Alief ISD** is a 5A urban school district in Southwest Houston serving approximately 45,500 students. As a receiver district, Alief's goal is to provide access to high quality distance learning opportunities to Alief students who meet the student eligibility criteria. Student objectives are to increase the number of high quality distance learning opportunities from 1 class offered to at least 5 classes offered and to increase the number of students enrolled and actively participating in online courses from 30 students to a least 660 students. Alief will increase the number of teachers trained to facilitate online courses from 9 staff members to at least 20 staff members as well as increase the number of administrators trained in best practices in online learning from 4 administrators to at least 20 administrators. Alief staff members engaging in and actively participating in online staff development courses in content areas (math, science, language arts, etc.) will increase from 9 staff members to at least 1,350 staff members. Courses will begin as a supplement to traditional course work in order to acclimate online learning for teachers, administrators, and students. Students will participate in math and science courses, and in foreign language classes such as German that the district is unable to offer. For more information on Alief ISD, go to [www.aliefisd.net](http://www.aliefisd.net).

**El Paso ISD (EPISD)** is a 5A school district located on the Texas-New Mexico border serving approximately 62,123 students. Two high schools, Austin and Chapin, will be participating in the Virtual Learning grant to provide online course curriculum and instruction through the TxVSN in order to improve student academic achievement, to assist every student in becoming

technology literate, and to encourage teachers to use web-based instructional strategies that are supported by professional development. The district will make online courses available to 100 students in Grades 9-12. As a provider district, EPISD is focused upon the development of AP Art History and Music Theory online courses. It is anticipated that a total of 19 teachers will receive professional development through the grant. The district plans include a mobile TV studio, camera and audio equipment, and "set" material. Teachers will be able to use recording software to upload lectures or activities into online modules that students may access via video streaming or interactive programs. For further information on EPISD, see [www.episd.org](http://www.episd.org)

**Frenship ISD** is a 4A school district located in Wolfforth, TX, in Southwest Lubbock County serving approximately 6,704 students. Frenship plans to participate as both a provider and a receiving district. Frenship's grant will provide funding for 300 students in Grades 9-12 to take online classes. It will enable 20 teachers to take an orientation course on online learning, 15 teachers to complete the TxVSN-required professional development, and approximately 10 teachers to complete professional development to develop online courses. The district will provide 60 student computers to be used specifically by students enrolled in online courses, and 10 laptops for teachers completing the online training programs. Frenship will increase the number of online courses available to students; increase the number of teachers who can facilitate or work with students taking online courses; and increase the number of teachers who are prepared to teach online for TxVSN. The district will pursue online elective and core curriculum courses to support the state curriculum in English/language

arts, mathematics, science, and social students. In particular, Frenship is targeting alternative math and science courses for students. More information on Frenship is available at [www.frenship.us](http://www.frenship.us).

**Galveston ISD** (GISD) is a 5A school district located on the Gulf of Mexico, serving approximately 7,903 enrolled. The district plans to participate in the TxVSN as both a provider and a receiver school district. Examples of the district's participant schools include Ball High School T-STEM Academy, Ball High School Accelerated Instructional Model (AIM) Academy (an individual instruction program for At-Risk students, Drop-Outs, Credit Recovery) and Ball High School-Shriner's Children's Hospital Burn Center, serving students who are burn patients from all over the United States. GISD will develop a Galveston Virtual Online School as part of its goal to establish 21<sup>st</sup> Century teaching and learning in the district. It plans to provide quality online curriculum to hospital bound students who are unable to attend regular classes, immerse students in technology, enhance course selections available to At-Risk students, and build the capacity of teachers at Galveston Virtual Online School. The district will provide an orientation session on online learning for both students and those district parents whose students will be taking online courses. GISD will provide 35 student laptops to students who are taking online courses. GISD plans to enroll a total of 453 students in online courses in Grades 9-12. The district anticipates that 156 teachers will participate in professional development for teaching online. The district further anticipates that 25 administrators/principals will participate in professional development related to online learning. For additional information, see [www.galveston-schools.org](http://www.galveston-schools.org)

**Irving ISD** is a 5A school district located in the Dallas-Ft. Worth area serving approximately 32,746 students. The district plans to be a provider district and proposes to develop at least 3 online courses by June 2009, with an additional 4 provided by June 2010. The district will use grant funds to establish the Irving Virtual School. The district is establishing the virtual school in recognition that its students need scheduling options to fulfill the state's 4x4 curriculum requirement, scheduling flexibility, access to courses not offered locally, and expanded course options to meet different student learning styles. The grant will potentially impact 500 students who will enroll in at least one online course, and 150 who enroll in more than one online course. It is anticipated that 48 teachers will participate in professional development for online learning. The district plans for 24 administrator/principals to complete some professional development for online learning. All Irving ISD high school campuses will be involved in this project. The district will coordinate bond funds with grant funds to provide laptops for students. Additional information about Irving ISD is available on the district website at [www.irvingisd.net](http://www.irvingisd.net)

**Patton Springs ISD** is a 1A school district located in Afton, Texas, approximately 74 miles northeast of Lubbock serving approximately 107 students. The district has been an exemplary district for 12 years and plans to be both a provider and receiving district. As a receiver district, its goal is to increase students' access to additional elective courses and highly qualified math and science teachers. As a provider district, developing online courses for the TxVSN will enable its teachers to reach students statewide with their curriculum. At the high school level, Patton Springs plans to provide online courses to 47 students in Grades 9-12: 13 students in Grade 12, 13

students in Grade 11, 12 students in Grade 10, and 9 students in Grade 9. It also plans to provide professional development for online learning to 10 teachers and 2 administrator/principals. The district will provide 20 laptops for student use in online courses; 10 laptops for teacher use in preparation; five Promethean boards for classroom integration, and 2 Qwizdom learning systems for classroom integration. Patton Springs website address is: [www.pattonsprings.net](http://www.pattonsprings.net)

### Region One ESC

Region One ESC has formed a Virtual Learning collaborative of districts that serve students ranging from Lyford CISD with 1,540 students to Laredo ISD with 25,148 students. Region 1 and its partner districts see online learning as a means of addressing some of the challenges the area faces as a result of shifting demographics, a changing

economy, student mobility, poverty, language and cultural differences. Among its objectives, the partner districts will train 40 core or elective subject area teachers teach online, provide professional development to 14 administrator/principals to increase their understanding of online learning, and have a total of 260 students engaged in online learning. In addition, the service center plans for 130 parents to receive training that will benefit the online learning experiences of students. Region One is partnering with Class.com, Texas Virtual School (TVS) Region 4 ESC, University of Texas-Pan American in its Digital Learning Link Program, offered through the service center's T-STEM Center. Courses to be developed include Essential Math, Health Science 1A and 1B, Oceanography, Anthropology, Civics, Spanish 1A and 1B and Spanish 2A and 2B.

### Region One ESC Participating Districts

General District Information including Total Enrollment as of October 2007

District	Total Students	Provider / Receiving	Website
Laredo ISD	25,148	Receiving	<a href="http://www.laredoisd.org/">http://www.laredoisd.org/</a>
Lyford CISD	1,540	Receiving	<a href="http://www.lyfordcisd.net">http://www.lyfordcisd.net</a>
Rio Hondo ISD	2,350	Receiving	<a href="http://www.riohondoisd.net/">http://www.riohondoisd.net/</a>
Valley View ISD	4,356	Receiving	<a href="http://www.vview.net">http://www.vview.net</a>

### Region 11 ESC

Region 11 ESC has a shared services agreement with 6 of its districts, forming the Cyberlearning Collaborative Region 11 (CC11). The districts within the shared services agreement range in size from Lingleville ISD with 204 students to Arlington ISD with 62,863 students. The vision is to improve student achievement by building capacity for access to quality online anywhere anytime coursework to supplement district offerings. CC11 will provide professional development to build capacity to participate in TxVSN.

CC11 will also provide the use of a laptop computer for students taking an online course in each of the participating high schools. The collaborative projects that 256 semester courses will be offered. CC11 will provide an Online Learning Specialist to each collaborating campus to facilitate core curriculum teachers moving online and blended learning. The collaborative indicates that 10 teachers will take professional development for teaching online, plus 64 teachers in core subject areas will participate in professional development

related to online learning, and 16 facilitators will receive training to provide

on-site support to online students.

<b>Region 11 ESC Participating Districts</b>			
General District Information including Total Enrollment as of October 2007			
District	Total Students	Provider / Receiving	Website
Arlington ISD	62,863	Receiving	<a href="http://www.aisd.net/">http://www.aisd.net/</a>
Cleburne ISD	6,691	Provider and Receiving	<a href="http://www.cleburne.k12.tx.us/">http://www.cleburne.k12.tx.us/</a>
Dublin ISD	1,311	Receiving	<a href="http://www.dublin.k12.tx.us">http://www.dublin.k12.tx.us</a>
Lingleville ISD	204	Receiving	<a href="http://www.lingleville.k12.tx.us/">http://www.lingleville.k12.tx.us/</a>
Mineral Wells ISD	3,669	Provider and Receiving	<a href="http://www.mwisd.net">http://www.mwisd.net</a>
Poolville ISD	563	Provider and Receiving	<a href="http://www.poolville.net">http://www.poolville.net</a>

### Region 16 ESC

Region 16 ESC has a shared services agreement with 8 districts in the Texas Panhandle. The districts range in size from Boys Ranch with 297 total students enrolled in October of 2007 to Dimmitt, with 1,122 students enrolled in 2007. Districts could choose to be either provider or receiving districts. Districts will provide online courses to students to meet a variety of needs: graduation requirements, accelerated graduation, dual credit, credit recovery, Advanced Placement, schedule enrichment,

homebound, and dropout recovery. Through the grant, the combined districts plan to serve a total of 1,491 students through online learning. The service center plans to provide professional development for 39 teachers and 21 administrators. Region 16 will provide a set of laptops with a laptop cart to participating districts for students who are taking online classes to check out as needed. Provider district teachers will receive a laptop so that they will have 24/7 access to their class.

<b>Region 16 ESC Participating Districts</b>			
General District Information including Total Enrollment as of October 2007			
District	Total Students	Provider / Receiving	Website
Booker	363	Receiving	<a href="http://www.bookerisd.net/">http://www.bookerisd.net/</a>
Boys Ranch	297	Receiving	<a href="http://www.boysranchisd.org/">http://www.boysranchisd.org/</a>
Canadian	718	Provider and Receiving	<a href="http://www.canadianisd.net/">http://www.canadianisd.net/</a>
Dimmitt	1,122	Provider and Receiving	<a href="http://www.dimmittisd.net/">http://www.dimmittisd.net/</a>
Hart	305	Receiving	<a href="http://www.hartisd.net/">http://www.hartisd.net/</a>
Memphis	584	Receiving	<a href="http://memphisisd.net/home.asp">http://memphisisd.net/home.asp</a>
Shamrock	326	Provider and Receiving	no website available
Tulia	996	Receiving	<a href="http://portal.tulia-isd.net/">http://portal.tulia-isd.net/</a>

Awardees are also listed on the Vision 2020 website at:  
<http://ritter.tea.state.tx.us/technology/title2/vision2020/awardees.html>

### **Rural Technology (R-Tech) Pilot Program**

The Texas Education Agency is in the process of implementing House Bill 2864 which passed the 80<sup>th</sup> Texas Legislature and was signed by the governor in 2007. The bill called for the establishment of a pilot program to provide supplemental technology-based instruction to students in rural school districts. Approximately \$7,950,000 in funding was made available for this pilot program.

The bill directs the commissioner to establish a pilot program under which state grant funds are provided to finance technology-based supplemental instruction to students at the sixth through 12th grade levels at participating campuses.

Campuses are eligible to participate in the program and receive state grant funds if the campus is located in a school that: (1) has an enrollment of fewer than 5,000 students and (2) is not located in an area defined by the United States Office of Management and Budget as a standard metropolitan statistical area (SMSA) as January 1, 2007.

The commissioner shall give priority to a campus that offers a relatively limited course selection to students, in comparison to the course selections generally offered to students in metropolitan areas.

A campus selected to participate in the pilot program is entitled to receive state grant funds in an amount not to exceed \$200 yearly for each student in an eligible grade level served through the program. The state grant funds must be used to provide technology-based supplemental instruction for students at the eligible grade levels.

Permissible expenditures under the program include costs incurred to provide:

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 Section 28.002 for the subject 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.

As a condition of receiving a state grant, a campus must contribute additional funding for activities provided at the campus through the program, in an amount equal to at least \$100 yearly for each student in an eligible grade level served through the program. The additional funding may consist of local funds, private funds, or state funds other than grant funds provided under this section. For program activities provided at the high school level, the high school allotment provided under Section 42.2516(b)(3) may be used to meet the additional funding requirement.

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

The Agency issued a Request for Proposals (RFP) in November 2007 notifying districts of the available funding. More than 300 applicants submitted a mandatory notice of intent to apply for this grant, far exceeding the amount of funding available. The



Agency then moved the process to include a competitive review and asked applicants to reexamine their proposals before submitting a final proposal.

Prior to releasing the RFP, the Agency released a Request for Qualifications (RFQ) seeking qualified vendors who could provide supplemental technology-based instruction.

Products include online and/or electronic instructional resources that extend, supplement and enhance learning in the four core curriculum content areas of English language arts, social studies, mathematics, science or languages other than English for grades 6 -12. These resources must be directly and demonstrably linked to the Texas Essential Knowledge and Skills (TEKS) for grades 6 -12.

Campuses are not required to use technology offerings listed as a result of the RFQ.

The vendors who completed the process include Achieve 3000; Agile Mind's; Apangea Learning; Ascend Education; Audio Optical Systems of Austin, Inc.; Compass Learning, Inc.; Education Service Center Region 10; Education Service Center Region 11; Educational Technology Learning; EPIC Learning System; Great Source Education Group; MyStudyHall.com; New Century Education Corp.; Pearson Digital Learning; Plato Inc.; Questia Media, America, Inc.; Renaissance Learning; Ripple Effects; Skills Tutor; and Texas A&M University.

The following 64 districts were funded:

Alpine, Apple Springs, Argyle, Aspermont, Atlanta, Ballinger, Bandera, Beckville, Beeville, Boles, Bonham, Boys Ranch, Campbell, Canadian, Carrizo Springs, Charlotte Childress,

Cisco, Clarksville, Columbia-Brazoria, Comfort, Commerce, Covington, Crandall, Dalhart, Dayton, Elgin, Floydada, Groesbeck, Hallettsville, Hamilton, Hitchcock, Hondo, Johnson City, Kirbyville, LaVilla, Mabank, Malakoff, Marion, Mathis, Maypearl, Medina Valley, Millsap, Navasota, New Summerfield, Newton, North Hopkins, Pecos-Barstow-Toyah, Premont, Quinlan, Rockdale, Rusk, San Isidro, Santa Fe, Scurry-Rosser, Splendor, Sweeny, Timpson, Vidor, Warren, West Orange Cove, Westwood, and Winters.

As additional R-Tech funding was still available, the Agency released Cycle 2 of the R-Tech grant program. Applications were due September 18, 2008. All of the eligibility requirements for Cycle 1 remain in effect for Cycle 2. A district that received a grant under Cycle 1 is eligible to apply under Cycle 2 provided that the district serves a different grade level or subject.

The Agency will deliver an interim report to the 81<sup>st</sup> Texas Legislature on this program.

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### **Digital Content and Instructional Materials**

Digital content has been in the spotlight for years. Texas schools have been incorporating digital content with teaching and learning through many means including 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. The Texas Education Code 31.002 defines electronic textbook, publisher, and textbook as follows:

- electronic textbook—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.
- publisher—an online service or developer or distributor of an electronic textbook.
- textbook—a book, system of instructional materials, or a combination of a book and supplementary materials that conveys information to the student or otherwise contributes to the learning process, or an electronic textbook.

Prior to 2004, and the adoption cycles initiated by Proclamations 2004 and 2005, few publishers offered online instructional materials outside of the Technology Applications subject area. Though some offered online instructional materials in subjects such as Social Studies, Science, English Language Arts, English as a Second Language, and Career and Technical Education, the number of publishers offering to deliver TEKS-aligned, basal instructional materials via the Internet represented only a small percentage of the total number of publishers submitting materials for adoption.

Beginning with Proclamation 2004, and continuing with Proclamation 2005, however, we have seen more publishers providing instructional materials via online delivery. Secondary math materials adopted included many electronic components for a variety of courses. Websites can be used to meet content standards. Publishers must monitor website links to ensure standards are met throughout the adoption. Ancillaries, which are free with

order, included an interactive whiteboard, teacher laptops, student response systems, scanners and/or LCD projectors. Then in 2007 with Proclamation 2005, the elementary math materials adopted included many electronic components for most grade levels such as: print materials with additional online components, print materials with identical online version, online interactive materials instead of print, additional CD and/or video components and combinations of the above.

### **Timeline of Events**

**1987**—The Texas Legislature amended the definition of a textbook to include “computer software”.

**1988**—The State Board of Education (SBOE) adopted the “Long Range Plan for Technology, 1988-2000, which encouraged modification to textbook laws, processes and procedures to support the adoption and electronic delivery of an Electronic Instructional Media System (EIMS).

**1990**—The SBOE adopted the first-ever EIMS with “Windows on Science”, a videodisc-based elementary science program from Optical Data.

**1992**—The SBOE adopted EIMS for computer literacy as well as seventh grade science and chemistry; additional changes were made to textbook rules and procedures to encourage EIMS.

**Mid-1990s**—Jack Christie, Chair of the State Board of Education promoted the concept that all students should have laptop computers with internet-delivered content instead of printed textbooks.

**2001**—Texas issued a proclamation for instructional materials for K-12 technology applications with an emphasis on electronic delivery. The SBOE created a subscription-based pricing model to encourage submission of online content.

**2002**—The SBOE adopted instructional materials that included CD-ROM and web-based versions in content areas such as language arts and social studies.

**2004**—The SBOE adopted instructional materials for technology applications that included many online and computer-based products.

**2005**—There have been many lessons learned with the implementation of Technology Applications subscription-based materials—both print and online:

- Sampling of online materials was much easier—distributed website address and login
- Not all publishers submitted online content
- Not all understood the subscription payment model—print materials also paid by subscription
- Subscriptions must be renewed each year—required changes to EMAT online ordering system and reminders to districts
- Textbook coordinators, teachers and technology coordinators may not have talked about what to order—network vs. online version, number of students, etc.
- Not all teachers understood how to manage student logins and passwords
- SBOE changed rules to include approval of revisions, updates and substitutions
- Review and approval takes several months

**2006**—Secondary math materials adopted included many electronic components for a variety of courses. Websites can be used to meet content standards. Publishers must monitor website links to ensure standards are met throughout the adoption. Ancillaries (free with order) included an interactive whiteboard, teacher laptop, student

response system, scanner, and/or LCD projector.

**2007**—Elementary math materials adopted included many electronic components for most grade levels such as: print materials with additional online components, print materials with identical online version, online interactive materials instead of print, additional CD and/or video components and combinations of the above.

**2008**—The SBOE amended Proclamation 2010, calling for instructional materials for Reading/Literature K-12 and English for Speakers of Other Languages. The TEA expects that many of these materials will either include digital components, or be offered entirely on web-based versions. Additionally, the SBOE issued Proclamation 2011, calling for instructional materials in English Language Arts 1-12, Prekindergarten Systems, and English as a Second Language. The TEA also expects that many of these materials will either include digital components, or be offered entirely on web-based versions.

### **New Adoption Cycle (August 2008)**

The new cycle is aligned with the TEKS review and revision process and proclamations are named for the year materials will be in the classroom.

- Proclamation 2010 Reading/Literature K-12, ESL 9-12
- Proclamation 2011 English Language Arts 1-12, ESL K-8 materials, PreKindergarten Systems
- Proclamation 2012 Science K-12, Engineering
- Proclamation 2013 Social Studies K-12, ELA Electives, Bible Literacy, Economics
- Proclamation 2014 Career & Technical Education, Technology Applications K-12

- Proclamation 2015 Elementary Math, Languages Other Than English K-12, Fine Arts K-12
- Proclamation 2016 Secondary Math, Health K-12, Physical Education K-12

When reviewing the Frequency/Design of Instructional Setting Using Digital Content data from the Campus STaR Charts during the progress reporting period, there was more movement from the Developing to Advanced levels of the STaR Chart.

Teaching and Learning – Frequency/Design of Instructional Setting Using Digital Content		06-07	07-08
Early	Most teachers occasionally use technology to supplement or reinforce instruction in classroom, library, or lab.	6.02%	4.12%
Developing	Most teachers have regular weekly access and use of technology and digital resources for curriculum activities in the classroom, library, or lab.	55.03%	48.92%
Advanced	Most teachers have regular weekly access and use of technology and digital resources in various instructional settings such as in classroom, library, lab, or through mobile technology.	34.20%	41.67%
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.	4.75%	5.29%

### Public School Libraries

With the focus on ensuring that 21<sup>st</sup> Century students and educators have 21<sup>st</sup> Century resources and information and the skills to use them effectively, the library continues to play a critical role in Texas public schools. Public school library programs increase student ability to learn and provide a more successful learning environment. School libraries support core curriculum areas, enabling students to achieve their potential and fully participate now and in the future in the social, economic, and educational opportunities of our state, nation, and world.

Library media specialists collaborate with teachers and curriculum coordinators and work with students to develop information literacy and digital technology literacy (Technology Applications) knowledge and skills. This



collaboration strengthens student achievement in English language arts and reading, mathematics, social studies, and science. The role of the library media specialist has expanded to include helping students develop research skills using a wide variety of learning resources, including books and other print materials, reference sources, online databases, the World Wide Web, and Web 2.0 tools. Such research skills are required by the English Language

Arts and Reading TEKS from kindergarten through twelfth grade. Further, libraries help develop critical thinking skills which form the foundation for lifelong learning.

### **School Library Programs: Standards and Guidelines for Texas**

The School Library Programs: Standards and Guidelines for Texas were adopted on May 16, 2005, by the Texas State Library and Archives Commission in consultation with the State Board of Education, after an extensive statewide process involving many school librarians, agency staff, and other school officials, as well as a review of the literature and models for school library programs. The standards provide direction for Texas public and charter schools' library programs. A school district shall consider the standards in developing, implementing, or expanding library services.

The standards are available at <http://www.tsl.state.tx.us/ld/schoollibs/>. As stated in the introduction to the standards, school achievement is the objective of school library programs. The School Library Programs: Standards and Guidelines for Texas originates in the ongoing effort to support effective schools, results-oriented education, and accountability. These aims are at the forefront of the school librarianship.

Standards are a professional tool for objective assessment based on recognized measures of performance. The revised Standards and Guidelines for Texas is based on research that shows a correlation between school library resources and services and greater student achievement. In preparation for revising the standards and guidelines, the Texas State Library and Archives Commission conducted a study entitled *Texas School Libraries:*

*Standards, Resources, Services, and Students' Performance*. The report of the study is available on the Texas State Library and Archives website at <http://www.tsl.state.tx.us/ld/pubs/schlibsurvey/index.html>. The findings of the study, which are similar to results of research in other states, are summarized in the article "Texas School Libraries: Standards, Resources, Services, and Students' Performance". The State Board for Educator Certification (SBEC) Guidelines for Certification of Texas School Librarians describes six major components for Learner-Centered school library programs. The School Library



Programs: Standards and Guidelines for Texas is built on the framework of these six Learner-Centered components.

The Standards and Guidelines for Texas establish four Levels of Support of Student Achievement for school library programs. Three of the Levels of Support of Student Achievement meet standards, one falls below standards. The Levels are identified as Exemplary, Recognized, Acceptable, and Below Standard.

Successful library programs in Texas use these standards in building strong, effective library programs that meet the needs of Texas students and educators. For additional information, visit: <http://www.tsl.state.tx.us/ld/schoollibs/sl/index.html>.



## **SCHOOL LIBRARY STANDARDS**

### **STANDARD I: LEARNER-CENTERED TEACHING AND LEARNING-STRATEGIES FOR LIBRARIANS**

Goal: To promote the integration of curriculum, resources, and teaching strategies to ensure the success of all students as the effective creators and users of ideas and information, enabling them to become lifelong learners.

### **STANDARD II: LEARNER-CENTERED PROGRAM LEADERSHIP AND MANAGEMENT-STRATEGIES FOR LIBRARIANS**

Goal: To demonstrate effective school library program leadership and management throughout the school, the district, and in local, state, and national activities and associations.

### **STANDARD III: LEARNER-CENTERED TECHNOLOGY AND INFORMATION ACCESS-STRATEGIES FOR LIBRARIANS**

Goal: To promote the success of all students and staff by facilitating the access, use and integration of technology, telecommunications, and information systems to enrich the curriculum and enhance learning.

### **STANDARD IV: LEARNER-CENTERED LIBRARY ENVIRONMENT-STRATEGIES FOR LIBRAIRANS**

Goal: To provide design guidelines for facilities to allow for manipulation, production, and communication of information by all members of the learning community.

### **STANDARD IV: LEARNER-CENTERED CONNECTIONS TO THE COMMUNITY-STRATEGIES FOR LIBRARIANS**

Goal: To provide information equity by working for universal literacy; defending intellectual freedom; preserving and making accessible the human record; ensuring access to print and electronic resources; connecting school faculty, staff and students to community resources and services as needed; and by connecting community members to school resources and services as appropriate.

### **STANDARD VI: LEARNER-CENTERED INFORMATION SCIENCE AND LIBRARIANSHIP-STRATEGIES FOR LIBRARIANS**

Goal: To promote the success of all students and staff by: providing information equity; working for universal literacy; defending intellectual freedom; preserving and making accessible the heritage of all cultures; and ensuring that equal access to resources in all formats is available for everyone.

## **Public School Library Study**

The Texas State Library and Archives Commission and the Texas Education Agency were directed by the 80th Legislature to conduct a study of public school libraries.

Government Code Sec. 441.021. Public School Library Study:

- (a) The commission and the Texas Education Agency shall conduct a joint study to identify the needs of public school libraries in this state and determine which needs

each agency is best suited to address.

- (b) Not later than December 31, 2008, the commission and the Texas Education Agency shall submit a joint written report containing the findings of the study and the recommendations of the commission and the education agency to the:
- (c) (1) governor;
- (2) lieutenant governor;
- (3) speaker of the house of representatives; and

(4) appropriate oversight committees of each house of the legislature.

Staff from TSLAC and TEA met in fall 2007 to discuss and agree upon a process for conducting the study. The agencies agreed to form a steering committee to advise on key points of the suggested methodology and to provide structured comment on the draft report. TSLAC staff recruited public school librarians, and TEA staff recruited school administrators to serve on the steering committee.

Staff from TSLAC and TEA, in consultation with the steering committee, devised an online survey for the Texas school community as the primary means of gathering information on the needs of public school libraries and which agency the school community felt was best suited to meet those needs. The survey was conducted in February 2008. Agency staff compiled the findings of the survey and worked together on recommendations and the final report.

### **Library Study Recommendations**

The findings show that adequate funding, resources, and recognition of the vital role the school library program and school librarian play in student success are needed. Respondents see a strong role for the local district to work with TEA, and to a lesser extent TSLAC, to accomplish this goal. Ideally collaboration among all entities to meet needs is best.

Recommendations covering seven key needs are:

- Funding - Additional funding is needed from local districts and the state and is key to enabling public school library programs to meet educational goals.

- Needed resources - As more funding is available, school library programs will be able to acquire the resources identified as necessary to a good program such as current materials, staffing, facilities, and technology.
- Collaboration - Both TSLAC and TEA can work with local districts in areas such as collaboration among libraries and with community organizations, as well as continuing education for school librarians.
- Online research and information resources (K-12 Databases) - The partnership between TSLAC, TEA, and Education Service Center, Region 20 has worked well to make the K-12 Databases available to all public and charter schools in the state of Texas as well as to provide training and support for the resources. The combination of TEA funding through Rider 88 with the market power of statewide database license negotiations through TSLAC has been successful and should continue.
- Standards - To ensure that the necessary funding, resources, and services needed for school library programs to contribute to student success are in place and that funds are actually allocated to the library program, TEA should consider using the Standards as the basis for data collection to document progress in providing quality library programs.
- Statistics - Data are essential for evaluation, and the annual collection of data on public school libraries is highly recommended for use by both state and local decision-makers.

Since it already has a large data collection program, the collection of statistics on school library programs should be a responsibility for TEA.

- Role of school librarians - TEA should determine methods to promote the professional status of librarians as teachers critical to student success.

To read the full report with recommendations and data from schools, visit <http://ritter.tea.state.tx.us/technology>.

### **Online Research and Information Resources-K-12 Databases**

During the 80th Texas State Legislature, Rider 88 was added to the Texas Education Agency (TEA) appropriations. Rider 88 funded online research and information resources for all libraries in public schools. These K-12 Databases are available to educators, students, and their immediate families at school or home through a partnership with the Texas Education Agency, the Texas State Library and Archives Commission (TSLAC), and Education Service Center Region 20. The resources are funded through the technology allotment.

From 1995 through 2003, the Texas Library/Learning Connection (TLC), administered by the Texas Education Agency, provided students, educators, and parents access to online full-text databases at no charge to schools. TLC was a statewide educational technology initiative developed in support of the Long-Range Plan for Technology. Due to budget shortfalls in the 78th Legislative Session, TLC was not funded. In 2005, the Texas Legislature directed the Texas State Library and Archives Commission to negotiate subscriptions to online resources for school campuses. Approximately 55% of the school campuses paid the subscription costs for these resources

during the 2006-2007 school year. Legislative supporters wanted to make sure that these resources were made available to every public school campus, not just those that could afford access. Rider 88 accomplishes this goal. Rider 88 directs the Commissioner of Education to transfer amounts not to exceed \$2.5 million in each year of the 2008-2009 biennium to TSLAC for the purpose of acquiring "online research and information resources for libraries in public schools, and for administrative expenses."

Thirty-four online databases from EBSCO Publishing with three age-appropriate interfaces for K-12 were made available in September 2007. They support K-12 learning with reference materials for students at every grade level. These include full-text articles from newspapers and magazines; maps and charts; photographs; educational and health reports; historical and current event information; biographies; country and state reports, and much more. Educators will also find professional journals and research studies.

Britannica Online School Edition was added to the K-12 Databases package on December 1, 2007. Britannica's online reference resources are available in Spanish, Korean, Japanese, Chinese, and French. The School Edition serves PK-12 students with four complete encyclopedias in English and two in Spanish, as well as atlases, dictionaries, timelines and more than 600 multimedia-rich student activities. Both learning materials and encyclopedia articles are aligned to the TEKS.

### Benefits of the K-12 Databases

The K-12 Databases provide 24/7 access to millions of quality, current, authoritative, non-biased, copyright-clear resources that support the PK-12 curricula in all content areas. Students, teachers and librarians can search encyclopedia, magazine and newspaper articles; biographies; current events; timelines and historical documents; country and state reports and comparisons; maps, atlases and flags; high-resolution images; video clips and other multimedia files; professional publications; and much more simultaneously in a fraction of a second. Information is organized in age-appropriate interfaces, Lexiles and/or standards. These interfaces provide tools for advanced search strategies that address the standards (Technology Applications, American Association of School Librarians Standards for 21<sup>st</sup> Century Learners, Reading/Language Arts, Social Studies Skills, and others) and lead to meaningful results. In addition, most of the information included in online databases is not available on the open Web.

In order to assist schools with K-12 Databases questions on a variety of topics, the ESC-20 Help Desk responded to 15,773 emails and 7,842 phone calls from schools throughout the state between September 1, 2007 and August 31, 2008.

### Program Qualifications

To qualify for the TSLAC / TEA program (from TSLAC's administrative rules (13 TAC §§8.1 - 8.5):

- A library must be part of a public school (accredited under Education Code Subchapter D Accreditation Status (§§39.071-39.076))
- The school must have a public school library-an organized collection of printed, audio/visual

and/or computer resources in a public school or public school campus (elementary or secondary). A public school library makes resources and services available to all students, teachers, and administrators.

- The public school library must be managed by or report to a certified school librarian or other certified staff member in the public school or on the public school campus.



As of August 31, 2008, 1,009 districts, 7,407 campuses, and 4,468,864 students are actively using the K-12 databases. This is an increase of 2,049,361 students from 2007. Additionally, from September 1, 2007 to August 31, 2008 there were a total of 21,956,093 searches conducted; 9,641,351 database sessions; and 8,691,253 documents retrieved on the K-12 Databases.

To promote widespread use of the K-12 Databases, each regional service center was required to submit an Outreach Plan that includes a brief explanation of how widespread participation will be accomplished in each region. The goal for K-12 Databases is to have 100% activation by eligible schools. At present 100% of eligible districts have been

contacted and provided the information for activating their campus. Of these, 96% of eligible charter schools and 98% of ISD and CSDs have been activated. Several remaining districts have been submitting their activation forms to ESC-20 at the beginning of the 2008-2009 school year, and are primarily rural districts with little library support.

Usage statistics were analyzed and a strategic plan is being developed to increase participation in campuses where usage is low. One of the patterns observed included a much higher usage at the secondary level than at the elementary level. In addition, usage is much higher in central and east Texas than in west Texas districts.

### **Training**

A collaborative training approach has been adapted to maximize the number of training opportunities in the state and to promote 21st Century leading, teaching and learning. Approximately 4,800 librarians, teachers, instructional technologists and campus leaders attended at least one K-12 Databases workshop. This includes 190 face-to-face sessions, 4 videoconferences, 4 online modules and 4 webinars. Many more participants attended overview sessions at local, regional and state conferences throughout the year. The components of the training program consist of face-to-face and online training.

Training Modules include the following with an overall satisfaction rate of 99.8%:

- Face-to-face and Online EBSCO Basics and Advanced
- Face-to-face and Online Curriculum Integration - Instructional Recipes
- Face-to-face and Online Teacher-Librarian Collaboration

The Long Range Plan for Technology 2006-2020 highlights several recommendations for the Texas Education Agency in relation to online learning. These include: to provide statewide access to library resources for students and teachers that support the curriculum and promote student engagement/academic success through equitable access to these resources; to encourage and support the continued development of innovative programs and technical standards designed to increase access to online learning tools and content for all learners, including those with disabilities; and to promote the development and use of innovative strategies for the delivery of curricula and instruction through online, digital technology, and a variety of distance learning technologies. The K-12 Database program targets each of these actions, as it provides an online learning tool accessible to students, teachers, and parents. The various options included in the K-12 Databases promote creative online learning and encourage new ways for students to obtain educational information through the use of technology.

In addition to the suggestions made to the Texas Education Agency, the LRPT identifies actions for Regional Service Centers, Local Education Agencies, and to Parents, Communities, and the Private Sector which have been implemented by the K-12 Databases. Regional Service Centers have worked in collaboration with providers of instructional resources and services to provide and maintain the K-12 Databases, as well as to supply school library media support to ensure that school libraries have the most up to date resources to encourage online learning. Local Education Agencies have supported the use of the K-12 Databases as emerging technologies, and school libraries have encouraged use by providing the tools and support



necessary to access the online tool. The K-12 Databases have also encouraged parent and community collaboration to promote this no-cost, web-enabled, product which facilitates a technology-rich learning environment both in the home and in school.

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### **Distance Learning and Online Learning Overview**

Distance learning is an educational process, delivered and supported by technology, in which the teacher and student are in different locations. Nationally and statewide, it is available through traditional correspondence courses, satellite, two-way interactive videoconferencing (IVC), instructional television, and the Internet. Distance learning is a powerful tool in the array of effective strategies the state needs to address many of the challenges facing our public education system. It is imperative to address those challenges that exist in public and higher education in Texas so students are ready for college, ready for work, and ready for life.

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, enabling schools of all sizes and economic means and from all corners of the state to overcome the potential limitations of their local resources. In particular, distance learning delivered via the Internet holds great promise and potential for students in all reaches of our state.

Effective school leaders must model as well as expect effective use of technologies. Systems of technical support, staffing patterns, budgeting functions, and funding acquisitions require ongoing professional and staff growth. Allocating sufficient time for

professional development is essential but poses challenges in balancing priorities. Online professional development opportunities can often assist in this area. Appropriate instructional support services are required in order to ensure teachers fully integrate technology in curricula and maximize educational benefits from the investment in technology. Leaders must plan effectively to create innovative, flexible, and responsive learning environments to maximize teaching and learning.

Distance learning, especially online learning, is an important strategy for providing teachers and administrators across the breadth of the state with professional development. Through distance learning, educators can participate in professional development in their home town—at school or at home—rather than leaving their classrooms and administrative offices to travel to a distant location. It can provide ongoing professional development to educators across the state, lessen the number of educators teaching outside their area of certification or expertise, and reduce critical teacher shortages.

The emergence of educational technology, which has been embraced by our state leaders and the public education system, has fostered the evolution from traditional correspondence courses to contemporary forms of distance learning study delivered via the Internet and IVC. Online is the fastest growing type of Distance Learning in the country and in Texas. In today's distance learning courses, most often offered via the Internet, technology enables robust interaction. It is the power of this interaction among students and between a student and teacher, which makes distance learning so effective.

Texas has made tremendous strides during the last decade in connecting schools to each other, to external resources, and to the Internet. Teachers and students are using the Internet as a major educational resource that is now an expected education standard. It is imperative that Texas continues to invest in high-speed connectivity for schools to provide equitable access for all students to these resources and educational opportunities. A stable infrastructure requires consistent and reliable funding to ensure the support for current and emerging technologies for the most effective and efficient delivery of services. Ever-increasing demands for online resources, assessments, communication, collaboration, data exchange and professional development provide additional challenges for infrastructure.

#### **Texas STaR Chart Data for Online Learning**

General data regarding online usage is gathered in the Texas Teacher and Campus STaR Charts. In order to align with the new LRPT, 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 STaR Chart update aligns with the new LRPT, 2006-2020, and reflects its aim of assisting classroom teachers in assessing needs and setting goals for the use of technology in the classroom to support student achievement in the 21<sup>st</sup> Century. It also supports and provides data for the LRPT recommendation that all learners have access to specialized or rigorous courses and expanded curricular and instructional offerings through the use of technology, including online and other distance learning and digital content services to meet the diverse and personal learning needs of all students.

The data reported in the Teaching and Learning section of the Campus STaR Chart reflects the data reported by all campus teachers in the 7,641 campuses reporting. The data below indicates a slight increase in teachers' self-assessed level of proficiency in online teaching and learning over the past two years of reporting. Teachers who consider themselves at the Developing, Advanced, and Target levels combined have increased by 8.8 %.

<b>Teaching and Learning</b>		<b>06-07</b>	<b>07-08</b>
Early	Most teachers use a few web-based learning activities	33.94%	25.14%
Developing	Most teachers customize several web-based lessons which include online TEKS-based content, resources, and learning activities that support learning objectives	59.91%	67.14%
Advanced	Most teachers create web-based lessons which include online TEKS based content, resources, learning activities, and interactive communications that support learning objectives	5.10%	6.64%
Target	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	1.06%	1.09%

The following section of this report examines the growth of online learning and issues surrounding that growth. It provides an update on the status of online learning as it is being implemented in the Texas Virtual School Network (TxVSN) and the Electronic Course Pilot (eCP). The report considers current data on online learning usage that teachers are reporting to the Agency through the School Technology and Readiness (STaR) Chart. Finally, it considers the lessons learned regarding appropriate funding for online learning. In addition, the report includes information about students and educators learning through Interactive Videoconferencing, which continues to play a significant role in meeting the needs of educators and students statewide.

With the increasing growth of online learning both nationally and within the state, much of the focus of this report is on that growth and its implications. According to the Southern Regional Education Board (SREB) "...more and more middle and high school students across the country are enrolled in online courses. This increase illustrates the success many students are experiencing. Reports indicate that most online learning courses are at least as successful as their face-to-face counterparts, and many have a higher completion rate." The efficacy of the online classroom is being validated through reports such as the Florida Tax Watch report Final Report: A Comprehensive Report of Florida Virtual School:

<http://www.floridataxwatch.org/resources/pdf/110507FinalReportFLVS.pdf>. In a period of rising costs and teacher shortages in critical subject areas, online learning is considered one strategy for meeting districts' needs. This growth, however, brings with it a need to ensure that policies for online learning develop in a

way that will assure quality online learning.

In summary, online courses can meet multiple and various needs of diverse student populations and can serve as an important strategy to address education needs in the state.

In addition, other lessons learned about online courses:

- students underestimate the rigor of an online courses and the work required;
- students and parents need information about realistic expectations of time and effort required;
- online courses are currently not readily available to all students;
- requests for online courses continue to increase;
- online courses may not be for all students;
- schools underestimate planning needed to establish online programs;
- schools need time to plan and implement virtual programs;
- online teachers need specialized training in order to teach effectively in an online environment;
- teaching online courses is not for all teachers; and
- courses have unique monitoring requirements for quality and accountability.

### **Online Learning Nationally**

Online learning continues to expand exponentially across the nation. *Keeping Pace with Online Learning: A State Level Review of k-12 Policy and Practice* reported that as of September 2007, "42 states have significant supplemental online learning programs, significant full-time programs, or both" (p. 14). That number represents state-led online programs, which includes only a portion of the growth in online learning. In "Laboratories of Reform:

Virtual High Schools and Innovation in Public Education,” Education Sector states that “[virtual] schools served 700,000 students in the 2005-06 school year, mostly at the high school level,” and there are estimates of “one million online enrollments in 2007” (CEEP, p. 1)

In fall 2007, Project Tomorrow’s Net Day Speak Up surveys collected the authentic, unfiltered viewpoints of 319,223 K-12 students, 25,544 teachers, 19,726 parents and 3,263 school and district administrators from 3,739 schools and 867 districts across all 50 states.

“Students from elementary through high school are increasingly interested in online learning. Over 29% of middle school students and 36% of high school students have had some interaction with online learning – either through a class that is taught 100% online, a class with online components or through their own personal pursuit of learning via non-school related online courses. This explosion in familiarity with online learning represents an 80% increase in high school student experiences over 2006 data findings. Over 41% of students believe that online classes will have the greatest positive impact on their learning, a growth of over 20% from the 2006 data findings.” (Learning in the 21st Century: a Trends Update, Speak Up online survey, Project Tomorrow)

The growth documented in these reports demonstrates both the opportunities to create equitable access to expanded course offerings and quality of instruction that is available through online learning and the increasingly robust infrastructure available to schools, and it also underscores the need for reliable measures of accountability as well as funding for online learning. It is also important to note that nationally and statewide, even

as online learning is transforming education (Education Sector, 2007, p. 1) and policies and quality guidelines are being established, online learning is undergoing continuous transformation.

While the growth of online learning programs across the country and the explosion in numbers of students choosing to enroll in online courses illustrate the growing acceptance of the effectiveness of this type of learning and its evolution toward becoming part of mainstream educational practices, states’ experience and reports also reflect the educational soundness of online learning. As noted by the Southern Regional Education Board, research and reports indicate that “...most online courses are at least as successful as their face-to-face counterparts, and many have higher completion rates.” The efficacy of the online classroom is being validated by student achievement on Advanced Placement exams and through reports such as the Florida Tax Watch findings, Final Report: A Comprehensive Report of Florida Virtual School (<http://www.floridataxwatch.org/resource/s/pdf/110507FinalReportFLVS.pdf>.)

A centralized state virtual school network ensures that students across the state have equitable access to rigorous online courses that are evaluated against and aligned with state curriculum standards and other state-approved quality standards.

### **Benefits of Online Learning**

Research shows that online learning provides the interactive, collaborative and self-paced learning environment that helps students gain the skills needed to succeed in their pursuits following graduation—in the workforce and higher education.

According to the iNACOL report, *A National Primer on K-12 Online*

*Learning*, the number one reason school districts cite for offering Internet-based courses is that the courses are otherwise unavailable. Many schools in rural or poorer urban districts find it difficult to recruit and retain highly qualified teachers especially in the areas of advanced mathematics, science and language courses. Online courses can meet specific needs, such as gifted students seeking opportunities for Advance Placement or homebound students needing access to more curriculum choices. Many Texas districts and schools in other states are recognizing the potential online learning has for providing students with unparalleled equity and access to high quality education. Some of the benefits offered by online learning include:

- expanded curriculum options available to students, including courses required for the Recommended High School and the Distinguished Achievement Graduation Plans
- advanced placement
- accelerated study
- credit recovery
- expanded access to qualified teachers
- alternative educational opportunities for diverse students, including gifted or accelerated students, at-risk students, migrant students, dropouts, pregnant students, incarcerated youth, elite athletes and performers, and students who may not be able to attend regular school because of injury, illness, or involvement with other activities
- alternative learning methods and opportunities for students whose needs are not being met through traditional instruction in a traditional classroom setting
- schedule flexibility for students with schedule conflicts or who may be working during the regular school day

- flexible pace for students who need to work at a faster or slower pace
- electives for which qualified teachers are not available locally
- opportunities for students to prepare for today's technology-rich real world experiences in the workplace and post-secondary education
- educational experiences to address the needs of today's technology-savvy students
- provisions for professional development for teachers and other educators
- provisions for mentoring opportunities to teachers

### **Trends in Online Learning: Blended Classrooms, Social Networking, and Virtual Worlds Blended Classrooms**

One important development in online learning has been the growth of blended classrooms: a combination of face-to-face and online classroom instruction. Definitions of blended classrooms vary. Some define blended learning as instruction delivered primarily online, but with instructors and students meeting face-to-face periodically. The Sloan Consortium defines a blended learning course as one in which 30 to 79 % of the instruction is delivered online (p. 2). Whatever the definition, the concept of blended learning is a trend that is important to note.

Education Sector reports that "one of the most popular models in online instruction is 'blended learning'...63% of school districts reported that they had one or more students enrolled in a fully online or blended learning course. The districts also predicted that over the next two years blended enrollments would increase by 23% and full online enrollments by 19%" (2008). Blended learning offers scheduling flexibility and many other benefits of online learning, while also offering the benefits of face-to-face instruction.



In another blended learning approach, instruction is delivered primarily face-to-face, while many supporting classroom activities take place in an online classroom. Although not true distance learning since the student and teacher must be able to meet face-to-face, blended learning is contributing to the growth of online learning. It is one way in which both teachers and students can become familiar with the online classroom. It is also providing opportunities for teachers to successfully integrate technology into their classroom instruction. Some schools have also found blended learning to be an effective way for a distance learning teacher who is an expert in a particular subject to serve as a model and mentor to a classroom teacher seeking to increase his or her own knowledge and teaching expertise in that content area. Other states are also finding this aspect of blended learning very helpful in addressing state needs. For example, The Louisiana Virtual School is working with local schools that lack a qualified algebra teacher by offering an online algebra course taken by students sitting together in a physical classroom. The students learn from a highly qualified teacher online, and a teacher not certified in math assists in the traditional classroom. This blended learning approach serves a dual purpose by providing both a highly qualified teacher for students and a mentor to the classroom teacher being trained in algebra.

### **Social Networking and Online Learning**

In December 2007, a Pew Internet and American Life Project report was released that indicated, "93% of teenagers are online" (p. 2). Of that 93%, "nearly two-thirds...are content creators." The report defined "content creators" as "online teens who have created or worked on a blog or

webpage, shared original creative content, or remixed content they found online into a new creation" (p. 2). The report described today's teens as part of a "participatory culture," in which "what is known by the most experienced is passed along to novices" (p. 3). These Internet users "create avatars...to interact with others in the gaming environment and in virtual worlds" (p. 3). Both the increasing numbers of teens who are online and teens' increasing participation in online games has had an impact on online learning.

The former may contribute to its growing popularity and the fact that "the overall course completion rate for online courses is over 90%" (Delaware Virtual School Report, p. 3). When students are allowed to learn and interact with other teens online, the online learning environment fits teens' needs and interests. Online learning can also offer additional opportunities for online students to develop socialization skills through school projects and other academic activities that require collaboration supported by technology and conducted face-to-face.

### **Online Gaming**

Teens' interest in online gaming and virtual worlds has also had an impact on online learning. As an emerging method of delivering online learning, this trend has been the subject of a growing body of education research. However, its use is still peripheral to the more conventional approach to online learning.

Games have been used in the face-to-face classroom environment for years, and play-theory supports this practice. Anecdotal evidence based upon the numbers of research reports, discussions of virtual world practices in online learning Internet forums, and webinars and conference topics focused on virtual world and Massive Multi-

Player Online Role-Playing Games (MMORPGs) indicates an increased interest in this method of online learning.

In their discussions, online educators are experimenting with virtual worlds and avatars, and with the social networking, communication, and learning possibilities available through complex online games. Studies indicate

that “online gaming can help students develop many of the skills they’ll be required to use upon leaving school, such as critical thinking, problem solving, and creativity” (Devaney, L. 2007). It is a trend to watch as students and teachers become more comfortable, and thus more creative and experimental in learning effectively online.

**Despite the rapid growth of K-12 online education and the way it is meeting critical education needs, online learning faces challenges and, in some states, controversy... While the challenges of online education are small compared to its actual and potential rewards, it is clear that both online programs and state oversight must evolve thoughtfully to continue to increase educational opportunities and improve outcomes.**

**A National Primer on K-12 Online Learning, iNACOL, April 2007**

### **Issues to Watch**

As it has been defined in Texas legislation (SB 1788), online learning is a highly interactive form of learning in which teachers and students are engaged in discussions that promote critical thinking skills, and—while learning is student-centered—the teachers are very actively engaged with their online students and become familiar with each student’s learning style, communication style, and interests.

Consequently, one of the most familiar concerns raised in debates regarding online learning—is it really the student who is online?—is addressed by online teachers’ frequent interaction with and knowledge of their individual students. Online students are required to participate in teacher-led online classroom discussions. In many programs, teachers also make weekly phone calls to students and are

encouraged to call when there appears to be problems with student work.

Just like their peers in face-to-face classrooms, online teachers ask their students the types of questions that allow a teacher to discern whether the student understands the material. Students report a greater amount of one to one interaction with their teacher in an online course compared with the traditional classroom, and teachers often comment that they feel they get to know their students on a more individual basis.

Questions of the legitimacy of online learning as an effective educational approach are being resolved over time as experiences, research, and reports reflect its success. However, key issues remain. The first, in nationwide discussions, is the matter of funding. Another central issue, nationally, is the development of state policies regulating

online learning programs, which has “outpaced education policy in many states,” and the growth of cyber charter schools (National Primer, p. 8). Finally, as John Watson points out in the National Primer, “Equal access remains a challenge: Online courses require, at a minimum, that the student have access to a computer, basic software, and the Internet. For students in affluent areas, such access is expected, but for

students in poor inner-city and rural areas the hardware and Internet access are not a given. Educators must work to ensure that the opportunities of online education are available to students across all income levels, geographic regions, and ethnic groups. In addition, online courses can pose challenges for students with learning or physical disabilities.” (p. 8).

**A major concern with...rapid expansion is the lack of quality control. As one educator in California said, “it’s the Wild West out there.”**

**(CEEP, Spring, p. 6)**

The Agency has been engaged in research into the best methods to proceed with online learning: methods that address some of the critical concerns mentioned above. While there much to be learned, much has been learned. Going forward requires a balanced approach. The state must ensure equitable access for all students and develop policies and guidelines that take advantage of the flexibility and promise inherent in online learning. At the same time, the state must ensure that online learning in public education grows responsibly, meeting state accountability measures, providing an appropriate learning environment for students with special needs, and ensuring that all students are receiving quality online learning programs.

The good news is that many of the recommendations that are being made nationally are incorporated into TEC Ch. 30A. and are being implemented in our state through a new online option for Texas students and districts, the Texas Virtual School Network. For example, TEC §30A. includes the review of online courses to ensure they meet the state

curriculum standards, the Texas Essential Knowledge and Skills (TEKS) as well as additional quality standards applicable to the online learning environment; required professional development that is specific to teaching online; and a definition of an electronic course that includes high levels of interaction among students and between students and the online teacher. All are considered key components for successful online learning. The Agency’s Electronic Course Pilot (eCP) also includes measures to address many of these key components.

### **Online Learning in Texas**

As a result of earlier pilot programs such as the Virtual School Pilot (VSP), the Investigating Quality of Online Courses (IQ) Pilot, and the current Electronic Course Pilot (eCP) program, the Agency learned valuable lessons. The state has learned that online learning that is teacher-led with extensive interaction between teachers and students and among students is an educationally sound alternative. Students can benefit from access to quality online courses and quality instruction and from access

to increased educational choices that better meet their educational needs.

Online courses have been developed and are available from a wide array of sources, including independent school districts, regional education service centers, higher education institutions, nonprofit organizations, and for-profit vendors. Texas school districts can choose to offer online courses to their students from any course provider across the country. However, they must research and locate the course and determine for themselves that each course meets or exceeds the TEKS in order to grant state credit. With the creation of the new Texas Virtual School Network codified in TEC. Ch. 30A, they have a new online learning option. Through the network, districts can participate by offering online courses to students across the state that have been reviewed against standards set by the state and are taught by Texas certified teachers who have successfully completed the TxVSN-approved professional development for teaching online. Districts may also participate by offering courses provided through the network to students enrolled in their district.

State standards for online courses and online instruction will assure quality and alignment with state curriculum requirements and national standards for quality on online courses and online teaching.

Today, Texas schools have improved and expanded Internet access which enables schools to offer courses via the Internet and other new and developing technologies. Schools have a continuing

need for the infrastructure and resources required to maintain and expand their access to educational opportunities and to resources available through technology.

Currently, despite great progress, not all districts in Texas have the local resources to offer students the courses required to meet each student's graduation program, including the Recommended High School Program. In addition, there is a critical shortage of qualified teachers and a disquieting number of teachers that are teaching outside their area of certification.

All districts regardless of their size, geographic location, or wealth, should be able to offer quality online courses and instruction to all students who might benefit by the opportunities offered by online courses, regardless of the student's geographic location, language, socio-economic status, or disability.

Through continued implementation and expansion of its Electronic Course Pilot (eCP) program and through the current implementation of the Texas Virtual School Network (TxVSN), the Agency is developing and carrying out a coordinated, statewide approach to online learning. That approach includes standards, policies, and programs to support and provide equitable access to quality online content, courses, instruction, and professional development delivered online. Several data collection instruments are in place to provide both general information about statewide online learning and specific information on the state-led online programs that are serving students.

### **Texas Virtual School Network (TxVSN)**

During the 80th Legislative Session, Senate Bill 1788 established a state virtual school network to provide online courses for Texas students. The Texas Virtual School Network (TxVSN) legislation set forth the operational, course evaluation and professional development requirements.

A request-for-proposal (RFP) process identified TxVSN partners to work under the direction of the Texas Education Agency:

- Region 10 Education Service Center, in collaboration with Harris County Department of Education, will serve as TxVSN Central Operations. Central Operations will coordinate the course registration and student enrollments, ensure the eligibility of virtual school providers, provide a list of approved electronic courses and coordinate reporting requirements. Development of these key elements was initiated in summer 2008.
- Region 4 Education Service Center will conduct the review of electronic courses to be offered through the network to ensure that all courses meet or exceed the state curriculum standards, the Texas Essential Knowledge and Skills, as well as the rigorous online course standards developed by the Southern Regional Education Board and endorsed and adopted by the International Association for K-12 Online Learning Online Learning (iNACOL). The review process for high school courses began in summer 2008.
- Five professional development providers will train educators to deliver online instruction through the TxVSN. These five providers are Education Development Center, Inc.; ESC Region 4; ESC Region 11; Harris County Department of Education; and Texas A&M University Center for Distance

Learning Research. Professional development opportunities are available for beginning as well as experienced online teachers. Each teacher delivering an online course through the TxVSN must complete required professional development from an approved provider. Approved providers began delivering training during summer 2008.

The TxVSN is a supplemental rather than diploma-granting program. A student's home district will continue to award credits and a diploma and remain accountable for the student's academic progress. The TxVSN will work in partnership with the home district to meet student needs.

Courses offered through the TxVSN will be provided by TxVSN Provider Districts. Only TxVSN Provider Districts may submit courses to the TxVSN for review and approval. They may submit courses they developed independently, or they may submit courses developed by a third party. TxVSN Provider Districts will be responsible for instruction, for ensuring that teachers teaching courses offered through the TxVSN meet the eligibility requirements, and for ensuring that teachers are certified under Texas guidelines and have completed the professional development required by the TxVSN prior to teaching courses offered through the network.

The current plan is to have TxVSN courses available for Texas students in time for the spring semester 2009. Information on how to become a TxVSN Provider District is posted online at <http://www.TxVSN.org>, along with the process to submit courses for review. Information on courses available via the TxVSN will be posted in fall 2008. The district TxVSN contact will authorize enrollment of students in TxVSN courses.



A request-for-applications (RFA) also was issued to build the capacity of districts to participate in the state virtual school network by providing federal NCLB Title II, Part D funds (Vision 2020 grant) to districts. Eligible expenses including funding for students taking online courses offered via the TxVSN, professional development for teachers teaching online courses, professional development for on-site facilitators and administrators, and other related activities and expenses.

For more information about the TxVSN, refer to the TxVSN Interim Report at the beginning of this report and visit the TxVSN website at <http://www.txvsn.org>. Questions about the TxVSN may be e-mailed to TxVSN@tea.state.tx.us.

Online learning provides expanded opportunities to meet the needs of diverse student populations, including at risk, traditional, and accelerated students as well as expanded access to qualified teachers, and enables students to graduate prepared for a full range of postsecondary opportunities.

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### **Electronic Course Pilot (eCP)**

Implementation of the new TxVSN builds upon the lessons learned through the Electronic Course Pilot (eCP), which continues to inform the state's online efforts. In response to the growing need for online learning, the 78th session, the Legislature passed Senate Bill 1108, Texas Education Code (TEC) §29.909, calling 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."

### **Project Goal**

Districts selected to participate in the Agency's Electronic Course Pilot (eCP) program have the opportunity to provide online learning options to public school students grades 3 - 8 who are not required to be physically present on campus during instruction. As defined in the eCP, an electronic course is a course in which instruction and content are delivered primarily over the Internet, a student and teacher are in different locations for a majority of the student's instructional period, most instructional activities take place in an online environment, the online instructional activities are integral to the academic program, extensive communication between a student and a teacher and among students is emphasized, and a student participating in the eCP is not required to be located on the physical premises of a school district or charter school.

To participate, a student must be enrolled in a Texas public school district or open-enrollment charter school. Students may combine regular program courses taught in a traditional face-to-face classroom and electronic eCP courses (online courses) taught in a virtual setting. Participating students are able to work on and complete assignments any day of the week, at any time of day or evening. They are able to use the flexibility the Internet provides, while also being held accountable for coursework and academic performance.

SB 1108 provided TEA with an opportunity to examine Foundation School Program (FSP) funding models that could support quality online learning. In the first application process, campuses and districts in eCP submitted a proposal for a funding model. Two funding models were piloted between spring 2005 and the end of the 2007-2008 school year.

The original eCP application and Terms of Participation built upon lessons learned from the Virtual School Pilot (VSP) and the Investigating the Quality of Online Courses (IQ) Pilot, extensive discussions and coordination with Agency divisions, and lessons learned from participation in state, regional, and national research efforts. Revisions to the Terms of Participation and application for the eCP expansion reflect additional knowledge the Agency gained through implementation of the original eCP program. Current research indicates that online learning can be effective for students and meet many needs, but less is known about the effectiveness of online learning for elementary grade students. Through the expanded eCP program, in addition to piloting a potentially scalable funding model, the Agency will gather valuable data for online teaching and learning among elementary students.

#### **Current eCP Participants**

The first eCP Application to Participate was released in spring of the 2004-2005 school year. Five districts, including one open-enrollment charter school were originally approved to participate in the eCP: Coleman ISD, Fort Davis ISD, Houston ISD, Iraan-Sheffield ISD and Southwest Schools, an open-enrollment charter district. Two participants signed contracts and were active in the pilot: Houston ISD and Southwest Schools.

#### **Southwest Schools: Texas Virtual Academy**

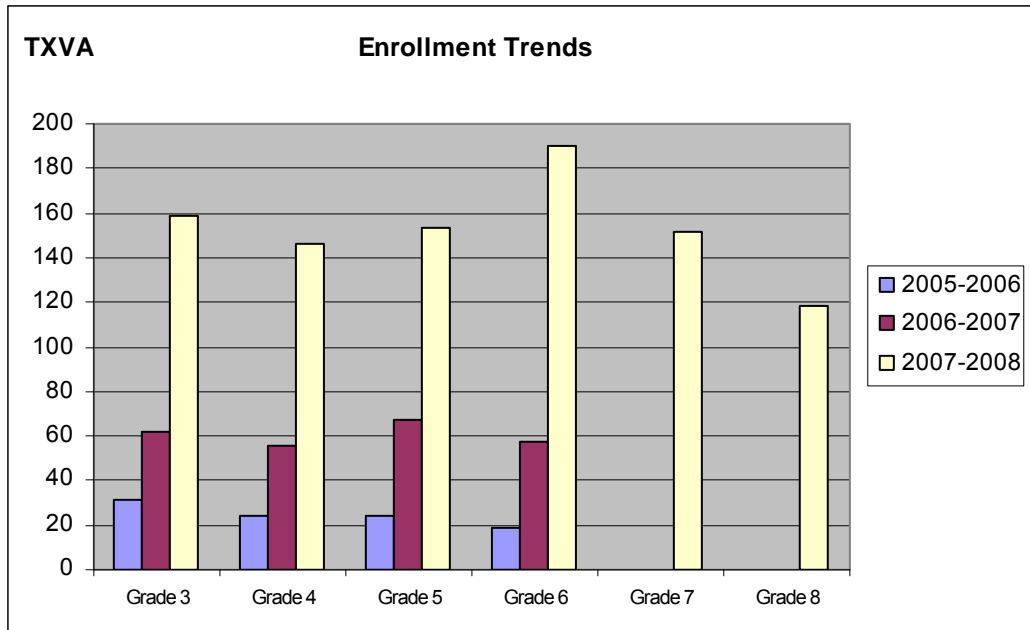
Negotiations were successfully completed with Southwest Schools and a final contract for participation in the 2005-2006 eCP was signed by all parties allowing Southwest Schools to serve a maximum of 200 Grades 3-6 students enrolled at any one time. However, eCP participants are allowed

to replace students as they withdraw, up to their maximum enrollment at any one time. Students began enrolling and receiving instruction through the eCP in spring 2006. By the August 31, 2006, a total of 98 eCP students were served.

A contract amendment of extension was signed to continue Southwest School's participation in the pilot for the 2006-2007 school year, again serving students in grades 3-6. During the 2006-2007 school year, Southwest Schools reported 171 students in attendance at the Texas Virtual Academy (TXVA) campus (a campus in which all students are attending virtually, via the eCP) during the Fall Snapshot reporting in PEIMS. As a result of the opportunity to replace students as they withdraw, by the end of the 06-07 school year, Southwest Schools reported that a total of 242 students had participated in the program as part of their Foundation School Program (FSP) funding request

For the 2007-2008 school year, Southwest Schools was approved to add grades seven and eight in the eCP program and to increase the numbers of students to be served through the eCP from an earlier limit of 200 students enrolled at any one time to a maximum of 750 students in Grades 3-8. By the end of the 07-08 school year Southwest Schools reported that a total of 918 students had participated in the program at some point throughout the school year due to the withdrawal and replacement of students.

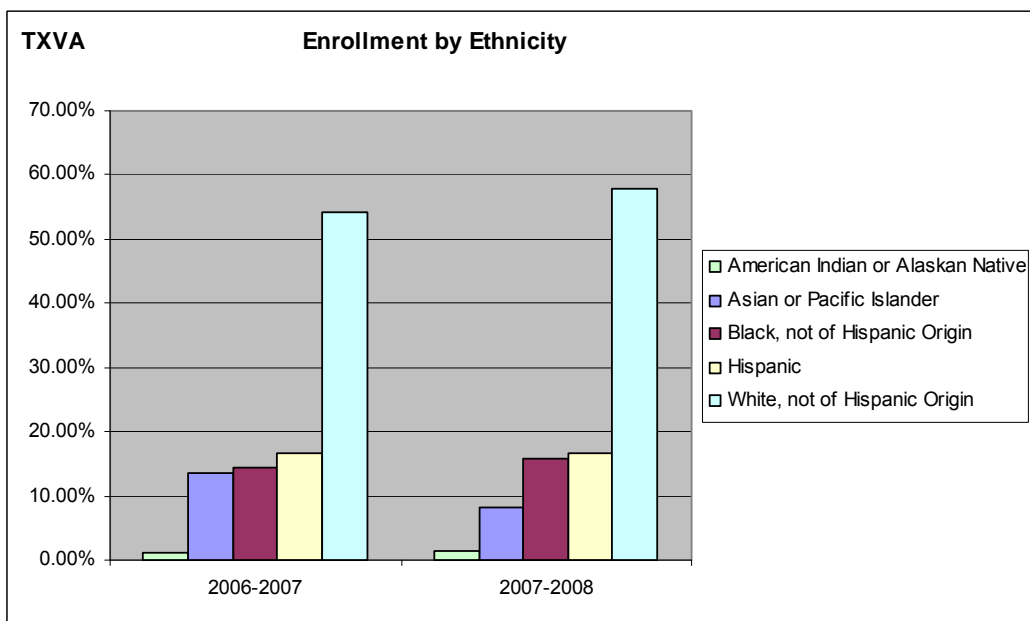
The chart below indicates the growth in student enrollments, beginning with Southwest Schools' entry into the eCP in the Spring of 2005 through the Spring of 2008. TXVA Student enrollments more than doubled in the 2007-2008 school year.



The 2005-2006 eCP Instructional year ran March-August 2006.

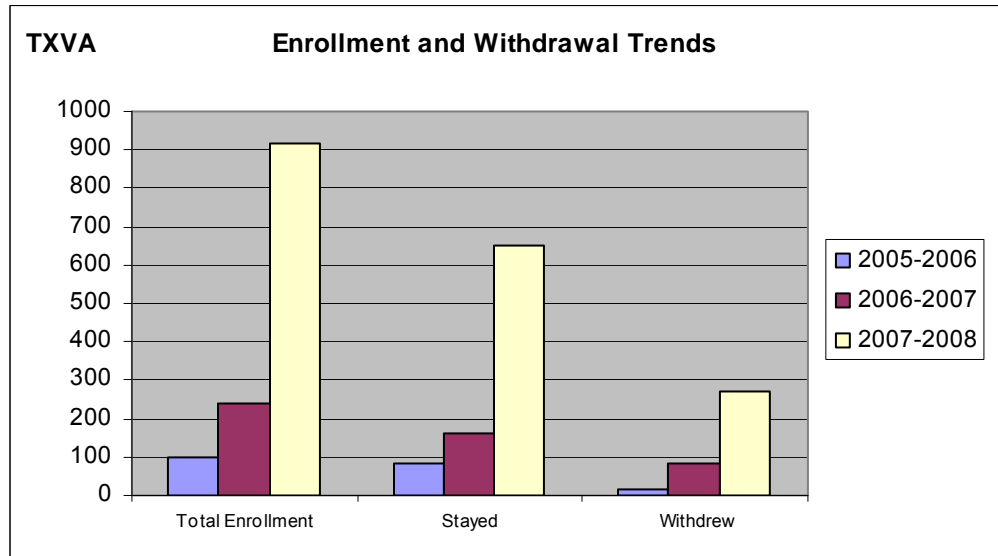
While tracking student enrollments as part of its attendance reporting and funding collection efforts, the Agency also required Southwest Schools to report student withdrawals from TXVA over the three eCP instructional years. The reporting for 2005-2006 cannot be compared statistically to subsequent instructional years because the TXVA campus did not begin serving students until March of 2006. However, from data

reported for the first full instructional year in 2006-2007, 67% of students who enrolled stayed in the program and 33% of students withdrew from the campus by the year's end. In 2007-2008, with significantly increased numbers of students served, the percentage of students who withdrew actually decreased slightly to 29% and the percentage of students who stayed in the program increased to 71%.



An independent outside evaluation commissioned by Southwest Schools indicates that the top two reasons cited

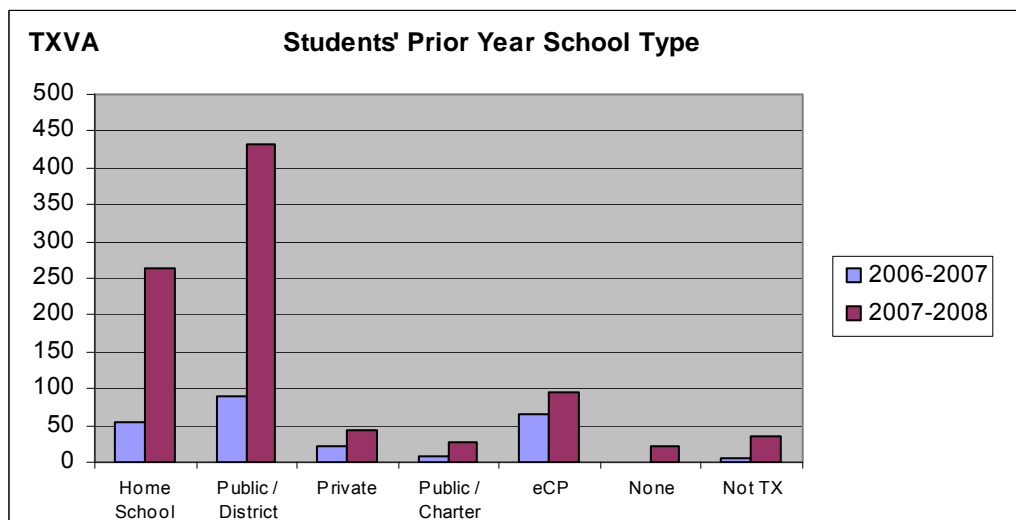
for student withdrawal from TXVA are: acceptance into his or her preferred school (31%) and workload (11%).



While it is good to see some improvement in student retention, these numbers underscore the point made frequently in this report that online learning is not a good fit for every student. There is no one educational strategy that is right for every student; online education is no exception. Additionally, students and parents who are new to online education often

underestimate the time and effort required.

Along with student withdrawal rates, the Agency collected information regarding the type of school students were attending prior to entering the eCP program. For TXVA, numbers indicate the majority of students were from traditional public schools, as noted in the chart below.

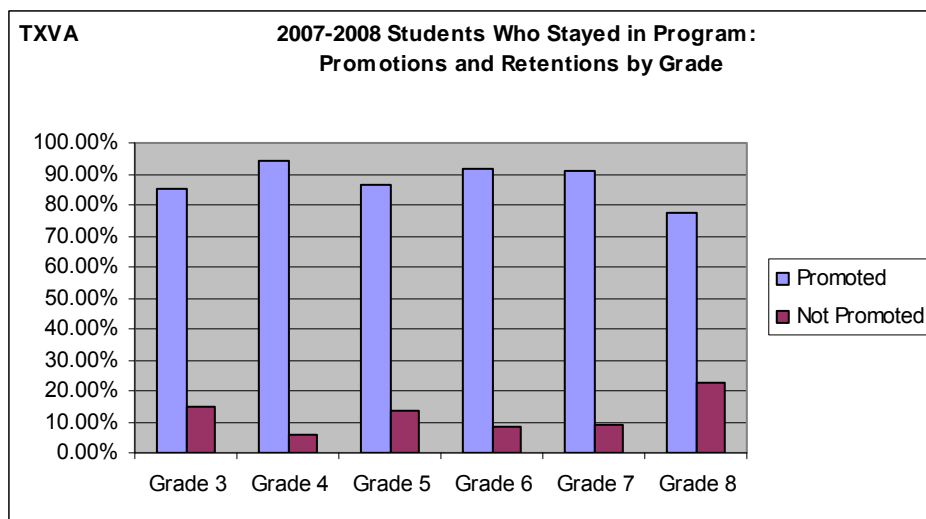
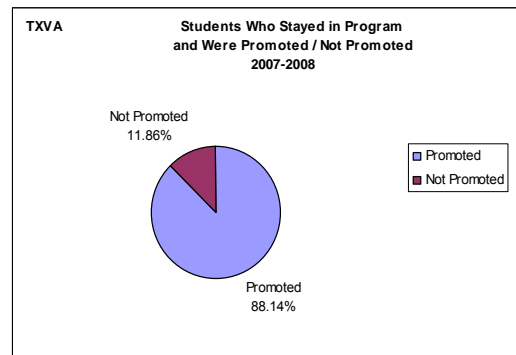
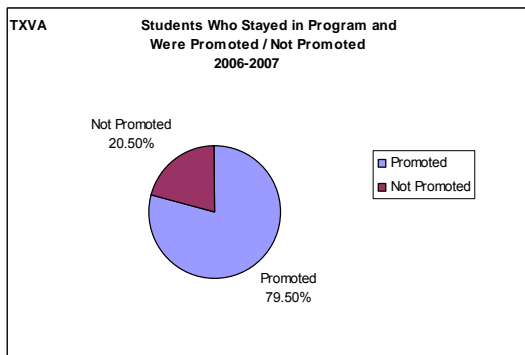


A look at demographics for the 2006-2007 and 2007-2008 school years shows that TXVA enrollment was approximately equal by gender status.

In terms of ethnicity, in both 2006-2007 and 2007-2008, more than half the students who enrolled in TXVA were white, not of Hispanic origin. Black and Hispanic students formed the next largest group of students at around 15% for each of the two school years, significantly less than the approximately 55% of white, non-Hispanic students enrolled during the same period. Although the number of Asian or Pacific Islander students who enrolled more than doubled from 06-07 to 07-08, the percentage of students in this population

group decreased from 14% to 8% in comparison to the total enrollment of all students.

According to an independent external evaluation commissioned by Southwest Schools, more than three fourths of all newly enrolled students entered the TXVA eCP program below grade level in at least one core subject area with 72% of enrolling TXVA students below grade in mathematics and 61% below grade in English Language Arts. A look at student performance in terms of the total number and percentage of students who stayed in the program and were promoted to the next grade level shows the following:





### **Houston ISD: Houston Virtual School**

Houston ISD (HISD) began serving students Spring 2007 and elected to serve grades 9-12. By the district's choice, their program was limited to a maximum of 50 students enrolled at any one time. HISD continued to serve grades 9-12 students through the end of the 2007-2008 school year.

In all, HISD served a total of 27 students over the two year period. These students enrolled in a total of 22 unique course offerings. The majority of students were in traditional public school settings prior to enrollment in the eCP. Because the numbers of students served by HISD were so small, the data collected is not statistically significant, and it would be misleading to extrapolate findings from the data received.

The district struggled to retain students in its eCP program. Of the nine students enrolled in 06-07, four stayed in the program and five withdrew; of the 18 students served in 07-08, ten students stayed in the program and eight withdrew. In reports to the Agency, the district's Virtual School staff identified some of the problems faced in implementing the program and some of its solutions and/or proposed solutions. Many of the problems reported are those that are encountered by most distance learning programs—ensuring student participation in courses or expenses related to the loss of instructional materials when students withdraw.

The cost of courses for eCP students also became a concern for the HISD Virtual School since the school paid nonrefundable course fees to third party course providers up front as each student enrolled, while payment of state funding was based on a combination of course completion and students' participation levels in those courses

(percentage of lessons completed). In the first year of the program, students were enrolled in a full course load, and 5 to 6 online courses proved overwhelming to some students. The following year, HISD Virtual School solved this issue by starting students with just two courses. Based on their progress in these courses after the first month, students could enroll in additional courses. This approach allowed students to acclimate to online learning and helped curb losses incurred when students dropped out of the program. It also provided students with a greater chance to master the new learning environment and to succeed.

The district indicated in its evaluation that it is now requiring an orientation class for students in order to better help students determine if online learning is a good fit for that student's individual learning needs. As HISD Virtual School staff note: "Students will be enrolled into a week long orientation course. This course covers everything the students need to know to navigate and participate in their online courses. It also has assignments and participation requirements through logging in and actively contributing to discussion boards. This serves to acclimate the student to the level of reading and work required in an online course."

The district's Virtual School Technology Director also recognized that students needed another type of orientation. Although it is sometimes assumed that today's students are all net savvy, HISD's Virtual School experienced something different. The Technology Director reported that "participants did not have sufficient computer skills to adequately engage their online courses." He further stated that:

"It would be a great service to those students who are not computer "savvy"

to offer them a pre-course mini-introduction to basic computing skills...the amount of time spent on teaching the required skills to those students lacking such skills [reduces time spent on coursework]...and presents an additional burden on both the student and the online school staff...While technical skills are one issue, it becomes clear that not all students, even those with expert computing skills, are good candidates for a distance learning program.”

While withdrawal rates in HISD’s eCP program were very high and therefore the corresponding rate of course completion rates was very low, of the 33 courses that were completed, the majority of these course (28) were successfully completed and only five courses were failed.

The eCP program will serve only students in grades 3-8 beginning with the 2008-2009 school year. As a result, HISD serving grades 9-12 will no longer participate in the program, but it will continue to pursue further development of the online learning opportunities it offers students.

### **eCP Expansion**

Beginning with the 2008-2009 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 were released in August 2008. (<http://ritter.tea.state.tx.us/technology/ecp>.)

Through the Agency’s eCP, districts and open-enrollment charters selected to

participate in the program will be given the opportunity to provide online learning options to Grades 3-8 public school students who are not required to be physically present on campus during instruction. Students must be enrolled in a Texas public school district or open-enrollment charter as a full-time student. The pilot will also allow the Agency to examine a new Foundation School Program (FSP) funding model that supports quality online learning, is appropriate to the online learning environment, and has the potential to scale for use statewide.

The eCP is not a grant program; schools selected for participation are eligible to earn FSP funding for students enrolled in electronic courses through the eCP. Students may participate in online courses from a location other than the school campus (virtual setting), or they may combine regular program courses taught in a traditional face-to-face classroom and online courses taught in a virtual setting.

Increasing the number of students currently served through the eCP will provide better statistical data than is currently possible. Further, expanding the program to include additional participants serving elementary and middle school students will enable the Agency to have a better understanding of the requirements for quality online classrooms at these grade levels.

### **eCP Funding Lessons Learned**

Texas authorizes all public schools to offer online courses to their students as state-funded supplemental programs. Districts may grant credit for a course if they have determined that the course meets or exceeds the state’s curriculum standards for that content area. In order for the districts to receive state funding, students must meet the normal attendance accounting rules of the state. Only districts participating in the

eCP may earn state funding for students taking online courses who are not required to be physically present on campus during instruction.

Much has been learned about funding electronic courses since the eCP was implemented in the 2005-2006 school year. Two funding models were piloted between spring 2005 and the end of the 2007-2008 school year. In the first funding model, 80% of funding was based upon a student's documented participation in the course, which served as attendance, and 20% was based on successful course completion. In the second funding model, 100% of funding was based upon a student's documented participation with a \$150 reduction for each TAKS content area not successfully completed per each student. In both instances, participation was reported by documentable activities that, together, completed a lesson. The funding was calculated based upon the percentage or number of lessons completed per student, per subject area.

The data collected was helpful in furthering the state's goal for development of policies and processes to support online learning. However, through the experience of collecting attendance information and funding students who were taking online courses through the eCP, the Agency and eCP districts learned that funding based upon tracking portions of an online course completed is difficult to track, hard to quantify, and not easy to fund satisfactorily. The highly detailed and complex documentation and reporting on a per student/per content area that each of the funding models required of schools and the resulting detailed tracking necessary at the state level for state funding and auditing purposes were difficult to implement and, above all, not scalable statewide.

Based upon lessons learned as a result of these pilot activities, phase two of the eCP will use only one funding model. The model is appropriate to the online learning environment, incorporates performance measures, requires significantly streamlined reporting criteria, and is potentially scalable.

### **eCP Expansion Funding Model**

When the Agency determined that expansion of the eCP was beneficial to the state, it recognized that one primary change would be to the funding model. Although this new funding model for the eCP expansion is, as yet, untested, it brings together elements of a number of approaches that have been successful elsewhere in the nation: successful course completion and an offset fee to compensate districts for serving students who do not complete the program. A reduction in funding has been added, based upon eCP student achievement on the statewide student assessment instruments.

Students who participate in the eCP will generate funding from the FSP upon successful course completion, as defined in the eCP Terms of Participation. The course must cover an instructional program equivalent to a full year of instruction that incorporates the required elementary or secondary curriculum typically taught by a teacher over the course of a full school year or the equivalent of 180 days of instruction. The course must be aligned with the Texas Essential Knowledge and Skills (TEKS) and meet the curriculum requirements set forth in the Texas Administrative Code (TAC), §§74.2 and/or 74.3(a). In accordance with the Texas Education Code (TEC), §28.021, each student must demonstrate academic achievement or proficiency of the subject matter sufficient for promotion to the next grade level.

A student who successfully completes the required elementary or secondary curriculum will generate funding based on the rate established in the eCP Terms of Participation for one student in average daily attendance (ADA). In order to ensure quality of instruction and the integrity of online learning as the program expands, total funding for a district is tied directly to performance on the statewide student assessments. If the eCP campus/program average passing rate for TAKS meets or exceeds the state average passing rate, no funding reduction will be assessed; if the eCP campus/program average passing rate does not meet or exceed the state average passing rate, funding is subject to a reduction as detailed in the eCP Terms of Participation.

Recognizing that the successful course completion model does not compensate districts for serving those students it serves but who do not complete the year, the eCP expansion funding model includes an offset fee. Students whose documented participation can be verified upon request, who do not meet the criteria for successful course completion, and are served for a minimum of 25 days within a 40 day period will generate 15% of the total entitlement per student. Students who are served for less than a minimum of 25 days within a 40 day period will not generate any funding.

For additional information, the eCP Terms of Participation are available at [http://ritter.tea.state.tx.us/technology/ecp/2008\\_2009/top08.doc](http://ritter.tea.state.tx.us/technology/ecp/2008_2009/top08.doc).

Through the pilot, the state will examine the efficacy of this funding model at the elementary grades for possible future use statewide.

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### **Interactive Videoconferencing (IVC)**

Prior to and concurrent 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 professional growth and experience. IVC continues to be a valuable 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 deliver courses statewide, including dual credit and graduate courses, professional development, certification programs, and field trips. The table below shows the growth in IVC usage over the past years, as well as the variety of learning opportunities available via IVC.

The ESC networks provide connectivity to more than 800 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 year in travel costs and productivity expenses. The cost-saving formula is derived by calculating the number of ESC sites in a conference and applying 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 2006 to May 2008 increased the cost savings to

approximately \$2.6 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.

Between September 2006 and May 2008, 920 statewide conferences and professional development sessions were held on TETN that resulted in saving of \$5.3 million in travel and productivity expenses. School districts participated in almost 50% of those conferences to receive first-hand information and answers to questions.

During this same time period, 6,375 K-12 classes and 830 field trips and/or meetings 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 (e.g. sharing teachers)
- Professional development classes across the state (e.g. university teaching master level classes to

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

#### IVC Usage

The numbers below indicate the use of IVC for dual credit and high school credit courses from the 2003-2004 school year through 2007-2008. Although the numbers of campuses receiving instruction has decreased and the number of high school credit course titles delivered to campuses has also decreased, student usage has increased, indicating that those campuses that use IVC courses are increasingly relying on distance learning to meet students' academic needs.

<b>Student Courses Delivered by Texas ESCs Through Interactive Videoconferencing</b>	<b>2006-2007</b>	<b>2007-2008</b>
Number of Dual Enrollment Course Titles Delivered	220	283
Number of Dual Enrollment Courses Delivered	676	604
Number of Campuses Receiving Instruction	307	291
Number of Student Enrollment	9,359	11,449
Number of High School Credit Course Titles Delivered	63	49
Number of High School Credit Courses Delivered	140	120
Number of Student Enrollment	2,357	2,662



### IVC Field Trips

Distance learning field trips through IVC continue to be a popular supplement to classroom instruction. They enable students to visit sites of interest without leaving their own campus. Students visit museums, aquariums, observatories, and other sites, and they interact with experts in fields such as geology, astronomy, and marine science. As well as providing students with the chance to venture beyond the classroom, distance learning field trips also enhance and reinforce classroom activities, offering students an opportunity to apply what they have learned in class as they watch, listen to, and interact with professionals in many different disciplines and with other students.

The figures below show the growth in the number of campuses taking

advantage of IVC field trip opportunities from the 2003-2004 to the 2007-2008 school year, and indicates the increasing number of electronic field trips offered. In addition, students are now delivering programs via IVC to other students across the state. In the category of "student delivered programs," the programs were those that students developed and delivered to other students, or they were collaborative programs such as one class reading to another as part of the National Education Association's (NEA) annual Read Across America celebration that focuses on how important it is to motivate children to read in addition to helping them master basic skills.

Electronic Field Trips for Students Delivered by Texas ESCs Through Interactive Videoconferencing (IVC)	2006-2007	2007-2008
Number of Electronic Field Trips Delivered	2,837	2,877
Number of Campuses Receiving Electronic Field Trips	2,559	2,935
Number of Students Participating	131,183	150,588
Number of Student Delivered Programs		427
Number of Electronic Field Trips Delivered	2,837	2,877

Designed to provide engaging content and interaction between students, educators, and experts in the field, individual ESCs hosted a wide variety of student events over TETN that added to educational experience of the across the state.



For example, in February 2008, live and via the TETN videoconferencing network from the George Bush Presidential Library and Museum, Former First Lady Barbara Bush read to students from the book, *Wackiest White House Pets*, as the author, Gibbs Davis, joined Mrs. Bush on stage. Approximately 7,000 students attended this interactive storytelling presentation, with 600 students from local campuses attending the program on-site at the library conference center. Through the TETN network, another 6,400 students attended from 25 different districts, with

31 campuses connected through the TETN network.

Thanks to IVC field trips delivered by the ESCs to campuses across the state, Texas students were not limited by time and space in their classroom learning adventures.

## Progress in Educator Preparation and Development



**E**ducators today need the tools and resources to prepare students to live and learn in the 21<sup>st</sup> Century. Technology plays a major role in providing our students with the skills necessary to succeed as 21<sup>st</sup> Century learners in a society that is increasingly dependent on technology. In Texas, high quality educator preparation and development are critical. Preparing educators to improve their teaching practices by incorporating technology is a high priority.

Students of today are living in a world where technology is part of everyday life. School districts, colleges, and universities have been preparing educators to effectively facilitate and manage 21<sup>st</sup> Century learning in technology and information-rich settings.

This involves essential retooling of the existing professional core of the educational system. Securing time, resources, and effective models for educator preparation and development have presented a tremendous challenge to the state and to the entire nation. Distance learning is making it possible for much of the preparation and development to take place anytime and anywhere, eliminating many of the time and resource challenges. Along with providing Texas educators with increased opportunities for growth and development, using technology for their own learning means, educators will have a greater familiarity with the technological tools available and with the application of those tools in an instructional setting. Thus, they are more likely to use technology in their own classrooms. As a result, schools and students stand to gain on many levels.

New and innovative methods for teacher and administrator preparation continue to fuel the education of young Texans with qualified and skilled personnel. Professional development facilitates the urgent charge of supporting the move from traditional schooling to 21<sup>st</sup> Century education. In this section, Progress in Educator Preparation and Development, the progress of this move for Texas educators is documented by addressing educator expectations and preparation, certification opportunities, and state and federal professional development grants and programs.

## State of the State

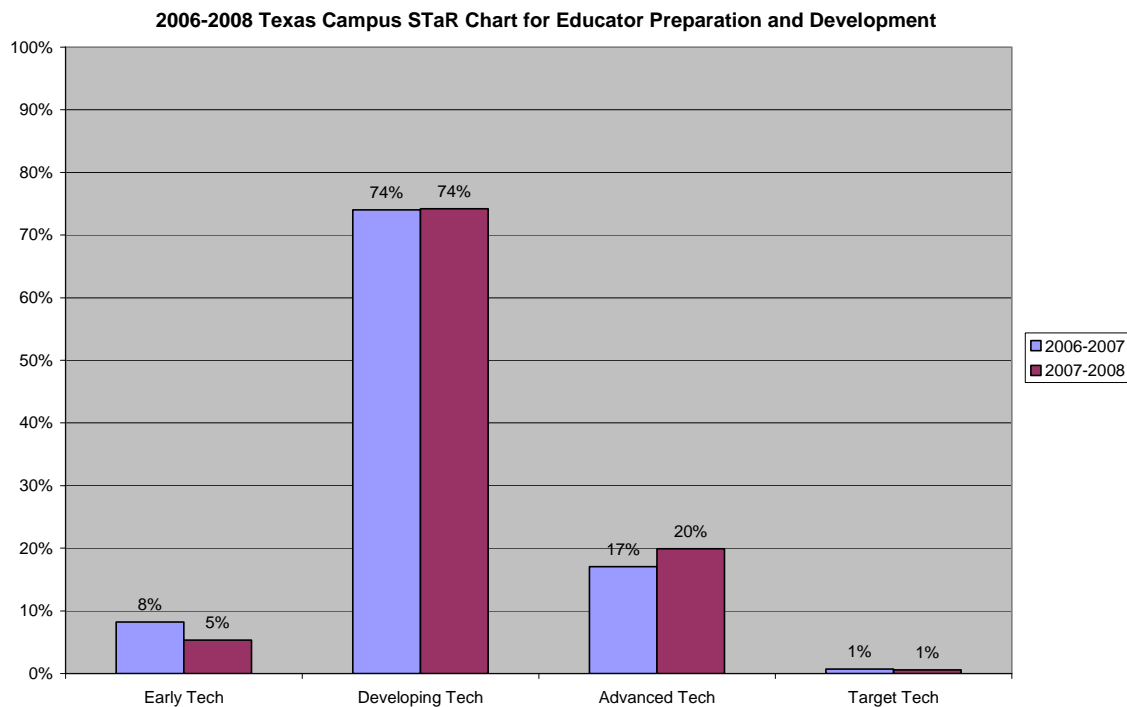
Texas educators and librarians showed slight gains in the area of Educator Preparation on the Texas Teacher STaR Chart when comparing the past two years—from September 2006 to August 2008. There was a 20 percent drop at the Target Tech level. In 2007-2008, 44 campuses achieved Target Tech compared to 55 campuses in 2006-2007. Due to changes in the State Board of Education's Long-Range Plan for Technology, additional reporting elements were added to the STaR Chart in 2006, which may account for this drop.

On a Target Tech campus, there are regular technology-supported learner-centered projects. There is vertical alignment of the Technology Applications TEKS and anytime, anywhere use of online resources.

Administrators ensure integration of appropriate technology. All, 100%, of the educators meet SBEC standards. At least 30% of the technology budget is allocated for professional development.

At the Advanced Tech level, in 2007-2008 there were 1,518 campuses compared to 1,321 campuses in 2006-2007.

According to the 2007-2008 data, fewer campuses were at the Early Tech level, 406 campuses, compared to 2006-2007 when the data showed 637 campuses at the Early Tech level. Also, the 2007-2008 data shows slightly fewer campuses, 5,654, at the Developing Tech level when compared to 2006-2007 when 5,739 campuses were at that level.



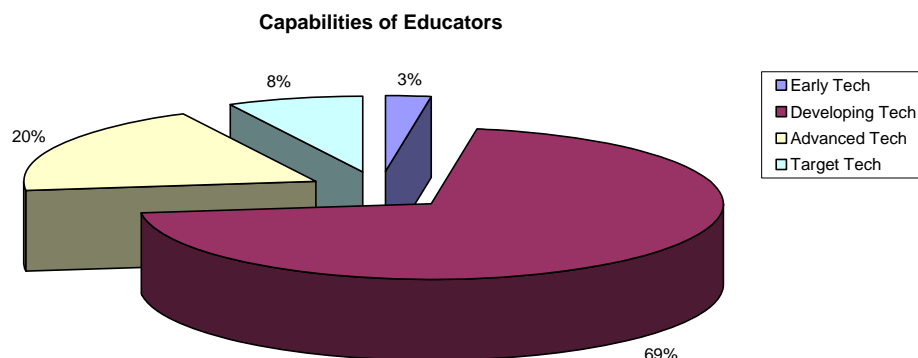
The Campus STaR Chart in the key area of Educator Preparation and Development reveals more detailed information.

In Focus Area EP 1, Content of Professional Development, 67% of campuses are rated as Developing Tech. Developing Tech in this Focus Area means that most teachers have completed professional development on the integration of technology specific to their content area and to increase productivity to accomplish a variety of instruction and management tasks. This Focus Area also shows that 1% of campuses are at Target Tech, 25% of campuses are rated Advanced Tech, and 7% at Early Tech.

In Focus Area EP 2, Models of Professional Development, more than half of the state's campuses, 69% are

rated as Developing Tech. A Developing Tech campus in this Focus Area provides large group professional development sessions that focus on increasing teacher productivity and building capacity to integrate technology effectively into content areas. In this Focus Area, 3% of campuses are at Target Tech, 20% of campuses are rated at Advanced Tech, followed by 8% at Early Tech.

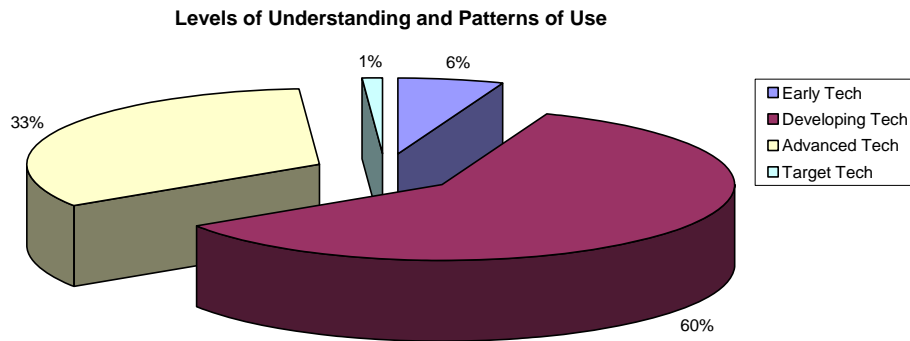
In Focus Area EP 3, Capabilities of Educators, almost two thirds of campuses, 69%, are rated at Developing Tech. This means that most of the teachers on the campus demonstrate two to three of the SBEC Technology Applications Standards. The Campus Chart also shows that 3% of campuses are at Target Tech, 20% of campuses are at Advanced Tech, and 8% at Early Tech.



In Focus Area EP 4, Access to Professional Development, 58% of campuses are rated at Developing Tech. This means nine to 18 hours of technology professional development are available per school year for all teachers. The Campus Chart also shows 8% of campuses are at Target Tech while 12% of campuses are at Advanced Tech and that 22% of campuses are at Early Tech.

In Focus Area EP 5, Levels of Understanding and Patterns of Use, 60% of campuses are at Developing Tech. Developing Tech means most teachers adapt technology knowledge and skills for content area instruction. This Focus Area also shows that 1% of campuses are at Target Tech, 33% of campuses are at Advanced Tech, and 6% are at Early Tech.





In the final Educator Preparation & Development Focus Area, EP 6 Professional Development for Online Learning, 60% of campuses are at Developing Tech. This means that most teachers have participated in professional development on the

customization of online content for appropriate subject areas. The Campus Chart also shows that 0.51% of campuses are at Target Tech, 4% are at Advanced Tech and 36% of campuses are at Early Tech.

### **Educator Expectations and Preparation**

Those involved with educating our students in the 21<sup>st</sup> Century have recognized the pivotal role that technology plays in our current society and the equally vital benefit that technology affords the 21<sup>st</sup> Century classroom. Now beyond the initial stages of technology integration in public education, a need persists for the training and education of teachers, administrators, and others in the school community in the best and most up-to-date practices of educational technology.

Educator preparation in the latest uses and classroom practices in educational technology is crucial if schools are to realize the full potential that new technologies offer students. If the expectation exists that educators will integrate technology across the curricula in order to support and further student learning in all disciplines, then the educators themselves must feel not merely comfortable with the latest technological innovations, but genuinely excited about their potential and

ambitious to employ them to the utmost benefit in the classroom. Resources must be garnered from all available sources to support the technological preparations of all members of the public school community, in order to see the most rapid, efficient, and fruitful progress of Texas 21<sup>st</sup> Century classrooms.

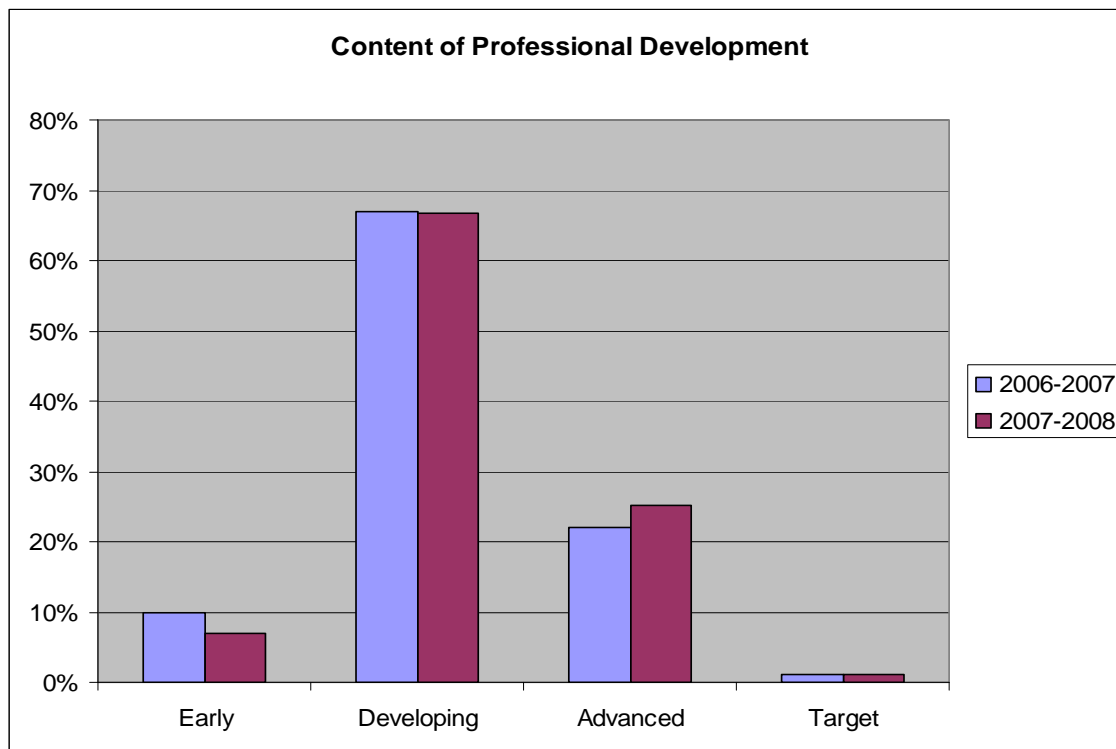
Educators are increasingly aware of the importance of technology for themselves and their students. Academic leaders recognize the importance of the types of training content, models of professional development, and budget allocations in their schools. Teachers are working toward meeting the SBEC proficiencies and integrating technology into the key areas of core curriculum. The importance of preparing educators for the 21<sup>st</sup> Century learner continues to be a priority for Texas schools.

The use of technology can support not only the content of educator preparation and development that is offered, but also its delivery. Title II, Part D funding has enabled technology initiatives that

support educator preparation and development. The Texas STaR Chart is designed to help campuses and districts gauge progress in meeting state and federal requirements for technology literate students, technology literate teachers, and technology integration across the curriculum as specified requirements in No Child Left Behind.

A comparison of campus STaR Chart data from the 2006-2007 and 2007-2008 school years shows that more campuses are gradually moving from the earliest stage of technological preparation into the Developing and Advanced stages. Developing Tech in the area of professional development content means that most teachers have

completed professional development on the integration of technology specific to their content area and have been trained to use technology to increase productivity in the accomplishment of a variety of instruction and management tasks. As this upward trend continues, it is expected that the bulk of campuses will move from their present state as Developing in their training experience with educational technology to the Advanced level. At the Advanced level, most teachers on a given campus have completed professional development on technology integration and on the utilization of proven strategies that promote higher order thinking skills in their students.



In this section information is provided in the following areas: educator technology standards, certification opportunities, professional development for educational technology, Technology Applications Teacher Network, Best

Practices, Texas Teacher STaR Chart training, professional development in educational technology and technology integration, and distance learning for educator preparation and development.

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### **Technology Applications Standards for All Educators**

The State Board for Educator Certification (SBEC) approved educator certification standards in Technology Applications for all beginning educators. The Technology Applications standards are incorporated into the Texas Examination for Educator Standards (TExES) for Pedagogy and Professional Responsibilities at each certification level. The Technology Applications SBEC standards are based on the Technology Applications Texas Essential Knowledge and Skills (TEKS) for students in Grades 6-8.

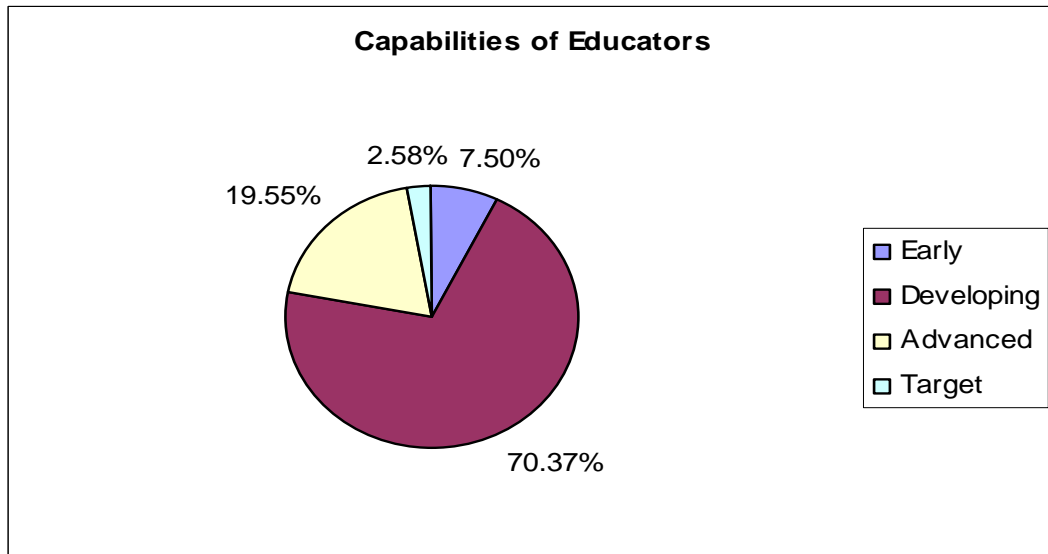
All current teachers should strive to meet the SBEC Technology Applications Standards, I-V. The Technology Applications Teacher Network (TATN) as well as adopted Technology Applications instructional materials assist teachers in meeting these standards. For additional information on Technology Applications educator standards, visit: <http://ritter.tea.state.tx.us/technology/ta/edstd.html>. Educator should strive to meet the SBEC standards in Technology Applications for all beginning educators.

#### **Technology Applications, Educator Standards I-V**

- I. All teachers use technology-related terms, concepts, data input strategies, and ethical 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.

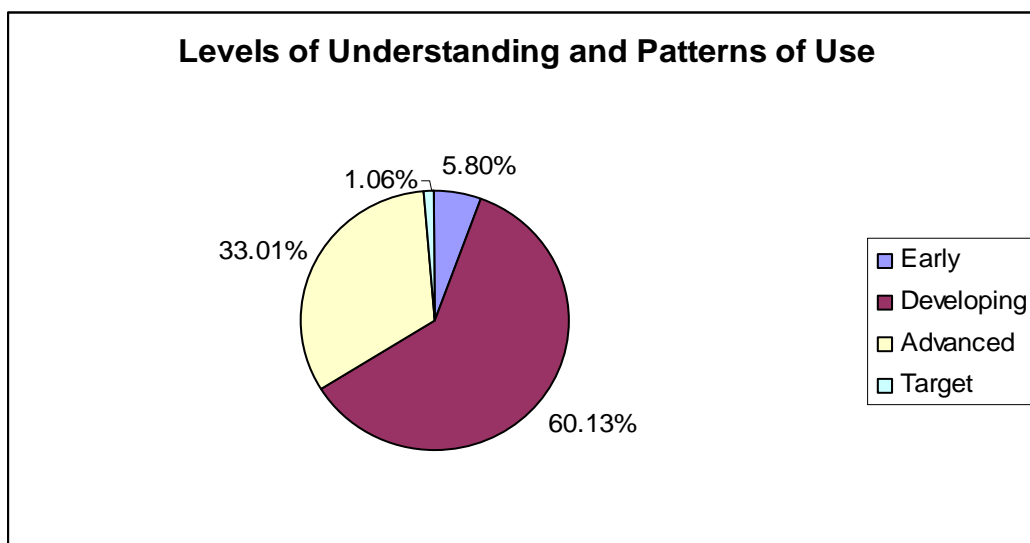
In Campus STaR Chart Focus Area EP 3, *Capabilities of Educators*, almost three quarters of campuses, 70.37 percent, are rated at Developing Tech. This means that most of the teachers on those campuses demonstrate two to

three of the aforementioned SBEC Technology Applications Standards. The Campus Chart also shows that 19.55 percent of campuses are at Advanced Tech, 7.50 percent at Target Tech and 2.58 percent at Early Tech.



In the STaR Chart Focus Area, *Levels of Understanding and Patterns of Use*, three-fifth (60.14 %) of Texas campuses indicate a status of Developing Technology. This means that most teachers on those campuses adapt technology knowledge and skills for

content area instruction. This Focus Area also shows that one-third of campuses are at Advanced Tech, while the remaining respondents are divided between the Early and Target stages of growth.



**Certification Opportunities**

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### **Technology Applications**

In addition to SBEC Technology Applications Standards I-V, there are Technology Applications standards and certificate options that include: Technology Applications EC -12, Technology Applications Grades 8-12, and Computer Science Grades 8-12. The technology applications requirements are included in SBEC Technology Applications Standards VI-XI. Following the development of test standards, items, and frameworks, the first administration of the TExES for these Technology Applications areas was October 2004. While the numbers of teachers gaining the Technology Applications EC-12 and 8-12 are increasing, the number of Computer Science certified teachers remains low. This has raised a concern throughout the field that there are not enough Computer Science teachers to teach students interested in taking Computer Science courses, including the Advanced Placement Computer Science courses.

### **Master Technology Teacher**

In addition, there is a Master Technology Teacher (MTT) All Level Certificate. The 77th Texas legislature mandated the Master Technology Teacher Certification (TEC §21.0483) and Grant Program (TEC §21.412) through House Bill 1475. The MTT Certificate prepares teachers to mentor other teachers and to work with students in order to increase the appropriate use of technology in each classroom.

Certified Master Technology Teachers (MTTs) have played a critical role in schools by working with other teachers to ensure the best uses of technology to improve student achievement. The

MTTs have been instrumental in encouraging teachers to try new methods of bringing to life the curriculum using technology. These methods make 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. The number of MTT certificates awarded between September 1, 2006 and August 31, 2008 was 96.

As schools across the state continue to prepare students and teachers with 21<sup>st</sup> Century skills, Master Technology Teachers are positively impacting teaching and learning. The number of teachers seeking this certificate should increase if stipends are made available.

### **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. The number of school librarians during this progress reporting period was 888.



<b>Technology Applications-Related Certificates Issued September 1, 2006 through August 31, 2008</b>	
Technology Applications EC-12	859
Technology Applications 8-12	801
Computer Science 8-12	116
Master Technology Teacher	96
School Librarian EC-12	888

SBEC Data

### **Changes in the Generalist Certificate**

Through actions of the State Board for Educator Certification, Technology Applications has been added to the Generalist Certificate so that teachers can teach Technology Applications TEKS in addition to other core areas specified in certification rules for the Generalist. The addition of Technology Applications to the listing of subject areas that can be taught with this certificate became effective in the 2007-2008 school year. In addition rules were clarified for teachers of separate Technology Applications courses at Grades 4-8.

### **Texas Administrative Code (TAC), §233.2 Categories of Classroom Teaching Certificates: Generalist**

(a) Generalist: Early Childhood-Grade 4. The Generalist: Early Childhood-Grade 4 certificate may be issued no earlier than September 1, 2002. The holder of the Generalist: Early Childhood-Grade 4 certificate may teach the following content areas in a prekindergarten program, in kindergarten, and in Grades 1-4: (1) Art; (2) Health; (3) Music; (4) Physical Education; (5) English Language Arts and Reading; (6) Mathematics; (7) Science; (8) Social Studies; and (9) Technology Applications.

(c) Generalist: Early Childhood-Grade 6. The Generalist: Early Childhood-Grade 6 certificate may be issued no earlier than September 1, 2008. The holder of

the Generalist: Early Childhood-Grade 6 certificate may teach the following content areas in a prekindergarten program, in kindergarten, and in Grades 1-6: (1) Art; (2) Health; (3) Music; (4) Physical Education; (5) English Language Arts and Reading; (6) Mathematics; (7) Science; (8) Social Studies; and (9) Technology Applications.

### **Categories of Classroom Teaching Certificates: General Authority**

(f) A holder of a certificate valid for Grades 4-8 may teach technology applications in Grades 4-8 if integrated within an academic course or through interdisciplinary methodology in those subjects that the individual is certified to teach. The school district is responsible for ensuring that the educator has the appropriate technology applications knowledge and skills to teach the course(s) to which he or she is assigned. If Technology Applications is taught as a separate course, the educator shall be required to hold an appropriate technology applications certificate (Technology Applications or Computer Science).

### **Educator Preparation and Professional Development**

Educator preparation programs provide opportunities for educators to receive the Technology Applications, Master Technology Teacher, and School Librarian certificates. Each of these

certificates gives Texas teachers options for expanding their digital technology knowledge and skills and abilities to integrate the technology across the curriculum. In addition, other curriculum areas address the use of technology in the classroom, including the foundation curriculum areas as well as various career clusters in the Career and Technical Education curriculum. For additional teacher certification information, visit: <http://www.sbec.state.tx.us>.

### **Professional Development for Educational Technology**

In order to make systemic changes in the way teachers teach and students learn, it is necessary to encourage and sustain a comprehensive professional development program that includes careful planning, supportive leadership, and data-driven decision-making. Schools must operate as professional learning communities that enable their members to share best practices, discuss challenges, and develop strategies for improving instruction using technology. They must involve all stakeholders in creating and sustaining professional learning communities. Opportunities for professional development must be provided in the school, district, and region in order to build the path of reform that facilitates successful learning communities. Education Service Centers (ESCs) have included information on the professional development that they have held in the section of this Progress Report on ESCs. The Intel Teach program and the STAR grant are two statewide professional development initiatives to assist educators in reaching the Target Tech level on the STaR Chart.

### **Professional Development for Schools, Teachers, Administrators and Regions (STAR) Grant**

The focus of the STAR grant is to implement and sustain a professional development program that will build

capacity for administrators to provide leadership in using educational technology to improve student achievement and provide teachers with the knowledge and skills and classroom strategies to effectively integrate technology into the classroom. Applicants were required to select a professional development model that would train administrators to be effective leaders in the planning of technology efforts on their campuses and to describe the model in the application. The professional development selected was to be a research-based model that



could be replicated on a large scale basis and was to include the different skill levels of all teachers and administrators. The model is ongoing and must not be dependent on specific hardware or software but rather focus on pedagogical strategies for classroom instruction through the use of technology. The model should contain descriptions of appropriate use of various instructional materials such as digital resources, technology-based tools, online and other distance learning technologies, and/or assistive technology solutions. Effective lesson planning to improve student thinking and learning to foster social, emotional and cognitive engagement is also critical. The program must align with the expectations for teachers, administrators and students in the state of Texas and must support the

recommendations in the Long-Range Plan for Technology and assist the participating campuses in reaching the Target Tech level of the Texas STaR Chart. The Long-Range Plan for Technology recommendations includes the NCLB, Title II, Part D professional development requirements. The Professional Development Definition is located under NCLB, P.L. 107-110, Section 9101 (34).

Goals of the No Child Left Behind Act, Title II, Part D are:

- to improve student academic achievement through the use of technology in elementary and secondary schools
- to assist every student in crossing the digital divide by ensuring that every student is technology literate
- to encourage the effective integration of technology resources and systems with teacher training and curriculum development to establish research-based instructional methods that can be widely implemented as best practices by state and local educational agencies



In addition, the grant addresses the following recommendation in the new Long-Range Plan for Technology 2006-2020:

- require and support high-quality, professional development to ensure the effective use of technology and full integration of technology across all subject areas and all grade levels and to further the implementation of the Technology Applications TEKS and the acquisition of the SBEC Technology Applications standards by all educators.
- to 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.

Ongoing professional development is essential to the effective use of educational technologies in Texas schools.



Technology can impact curriculum and instruction, but for this to occur, teachers need to learn to incorporate technology appropriately to support the curriculum and bring about learning opportunities that would not be possible without the use of technology. The Long-Range Plan for Technology, 2006-2020, provides the vision for quality educator preparation and development.

According to the LRPT's recommendations, all educators will be able to develop new learning environments that utilize technology as a flexible tool where learning is collaborative, interactive and customized for the individual learner, and 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, and evaluation.

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### **The STAR Grant In Action**

One of the main goals of Title II, Part D No Child Left Behind is to encourage the effective integration of technology resources and systems with teacher training and curriculum development to establish research-based instructional methods that can be widely implemented as best practices by state and local educational agencies. Through the Star Grants, many different types of professional development were implemented. Participating school districts report the following educational technology developments as a result of support from the Star Grant:

- Administrators were equipped with the professional development and tools needed to implement 21<sup>st</sup> Century learning on their campuses. (Bryan ISD)
- Administrators reported that teachers requested more technology for their campuses and were more confident in their use of technology. Increased levels of higher-order thinking skills were observed in technology-integrated lessons. (Belton ISD)
- Online learning professional developments are mitigating the costs of rising fuel prices, and technology workshops are targeted at improving weakness in TAKS results. (Region VII)

- Teachers of math and science were provided opportunities to observe fellow teachers as they modeled technology-infused lessons. (Irving ISD)
- Campuses built formal technology plans, and set standards of use for technology, i.e. best practice models are shared by model-teachers. (Ysleta ISD)

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### **The Intel® Teach Program**

While there are many successful professional development models used throughout the State of Texas to promote educational technology, the Intel® Teach Program is one example that was made available to our Technology Immersion Pilot (TIP) campuses.

Through the ESC10 Technical Assistance Grant and as the state coordinator for Intel training, other ESCs have had the opportunity to become involved in the Intel® Teach Program in order to build capacity throughout the state.

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, promoting problem solving, critical thinking, and collaboration skills among their students. To date the program has trained approximately 12,000 Texas teachers.

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 model anticipates results





in increased technology integration and an energized standards-aligned 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 of this process is that teachers are 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 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.
- **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>

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### **Texas Principal Excellence Program**

The Texas Principal Excellence Program (TxPEP) is authorized under Subchapter E Chapter 11, §11.203, of the Texas Education Code and formerly referred to as the School Leadership Pilot Program. TxPEP is one of the intervention programs designed and implemented by TEA to assist principals of campuses rated as Academically Unacceptable (AU) in the state accountability system. TxPEP is an effort to improve school performance by expanding principal leadership and management skills.

Participants of the 2008-09 TxPEP program create an individual professional development plan based on their 360-degree assessment results, a National Association of Secondary School Principals' 21st Century instrument, and select learning content from the program catalog to meet their needs. They then work towards implementing their plan through the completion of individual and group



activities and the study of various types of content, including videos, webinars, books, articles, and more. Two major content elements in the program will be provided by PD360 and Educational Impact Online—the two premier providers of online professional development materials geared toward principals and school administrators. Both of these resources provide 24/7, on-demand online streaming video content from nationally-recognized educators and researchers. Their personalized plan is facilitated through the Learning Networks – with monthly learning activities, both face-to-face and virtual, as well as self-paced individual learning. As participants are engaged with the learning content, they will also receive monthly one-on-one coaching from their Learning Coach. The coaching is provided to assist participants in focusing on the application of learning content at their campuses and to provide support throughout the school year. A final 360-degree assessment will help to evaluate professional development growth over the course of the program and then the program concludes with a final meeting and with completion of program

requirements. For more information on the TxPEP program please go to <http://www.txpep.org/>.

### Technology Applications Teacher Network (TATN)

Since 2002, Texas teachers have had access to resources and best practices through the Technology Applications Teacher Network (TATN) which is supported through NCLB Title II, Part D technical assistance funds. It is a collaborative project between the twenty Texas Education Service Centers and TEA. The TATN website is designed to provide Texas teachers with resources to implement the Technology Applications 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 as well 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.

<http://www.techappsnetwork.org>

## Technology Applications Teacher Network Best Practices Event

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 six years. The purpose of the pre-conference 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 present to share best practices. Over the last two years, the event has expanded in all areas including attendance, quantity and quality of presentations, and interest and discussion of emerging technologies.



On February 6, 2007, the fifth annual TATN Best Practices Event was held. Teachers shared lesson plans noting correlations to both core area and technology applications TEKS. Student projects and assessment rubrics were included in the 84 teacher presentations. 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 the over 700 attendees from across the state.

On February 5, 2008, the sixth annual Technology Applications Teacher Network Event was held in Austin at the

TCEA conference. Approximately 950 teachers from across the state attended the 84 breakout 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. New for 2008 were expanded strands in Core Integration for Grades 6-8 and Grades 9-12. These sessions focused on technology-infused presentations by teachers in such content areas as Physics, Texas History, English and Economics. As with the previous year, CD's were distributed to all attendees and lesson plans were posted on the TATN website. The next TATN event is scheduled for February 3, 2009, at the TCEA Convention and Exposition.

"The best practices event is a wonderful way for teachers to learn from each other and build a network with other teachers to share resources and better support the learning of Technology Applications in Texas schools."

TATN Event Participant

## Distance Learning

Distance learning, especially online learning, is an important strategy for providing teachers and administrators across the state with professional development. Educators can participate in professional development via distance learning from their home town—at school or at home—rather than by leaving their classrooms and administrative offices to travel to a distant location. Distance learning can provide ongoing professional development to educators across the state, helping to reduce critical teacher shortages and lessen the number of educators teaching outside their area of certification or expertise.

All educators need professional development in the effective use of technologies. Systems of technical support, staffing patterns, budgeting functions, and funding acquisitions require ongoing professional and staff growth. Allocating sufficient time for professional development is essential but poses challenges in balancing priorities. Online professional development opportunities can often assist in this area. Appropriate instructional support services are required in order to ensure teachers fully integrate technology in curricula and maximize educational benefits from the investment in technology. Leaders must plan effectively to create innovative, flexible, and responsive learning environments to maximize teaching and learning.

The importance of professional development for online teachers cannot



be over-emphasized. Teachers are at the heart of education and learning whatever the instructional setting. As stated in the introduction to SREB's *Standards for Quality Online Teaching*: "The most important factor affecting student learning is the teacher. Everyone understands, on a personal level, the importance of teachers to their educational success. Teachers who know their subject, understand how to teach and can adjust their teaching to student needs will be successful in raising student achievement, research shows. Teacher expectations are a significant factor in how much and how well students learn." Through state and national research efforts, quality online teaching has been recognized as a key component of quality online learning, just as quality in teaching is essential in a traditional, face-to-face classroom.

Recognizing the importance of the online teacher, Texas Virtual School Network (TxVSN) statute, §30A.11, requires each teacher of an electronic course offered by a district or open-enrollment charter school through the network to successfully complete the appropriate professional development course authorized by the network before teaching an electronic course offered through the network. Through a Request for Qualifications process, the network identified TxVSN-approved professional development from five providers. The professional development required by the network must meet the *International Association for K-12 Online Learning* developed by SREB and fully endorsed by iNACOL. <http://www.inacol.org>.

The five providers are Education Development Center, Inc.; ESC Region 4; ESC Region 11; Harris County Department of Education; and Texas A&M University Center for Distance Learning Research. The application for

approval to provide TxVSN- approved professional development is an ongoing process and will allow additional professional development providers to be identified.

Each teacher of an online course offered through the Electronic Course Pilot (eCP) must also successfully complete professional development for online teaching which meets the *National Standards for Quality Online Teaching* before the start of the 2010-2011 school year.

The professional development requirements related to online learning programs included in the TxVSN, eCP, and Vision 2020 grant give the Agency an opportunity to promote professional development to support the use of online and distance learning technologies, thereby meeting a recommendation for the Agency in the State Board of Education's (SBOE) *Long-Range Plan for Technology, 2006-2010*.

### **Interactive Video Conferencing for Professional Development**

Distance learning through interactive videoconferencing (IVC) is an important way that Texas educator professionals are being served through the state's twenty regional education service centers (ESCs). Courses and workshops delivered through IVC meet the needs of educators desiring additional professional development, certification, and graduate course opportunities. In Spring 2007, a survey completed by the service centers gathered snapshot data of the activity in distance learning provided by ESCs through IVC.

The table below provides information regarding the use of IVC opportunities for professional development. The ability to meet the demands of educators working throughout the state who want to expand their knowledge and skills is one of the significant benefits available through distance learning, whether through online, videoconferencing, satellite, or other distance learning technologies.

<b>Professional Development Provided by Texas ESCs Through Interactive Videoconferencing (IVC)</b>	<b>2006-2007</b>	<b>2007-2008</b>
Number of Professional Development Workshops Delivered	1,952	2,624
Number of Student Enrollments	30,797	37,342
Number of Certification Courses Delivered	28	38
Number of Student Enrollments	716	601



## Progress in the Leadership, Administration, and Instructional Support



All school districts in Texas have an overarching goal to enhance the educational process through the use of technology. The framework to succeed with the implementation of technology within the state's schools is dependent upon many factors that include planning, budgets, processes, programs, and people. School personnel must work collaboratively and continuously to integrate technology into the teaching, learning and business environments. Effective integration provides schools with

the resources necessary for students to increase student achievement, enhance teacher's knowledge and proficiencies, and provide administrators with the tools to effectively manage their responsibilities.

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 improvement of overall school operations and the 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 used effectively.

With the guidance from school administrators, schools have been actively planning to integrate technology into every aspect of the school environment. Student achievement has been improving through the use of technology. Educator's knowledge and proficiencies with technology literacy is growing, but it must be ongoing if schools are expected to prepare students to succeed in the 21<sup>st</sup> Century. Technology is rapidly changing, and school administrators should continue their efforts in using the latest technology to improve student learning, increase productivity, and ensure efficient school operations.



### State of the State

During 2007-2008, in the key area of Administration and Support, slightly more campuses, 276 campuses, were at the Target Tech level in comparison with the 248 campuses at that level in 2006-2007.

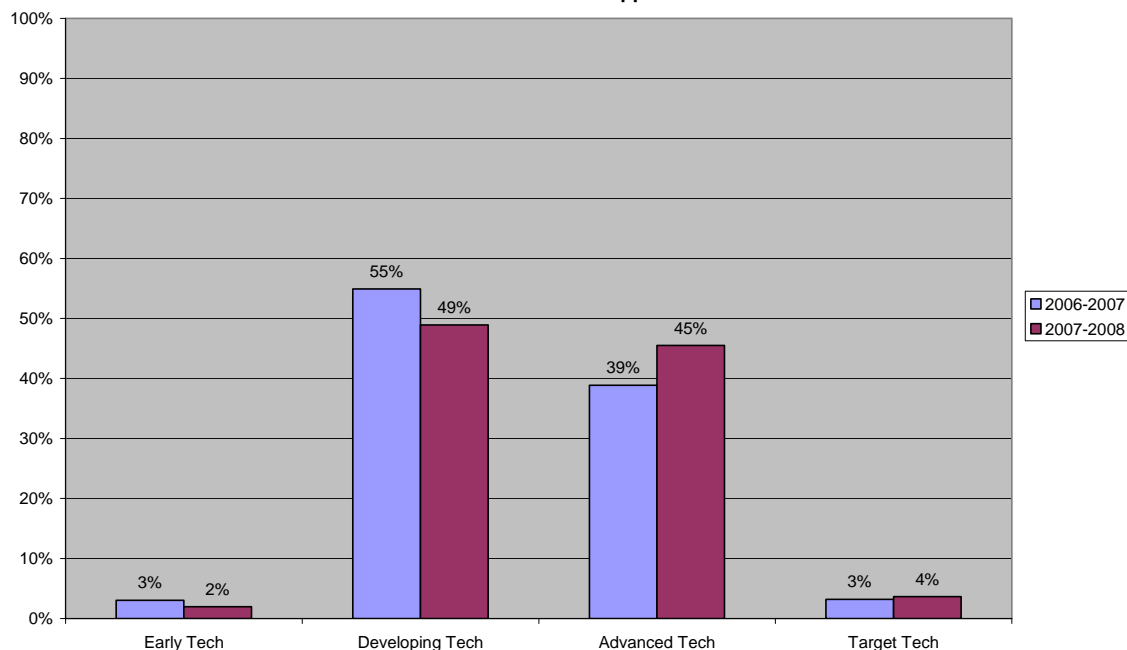
On a Target Tech campus, the campus plan is focused on student success, supported by the board and administration. There is one technical support staff member per 350 computers. Campus-based instructional technology support is available. The Technology Allotment, E-Rate, state and federal competitive grants, and local funding are

available to acquire technical support at the campus level.

Between 2006-2007 and 2007-2008, however, the largest increase in the area of Administration and Support was at the Advanced Tech level. In 2007-2008, 3,473 campuses were at Advanced Tech compared to 3,012 in 2006-2007.

Fewer campuses, 3,734, in 2007-2008 were rated at the Developing Tech level than the 4,257 campuses in 2006-2007. At the Early Tech level, in 2007-2008 there were 150 campuses compared to 235 campuses in 2006-2007.

2006-2008 Texas Campus STaR Chart for Leadership, Administration and Instructional Support



A closer look at the Campus STaR Chart in the Key Area of Leadership, Administration & Instructional Support reveals more detailed information. In Focus Area L 1, Leadership and Vision, 47% of campuses are rated as Developing Tech. Developing Tech in this Focus Area means that campus leadership develops a shared vision and

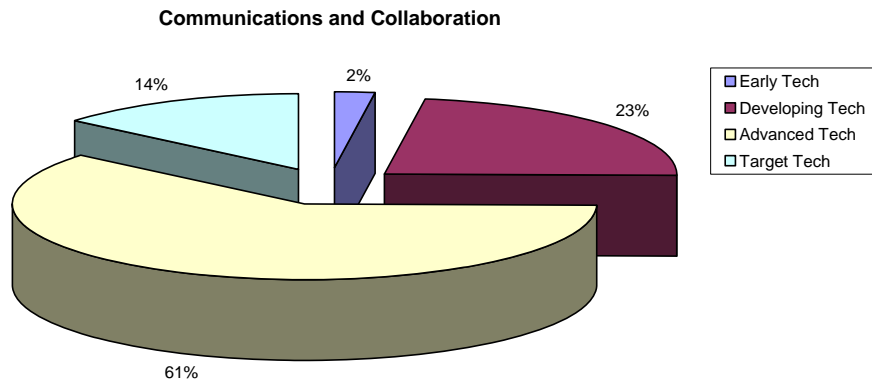
begins to build buy-in for comprehensive integration of technology leading to increased student achievement. This Focus Area also shows that 7% of campuses are at Target Tech, 42% are rated Advanced Tech and 3.76% at Early Tech.

In Focus Area L 2, Planning, more than half of the state's campuses, 59% are rated as Developing Tech. This means the campus has several technology goals and objectives that are incorporated in the Campus Improvement Plan. In this Focus Area, 4% of campuses are rated at Target Tech, 31% are rated at Advanced Tech, followed by 5% at Early Tech.

In Focus Area L 3, Instructional Support, more than half of campuses, 67% are rated at Developing Tech. Developing Tech campuses provide regular access to instructional support for the integration and use of technology in content areas.

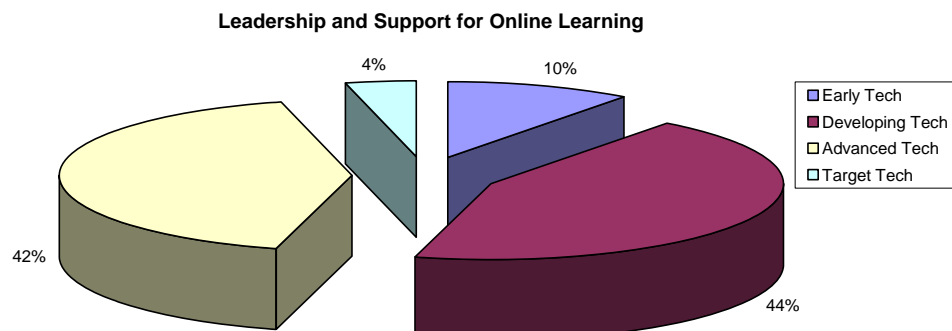
The Campus chart also shows that 3% of campuses are at Target Tech, 25% are at Advanced Tech and 5% at Early Tech.

In Focus Area L 4, Communication and Collaboration, 61% of campuses are rated at Advanced Tech. This means current information tools and systems are used at the campus for communication, management of schedules and resources, performance assessment and professional development. The Campus chart also shows that 14% of campuses are at Target Tech, 23% are at Developing Tech and 2% are Early Tech.



In Focus Area L 5, Budget, slightly less than half of campuses, 49%, are at Developing Tech. Developing Tech means campus discretionary funds and other resources are allocated to advance implementation of some technology strategies to meet goals and objectives in the Campus Improvement Plan. This Focus Area also shows that 5% of campuses are at Target Tech, 36% are at Advanced Tech and 9% are at Early Tech.

In the final Leadership, Administration & Instructional Support Focus Area, L 6 Leadership and Support for Online Learning, 44% of campuses are at Developing Tech. This means in Grades K-8 the campus uses online learning and educators collaborate on the integration of online learning into the curriculum. The Campus chart also shows that 4% of campuses are at Target Tech, 42% are at Advanced Tech and 10% campuses are at Early Tech.



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## Technology Planning

### **Educational Technology Advisory Committee**

Authorized by the Education Code, 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, ESC personnel, national and state leaders in educational technology, and Agency 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 that spans 2006-2020. This new plan will guide districts in Texas in the effective use of technology in ways that will prepare students to learn and work in the 21<sup>st</sup> Century.

The current ETAC was convened in the fall of 2006 and charged with assisting the Agency in developing strategies for implementation of the *Long-Range Plan for Technology 2006-2020*, state and federal legislation, and federal reporting requirements. The Texas Education Agency (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 will use the STaR Chart data collection system to collect the additional data required to report on Internet connectivity in districts, the unduplicated number of 8<sup>th</sup> graders evaluated for technology literacy under the district's methodology as defined by the state at the end of the 8<sup>th</sup> 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.

The committee also developed a Technology Planning Toolkit to assist districts in identifying and involving all stakeholders (teachers, students, administrators, taxpayers, organizations, business and community leaders) in the development of a shared vision for effective technology planning. This toolkit will be made available electronically to districts across the state in an effort to maximize state and federal funding for technology to schools and will provide a suite of tools to assist in this planning.

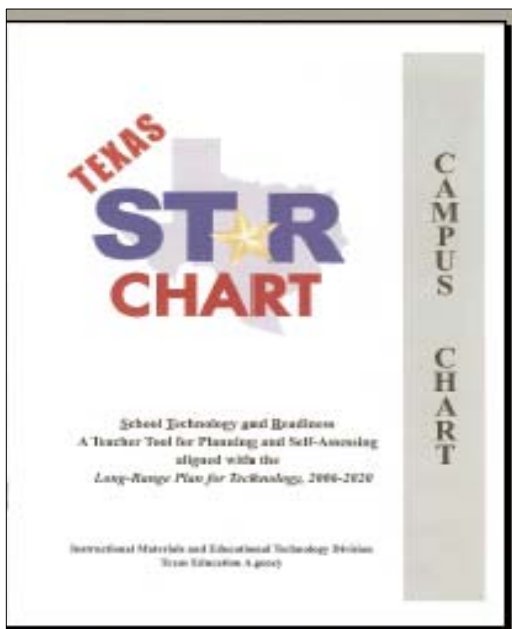
The ETAC provides input on implementation of technology related legislation and continues to be a valuable resource for educational technology across the state.

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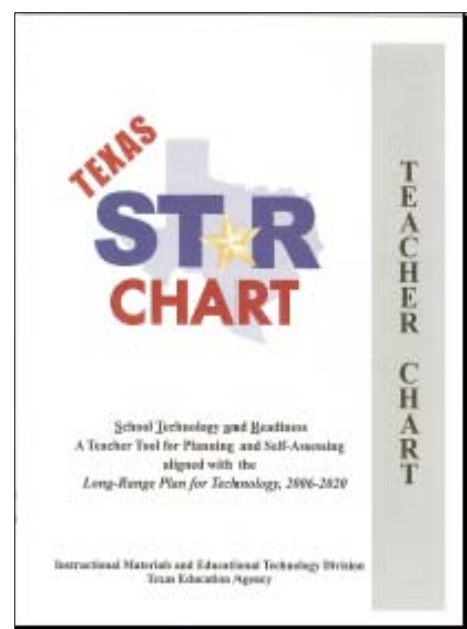
### Texas STaR Charts

With the adoption of the *1996-2010 Long Range Plan for Technology* came new technology goals and recommendations for school districts. Due to these new recommendations, new expectations for districts were implemented. In 2004, the Teacher STaR Chart was added to the suite of technology planning tools available for measuring progress in meeting state and federal requirements and the impact of state and local efforts to improve student learning through the use of technology. In addition, the STaR Chart assists in identifying needs for ongoing professional development and raises awareness of

research based instructional goals. With the adoption of the new *Long Range Plan for Technology 2006-2020*, the Texas Campus and Texas Teacher STaR Charts were updated to align with the most recent recommendations. Modifications were made to assist administrators 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. These modifications to the STaR Charts were used in collecting data beginning the 2006-2007 school year.



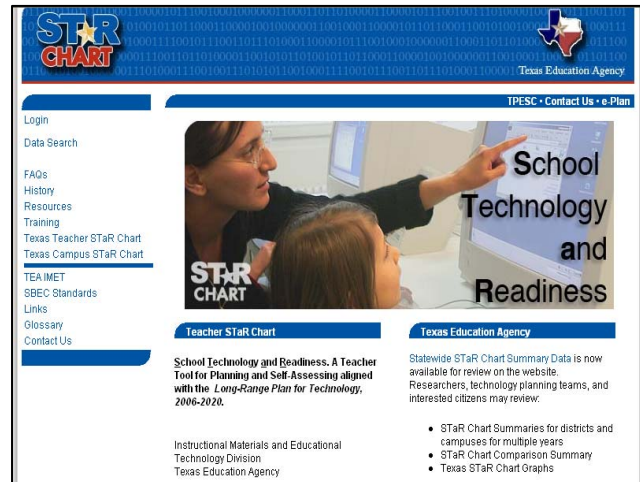
The Texas Campus STaR Chart is a tool designed for use in technology planning, budgeting for resources, and evaluation of progress in local technology projects. All applications for state funded technology grants require a completed campus or district Texas STaR Chart profile to be filed with the application 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.

State-wide 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 technology 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 Learning; Educator Preparation and Development; Leadership, Administration and Instructional Support; and Infrastructure for Technology.

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 (ICT) economy.



The Texas Public STaR Chart is an online tool to allow all 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, and 2007-2008 school years. The public site is available at <http://ritter.tea.state.tx.us/starchart/search>.

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

The Technology Planning and E-Rate Support Center (TPESC) at the Region XII, 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, and online resources and help-desk support. Additional information can be found at <http://tpesc.esc12.net>.





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## Technology Planning and Approval Process

Texas has led the nation in the area of school district technology planning. In 1988, the State Board of Education adopted the *Long-Range Plan for Technology*. The Texas Education Code, Section 32.001, requires the SBOE to develop a long-range plan for technology, and requires that biennial reports be completed and provided to the governor and Legislature on the progress toward implementation of this plan.

In the 20 years since that first plan was adopted, changes in technology and changes in legislation mandated an update to the first plan. In 1996, the SBOE adopted the *Long-Range Plan for Technology, 1996-2010*, and presented it to the Legislature. This plan reflected the ongoing changes in the key areas of: Teaching and Learning; Educator Preparation and Development; Administration and Support Services; and Infrastructure for Technology; and their effect on students and education.

The passage of the No Child Left Behind Act of 2001 led to the *2002 Update to the Long-Range Plan for Technology, 1996-2010*, to assure that goals and objectives of the plan were aligned with the federal plan in order to guarantee that the students of Texas would have access to and benefit from federally funded technology programs.

In the ten years since the adoption of the *Long-Range Plan for Technology, 1996-2010*, again, many changes occurred in education as well as in technology that impacted the plan. In addition, the 2004 National Educational Technology Plan was released. As a result of these changes and the new national plan, the need for a new state plan became apparent. After a two-year work-study, the Educational Technology Advisory Committee completed the *Long-Range*

*Plan for Technology, 2006-2020*. This plan was presented to the State Board of Education and approved at its November 2006 board meeting. The TEA, school districts, charter schools and education service centers continue to implement the Long-Range Plan through a variety of projects described below and throughout this report.

## Texas ePlan

Texas has led the nation in requiring school districts to plan for the use of technology in districts, schools and classrooms. Since the development of the first *Long-Range Plan for Technology*, schools are required to develop a technology plan to guide the educational technology efforts.

To develop an effective technology plan, district planners should:

- Establish and articulate a vision/plan for incorporating technology into all phases of the learning, teaching, and administrative processes of the district to meet the needs of the 21<sup>st</sup> Century workplace
- Assemble a team representing all stakeholders
- Review technology requirements from federal, state, and local levels
- Assess the status of present technology access, infrastructure, implementation, and needs
- Develop goals, objectives, and strategies to meet the needs identified and to address requirements
- Incorporate goals into the budgeting process
- Monitor and evaluate technology implementation
- Assess the use of technology for all students, educators and administrators

Through thoughtful planning, school districts and school boards lay out a roadmap for the use of technology in a district, establish goals and objectives, spell out performance measures for ensuring that the technology plan can be evaluated, and take mid-course corrections or changes to the plan. School district plans are developed around the SBOE's *Long-Range Plan for Technology*, the *National Technology Plan* developed by the U.S. Department of Education and other requirements including E-Rate.

To assist school districts and charter schools, the TEA, in conjunction with SEDL (formerly the Southwest Educational Development Laboratory) and Region XII Education Service Center, developed an online technology planning tool, ePlan.

Through the use of technology planning tools such as the Texas STaR Chart and other technology assessment tools, school districts can gather data that can be used in the development of a technology plan in the ePlan system.

ePlan allows applicants to develop, write, revise, and submit an electronic technology plan which is then reviewed and approved in a completely electronic process. The ePlan system helps ensure that a technology plan that meets all state and federal requirements for technology planning purposes. More information about the ePlan system is available at <http://tpesc.esc12.net/eplan/TexasPlan.html>.

#### **ePlan and E-Rate**

The initial step for schools, school districts, and libraries that intend to apply for E-Rate discounts is to prepare a technology plan. 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. For E-Rate purposes, 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
- An evaluation process that enables the school or library to monitor progress toward the specified goals

Before discounted services begin, an Schools and Libraries Division (SLD)-certified technology plan approver must approve their technology plans. In Texas, the Agency is the SLD-certified approver for public school districts, charter schools, and education service centers. Other applicants can locate SLD-certified approvers by using a search tool available on the website. Applicants who seek discounts only for basic local, cellular, PCS, and/or long distance telephone service (wireline or wireless) and/or voice mail are not required to develop technology plans.

TEA and the regional education service centers have always played a role in the technology plan approval process. As noted above, all applicants are required to create a one to three year technology plan which details the district's current use of technology as well as guiding the

district in the acquisition and implementation of new technologies.

In Texas, all teachers and librarians must first complete the Texas STaR Chart before a district can submit their technology plan through the ePlan system. See the section on the STaR Chart for more information on that technology planning tool.

Public school districts and education service centers submit a technology plan through the ePlan system. Region XII currently serves as the Technology Planning and E-Rate Support Center for Texas.

Reviewers at the regional education service centers read each plan to determine if the plan meets the guidelines set out by the SLD for technology plans. Additionally, the technology plan is reviewed to make sure it meets the guidelines spelled out in the National Technology Plan, the No Child Left Behind (NCLB) and the state's Long-Range Plan for Technology.

A submitted plan is read by a minimum of two reviewers at the regional level. These reviewers, who receive training each year, are typically school district educational technology directors or technology specialists. If the two reviewers both recommend the plan for approval, the plan is sent to TEA for final approval. If both reviewers disapprove or reject the plan, the plan is returned to the district to remedy any areas that caused the disapproval. If the two reviewers disagree, the plan is electronically sent to a third reviewer for another review. If that reviewer recommends the plan for approval, the plan is sent to TEA for final approval. If the third reviewer disapproves the plan, the plan is returned to the district to remedy those areas of concern by the reviewers. After modifications to the plan, the plan is sent to the ESC for a review after modifications. The ESC either approves

the plan or suggests more modifications. Once all modifications have been made, the plan is sent to TEA for final approval.

At TEA, all of the plans are reviewed. Plans are given one of three levels of review as follows:

- Level I - Checks the reviewer details to ensure that all requirements are marked with "met expectations" (performed on all plans);
- Level II - Check plus spot-checks sections of plan to ensure accuracy of reviews (performed on one in every ten plans); and
- Level III - Conducted a complete review (performed on one in every fifty plans and all education service center plans).

On a practical level, plans with disagreements among reviewers over approvals or length of approvals receive a Level II review to reconcile the disagreements between education service center reviewers.

Once a plan is approved by TEA, an applicant receives an email message and may go to the ePlan website and print the technology plan certification form.

In E-Rate Year 2007, 1,155 plans were submitted and approved through the ePlan system. Of those, 836 plans were normal approvals and 319 plans were updated automatically.

In E-Rate Year 2008, 929 plans were submitted and approved through the system. Of those, 445 were normal approvals and 484 were updated automatically.

When the E-Rate program was created, the SLD authorized TEA to certify technology plans for public schools in the state. TEA does not approve plans for private schools. The Texas State Libraries and Archives Commission approves plans for libraries in the state.

## Technology Funding

### E-Rate

The Schools and Libraries Program of the Universal Service Fund (USF) is better known as the E-Rate program. The E-Rate program is a discount program and part of the federal USF. The program is funded through a fee on customer's telephone bills. It is not a grant or a formula funding program. Eligible applicants do not receive funding directly from the program. Eligible applicants receive either discounts on their telecommunication related bills (telecommunication services, Internet access, maintenance and, in some cases, internal connections) or receive reimbursement of expenses paid in full from their certified telecommunications carrier.

Since its inception more than ten years ago, the E-Rate program has delivered approximately \$2.25 billion in annual discounts to schools and libraries in the United States and its territories. Texas schools and libraries annually receive approximately ten percent of all nationwide funding in discounts or reimbursements. The E-Rate fiscal year runs from July 1 through June 30 of each year.

#### Texas Totals for E-Rate Funding

1998	\$133,137,939.09
1999	\$147,032,353.96
2000	\$152,025,355.96
2001	\$216,369,645.77
2002	\$254,606,019.49
2003	\$414,811,562.28
2004	\$283,933,765.12
2005	\$215,172,271.80
2006	\$177,731,465.87
2007	\$197,101,176.92

Through August 31, 2008, Texas schools and libraries have received \$90,541,818.96 in discounts. Funding waves are released almost year round.

The Schools and Libraries Division (SLD) of the Universal Service Administrative Company (USAC) administers the program under the direction of the Federal Communications Commission (FCC). The program supports connectivity—the conduit or pipeline for communications—using Internet access and telecommunications services. Funding is requested under four categories of service, including: telecommunications services, Internet access, internal connections, and basic maintenance of internal connections.

Telecommunication services and Internet access are considered Priority 1 services. All applicants are eligible for discounts on Priority 1 services. Internal connection discounts are available to applicants with a higher need as determined by the number of students eligible for the National School Lunch Program. Discounts also differ on the basis of urban versus rural status. Discounts range from 20 to 90 percent. Applicants are required to pay for the non-discounted portion of their bills.

Eligible schools, school districts, and libraries may apply each year either individually or as part of a consortium. The application window normally opens in November and closes in January or February of each year.

### Texas Education Agency's Role

Since the beginning of the program, the Texas Education Agency has played a small role in the E-Rate process. Each school district is responsible for applying for E-Rate discounts for each year of the program. TEA does not apply for discounts for or on behalf of school districts or education service centers. The Agency interacts with the SLD at various times during the year regarding the program. In addition, TEA contracts with

Region 12 ESC to provide technical assistance to applicants and to serve as a conduit between the SLD and school districts in the state. TEA also assists the SLD in determining eligibility requirements for Texas public schools. TEA remains the final authority in Texas for all policy matters relating to the E-Rate program. Although private schools and libraries are eligible to participate in the E-Rate program, TEA has no statutory authority over these types of applicants and is not obligated to provide support to these applicants.

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### **Title II, Part D Enhancing Education through Technology**

Title II, Part D of the No Child Left Behind legislation combines several previous technology programs into a single state educational technology program. The goals of the program include improving student academic achievement through the use of technology in elementary and secondary schools; assisting every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade; and encouraging the effective integration of technology resources and systems with teacher training and curriculum development. Some of the purposes of the funding include assistance to states and localities for the implementation and support of a comprehensive system that effectively uses technology in elementary schools and secondary schools to improve student academic achievement; assisting states in the acquisition, development, interconnection, implementation, improvement and maintenance of an effective educational technology infrastructure in a manner that expands access to technology for students and teachers; promoting initiatives that provide school teachers, principals, and administrators with the capacity to integrate technology effectively into curricula and instruction

that aligned with challenging state academic content and student academic achievement standards through such means as high quality professional development programs; enhancing ongoing professional development of teachers, principals and administrators by providing constant access to training and updated research in teaching and learning through electronic means; and supporting local efforts using technology to promote parent and family involvement in education and communication among students, parents, teachers, principals, and administrators.

Funds are allocated to states that distribute 50% to schools through a formula program and 50% through a competitive grant program. At least 25% of the funds must be used for high-quality professional development to prepare teachers to integrate technology into the curriculum. This requirement applies to both the formula and competitive grants awarded under the program.

The Technology Immersion Pilot (TIP) program grants were able to continue for years 3 and 4 as a result of Title II, Part D funding. The 2007-2008 school year was the final year for this funding. Title II, Part D funding allowed for continuation of this competitive grant program for the school districts that were a part of the TIP program and the extension of the Evaluation of the Texas Technology Immersion Pilot (eTxTIP).

The STAR grants (Professional Development for Schools, Teachers, Administrators and Regions Grant) were in awarded in the 2007-2008 school year. The purpose of this 2 year competitive grant is to provide schools with the necessary funding to provide proven research-based professional development that will assist schools in effectively integrating advanced technologies, including emerging technologies, into the curricula and



instruction to ensure student success.

Vision 2020 grants funded under NCLB Title II, Part D, Enhancing Education through Technology will focus on the best practices 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). Two strands are included in the Vision 2020 grant: technology immersion and virtual learning. \$11.3M is available for the Vision 2020 projects, which will begin on September 1, 2008 and end June 30, 2010.

Formula awards in the 2007-2008 school year, ranged from the smallest award of \$40.00 to the largest award of \$893,839. Districts apply for the formula grants as part of their consolidated application for NCLB.

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### **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).

Over the years, the Technology Allotment has been funded by the Legislature through a variety of ways. Originally, the allotment was funded out of the Foundation School Program (FSP). In 1995, the funding source was moved to the State Textbook Fund and in 2003, the funding source was moved to the Telecommunications Infrastructure Fund. In 2007, funding was moved to general revenue. The Legislature may elect to appropriate the Technology Allotment

from any other fund that may be used for this purpose.

Technology Allotment funds may only be used for the purposes specified in the Texas Education Code, Chapter 32, §32.005 (B):

(1) provide for the purchase by school districts of electronic textbooks or technological equipment that contributes to student learning; and (2) pay for training educational personnel directly involved in student learning in the appropriate use of electronic textbooks and for providing for 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 device, or equipment necessary for:

(A) instructional use in the classroom, including to gain access to or enhance the use of an electronic textbook; or (B) professional use by a classroom teacher.

### **Additional uses of the Technology Allotment**

In 2005, the Texas Legislature passed Senate Bill 483, authorizing the Texas State Library and Archives Commission (TSLAC) to negotiate online database pricing on behalf of public school libraries.

TSLAC and Education Service Center, Region 20 partnered to meet the needs of the K-12 library community. A general content database package was made available for K-12 public school libraries.

During the 2007 session, the Legislature added Rider 88 to the Texas Education Agency (TEA) budget. Rider 88 directs the Commissioner of Education to transfer amounts not to exceed \$2.5 million in each year of the 2008-2009 biennium to TSLAC for the purpose of acquiring "online research and information resources for libraries in public schools, and for administrative expenses."

The provisions of TEA Rider 88 stipulate that funds are to come from TEA's Technology Allotment, shall not exceed \$2.5 million per year, and TEA will enter into an interagency contract to transfer funds to Texas State Library and Archives Commission.

In previous legislation, the Commissioner of Education was authorized to deduct funds from the Technology Allotment for the purpose of supporting development and implementation of state-wide technology initiatives. This changed with the passage of Senate Bill 1 in 2003. School districts then received the full \$30 per ADA. In 2005, TEA received an appropriation of \$115,000,000 which computed to an estimate of 27.384 ADA. Even though the Texas Education Code stated that districts would receive \$30 per ADA, the \$115,000,000 appropriation was not able to fulfill the \$30 per ADA commitment. For the 2006-2007 school year, the appropriation available for the technology allotment was \$115, 000,000. The district's actual technology payment for that year was computed using \$26.92 per ADA. During 2007-2008, \$130,300,000 million was appropriated and after funding from the allotment was obligated for the K-12 databases, the remaining was \$127,800,000. The actual

technology payment was computed at \$29.50 per ADA.

In August of 2008, the agency asked that the technology allotment be increased by \$5 to total \$35 in an Exceptional Item Request through the Legislative Appropriations Request. The request may be viewed at

<http://ritter.tea.state.tx.us/lar/2010-2011/4AExceptionalItemRequestSchedule.pdf>.

## Progress in the Infrastructure for Technology



**T**exas public school districts continue to progress toward an infrastructure for technology to allow students and educators to learn and use the skills necessary to be successful in the 21<sup>st</sup> Century. This infrastructure includes not only the boxes and wires that make the connections possible but also the human infrastructure necessary to support and maintain the network. In prior years, the state provided hardware and software to make connections to each other, to regional education service centers, to the state and to the Internet. Currently, most schools rely on federal funding resources for

infrastructure, such as E-Rate, or local funds to increase infrastructure capacity and for maintenance.

A 21<sup>st</sup> Century infrastructure offers high-speed connectivity among schools, colleges, medical facilities, libraries, businesses and home and is equipped with ample digital tools and resources for all learners. This robust, state-wide infrastructure is critical to provide equitable access to all learners. It is important that campus infrastructures integrate voice, video, and data and have the capacity to host large volumes of digital content and powerful applications. Students have increasing expectations for anytime, anywhere connectivity to these sources. This environment supports education and innovation by providing students, parents, and educators easy access to online information and materials, collaboration, and broadly shared resources. With the help of collaboratives, Education Service Centers, and with local, state, and federal funds, districts in Texas are making great strides in infrastructure and creating a strong sense of community that is conducive to interdisciplinary projects and expansion of learning beyond the traditional classroom.

In this section you will see how the state's educational infrastructure is progressing to meet the recommendations for the Agency, the regional service centers, and districts from the *Long-Range Plan for Technology, 2006-2020*.

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## State of the State

In the Campus STaR Chart's key area of Infrastructure for technology, more campuses, 511, were rated at the Target Tech level in 2007-2008 than the 404 campuses at that level in 2006-2007.

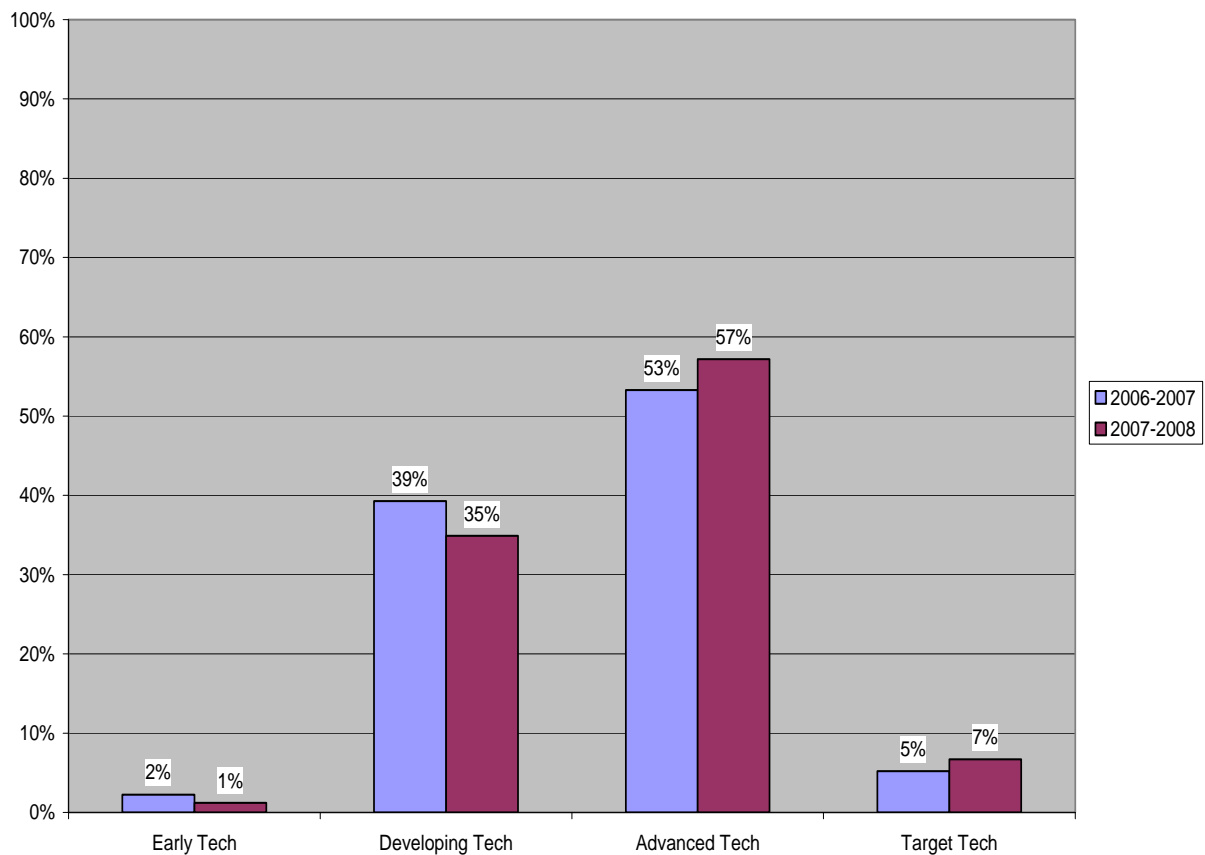
On a Target Tech campus, there is on-demand access for every student and direct connectivity is available in all rooms and web-based resources are available in multiple rooms. All rooms are connected to a Wide Area Network

(WAN). The campus is fully equipped with appropriate technology.

In addition to Target Tech data, 2007-2008 data show more campuses, 4,370, rated at the Advanced Tech level versus 4,130 campuses at that level in 2006-2007.

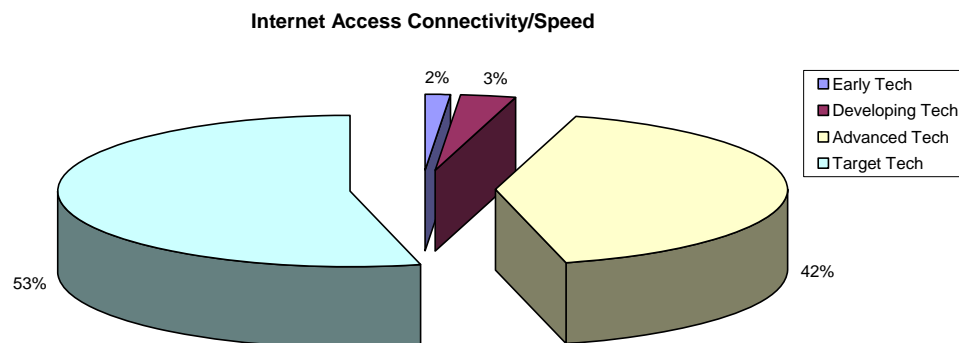
In 2007-2008, fewer campuses, 2,666 were rated at Developing Tech compared to 3,044 campuses in 2006-2007. There were also fewer campuses, 94, rated at Early Tech in 2007-2008 versus 174 campuses in 2006-2007.

**2006-2008 Texas Campus STaR Chart for Infrastructure for Technology**



In Focus Area INF 1, Students per Computers, 60% of campuses are rated as Developing Tech. Developing Tech in this Focus Area means there are between five and nine students per each Internet-connected multimedia computer. This Focus Area also shows that 5% of campuses are at Target Tech, 21% are rated Advanced Tech and 14% at Early Tech. In Focus Area

INF 2, Internet Access Connectivity/Speed, more than half of the state's campuses, 53% are rated as Target Tech. This means the campus has direct connectivity to the Internet in all rooms with adequate bandwidth. In this Focus Area, 42% of campuses are rated at Advanced Tech, followed by 3% at Developing Tech and 2% at Early Tech.



In Focus Area INF 3, Other Classroom Technology, more than half of campuses, 63% are rated at Developing Tech. This means there is a dedicated computer per educator with shared use of technologies such as digital cameras, classroom phones, flash drives, portable digital devices, probes, interactive white boards, projection systems and classroom sets of graphing calculators. The Campus chart also shows that 4% of campuses are at Target Tech, 22% are at Advanced Tech and 10.47% at Early Tech.

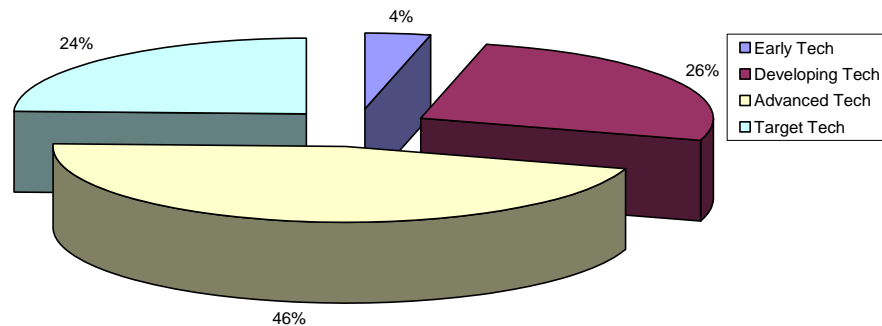
500 computers. The Campus Chart also shows that 21% of campuses are at Target Tech, 34% are at Developing Tech and 10% are Early Tech.

In Focus Area INF 5, Local Area Network Wide Area Network (LAN/WAN), slightly less than half of campuses, 46%, are at Advanced Tech. Advanced Tech means there is broadband access to the campus with most rooms connected to the LAN/WAN with access for teachers and students to print, for file sharing and for access to district-wide resources on the campus network. This Focus Area also shows that 24% of campuses are at Target Tech, 26% of are at Developing Tech, and 4% are Early Tech.

In Focus Area INF 4, Technical Support, 35% of campuses are rated at Advanced Tech. This means there is at least one technical staff member to 351-



Local Area Network Wide Area Network (LAN/WAN)



In the final Infrastructure for Technology Focus Area, INF 6, Distance Learning Capacity, 55% of campuses are at Developing Tech. Campuses at Developing Tech have scheduled access to online learning with rich media

such as streaming video, podcasts, applets, animation, etc. The Campus chart also shows that 9% of campuses are at Target Tech, 23% are at Advanced Tech, 13% campuses are at Early Tech.

## Internet Safety

As educational use of new digital technologies and the Internet has increased in classrooms and homes all across Texas, so has the need for Internet Safety and Digital Citizenship education. Texas teachers and administrators use Internet safety guidelines and standards from the Technology Applications TEKS and the National Educational Technology Standards developed by the International Society for Technology in Education, and locally developed Acceptable Use Policies (AUP) that specify expectations and rules. In addition there are thousands of resources on the web that may be beneficial to educators as they seek to teach their students, staff and parents about being smart and safe on the Internet but to search through them to find relevant, free guides is time consuming. Educators and parents

needed a concise, valid list of resources to guide them safely through the web. During the 80<sup>th</sup> Legislative Session, HB 3171, Section 38.023 was made law and required the Agency to develop and make available to school districts a list of resources and organizations concerning Internet safety. The bill specifically called for the resources to address potential dangers of posting personal information, significance of copyright laws, consequences of cyber-plagiarism, and theft of audio-visual works, including motion pictures, software, and sound recordings through uploading and downloading files. In addition, to this law, Senate Bill 136, passed during the 80<sup>th</sup> Legislative Session addressed Internet safety.

TEA, along with advice and input of the Educational Technology Advisory Committee, the Attorney General's Office, and the Department of

Information Resources (DIR), developed the website of resources as stipulated by HB 3171. In addition to the required information by law, TEA included three different portals, Educators, Students and Parents. The website also houses additional categories and information to promote Digital Citizenship, which includes cyberbullying, communication, curriculum, security, activities and lessons, Technology Applications Standards, and International Society for Technology in Education's National Educational Technology Standards (ISTE's NETS). For more information please visit the TEA Internet Safety website:

<http://ritter.tea.state.tx.us/imet/intersafe/>

Federally, Internet safety and digital citizenship are actively being addressed as well. On September 24, 2008, Congress passed the Protect Our Children Act (HR 3845 / S 1738). The act authorizes over \$320 million over the next five years in funding for law enforcement to investigate child exploitation, mandates that child rescue be a top priority for law enforcement receiving federal funds, and allocates funds for high-tech computer software that can track down Internet predators.

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## **TETN and TETN Plus**

### **Background**

Since its inception in 1996, the Texas Education Telecommunications Network (TETN) has provided video, voice, and data 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 Plus**

Due to limited bandwidth, in the last 12 years, TETN has focused mainly on providing video conferencing services to TEA, ESCs, and school districts. Beginning in 2007, with the initiation of the TETN Plus project, TETN began replacing point-to-point T1s with a gigabit backbone to provide a high-speed, high capacity backbone as recommended in the state's Long Range Plan for Technology. The TETN Plus project will have broadband connections to higher education institutions and Internet2 by using the Lone Star Education and Research Network (LEARN), will hire a person in the TETN Office to coordinate content across the new network, and will implement shared services among the ESCs such as Internet access and disaster recovery solutions.

In 2007, five ESCs were identified as pilots and the process to establish the initial core network began. TETN routers were deployed among the cities of Dallas, Houston, and Austin. Peering with higher education was implemented and shared Internet2 service of 80 mbps was established. TETN became the 34<sup>th</sup> member of the Lone Star Education and Research Network (LEARN) and serves as the K12 representative on the LEARN Board. Currently, ESCs have dedicated connections to over 55 community colleges and universities in Texas for dual credit courses and professional development course work. By creating an "education intranet" with LEARN, these dedicated connections can eventually be eliminated, high-bandwidth applications can be used that require a dedicated connection, and more opportunities among higher education and K12 can be supported.

In 2008, TETN deployed a switch in San Antonio to complete the central Texas core network. Three other ESCs coordinated plans to join the network. An initiative to identify and support content on the new network began with an agreement among the 20 ESCs to hire a content specialist in the TETN Office. The content specialist began work in August 2008. The main goals for the first six months are to develop a portal that markets ESC services, assist with student course sharing among the ESCs, initiate a student project that demonstrates the robustness of the network and work with the ESCs to identify programs and professional development that are needed by school districts.

In 2008-2009 the core network will be completed by adding Lubbock as the TETN point of presence to serve the West Texas ESCs and to complete the TETN ring.

#### **Video Conferencing Return on Investment (ROI)**

The ESC networks provide connectivity to over 800 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 interactive video conferencing consistently saved TEA and the ESCs approximately \$2 million a year in travel costs and productivity expenses. The cost-saving formula is derived by calculating the number of ESC sites in a conference and applying 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 2006 to May 2008 increased the cost savings to approximately \$2.6 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.

Between September 2006 and May 2008, 920 statewide conferences and professional development sessions were held on TETN that resulted in saving \$5.3 million in travel and productivity expenses. School districts participated in almost 50% of those conferences to receive first-hand information and answers to questions.

During this same time period, 6,375 K-12 classes and 830 field trips and/or meetings between school districts were conducted over TETN.

The following are common uses of TETN:

- administrative meetings between TEA and coordinators in the ESCs
- collaborative meetings among ESC staff (e.g. business managers)
- 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 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)
- 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
- toll-free calling among the ESCs and TEA

### **Current Funding**

TEA funded the original network and a subsequent network upgrade in 2001 using state funds allocated for implementation of the Long-Range Plan for Technology. In 2006-2007, the TETN Office continued to upgrade the video infrastructure by adding another multi-point control unit (MCU) to accommodate 60 concurrent video connections and equipment that would make it easier for video to traverse firewalls. The TETN Office also purchased three of the four core routers for the new network, TETN Plus. In 2007-2008, TETN issued and awarded RFPs for the core network's connectivity and for shared internet access. TETN members funded the upgrades, totaling approximately \$300,000. Each member of the cooperative agrees to annual funding commitments for the video network:

- pay a yearly fee to support the operational costs of TETN as determined by the TETN Governance Committee
- designate an employee as the TETN site manager and underwrite all costs associated with the position
- establish and underwrite all costs associated with operating a TETN video conferencing room

### **Network Assessment**

TETN provides an effective means of communication between TEA and the ESCs, as well as among the ESCs, districts, and the larger education community across the state. 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, and stakeholders believe that the benefits of the TETN outweighed the costs. Finally, 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.

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### **A Sampling of Technology Infrastructure in Texas Districts**

**Ballinger ISD** has a laptop initiative: "emPOWERing Students for the Future". The project loans a school owned laptop computer to a student for school and home use (6th-12th Grade). MacBook laptops are being integrated as a tool within the classroom.

<http://www.ballingerisd.net/education/district/district.php?sectionid=1>

**Boerne ISD** has initiated a Mobile Learning Environment using iPods as instructional tools. iPods and supporting equipment were purchased for use with ELL students who have not passed TAKS to help them gain academic skills

and develop proficiency in use of the English language. Teachers received training in iPod-related instruction, and currently use the technology both for student instruction and parent communication. BISD instructional staff are also exploring video gaming as an instructional tool.

<http://www.thsp.org/cms/one.aspx?objectId=974780&contextId=274785>

<http://www.boerneisd.net/page.cfm?p=6054>).

<http://www.boerneisd.net/uploaded/faculty/turnerj/NECC2008.wmv>

**Business Careers High School, Northside ISD** in San Antonio has a 1:1 laptop program for students and teachers, begun in August 2006. There is a \$60 buy-in for students, which covers machine insurance and repair costs. Students and teachers have access to wireless connectivity throughout the campus, as well as the use of multiple software applications which support the core academic disciplines and help prepare students for careers in the business world.

<http://www.nisd.net/technology/BCHSPresentation.ppt>

**Childress ISD** reports a technology expenditure per pupil of \$1,503.30, and has reached a student to computer ratio of 2:1. CISD employs the use of online textbooks, elmos, interactive white boards, projectors, and other tools in all class rooms across the district in grades K-12. In February of 2008, the district updated their Technology Plan to encompass three primary objectives. The first is to integrate technology into the curriculum to enhance the educational process students and teachers. Next the district provides information for parents, students and the community outside the physical school environment. Finally, as the district continues to grow, so does the need to maintain the latest technology advances

through staff development and implementing the most current technology available for staff and students.

<http://www.childressisd.net/vnews/display.v/ART/4609cad9897a6>

**Clarendon CISD** has incorporated a 1-to-1 MacBook initiative to improve student achievement. Students in grades 5-12 are issued a MacBook computer, and students in grades Pre-K through 4 have access to MacBooks via a mobile laptop cart. Teachers received their MacBooks in January inservice training, and students received their MacBooks in September of 2008. A new technology building will be constructed to house all servers, the video conference room, technology staff offices, a workroom, and two technology classrooms. As with all teaching and learning initiatives, teacher training is a major component. Teachers have already completed two separate two-day training sessions from Apple trainers. Many teachers also have had the opportunity to attend networking meetings with teachers from other schools currently implementing 1-to-1 programs.

<http://www.clarendon.k12.tx.us/>

**Duncanville ISD** provides the professional online training service FOCALPoints, which stands for Focus on Children and Learning. Through the program, district staff is able to select training topics, download handouts, complete projects, and submit completed projects for evaluation. When teachers, counselors, librarians, and administrators earn credit for completing projects they receive points that can be collected and spent on technology for the classroom/campus.

<http://www.duncanvilleisd.org/focalpoints/fp2/FP2jumpstart.pdf>

<http://www.duncanvilleisd.org/focalpoints/default2.htm>



**Forney ISD** is in the 5th year of an eBook project in which the district is loading student textbooks onto laptops and providing them to students in Grades 5-12. The first 4 years was a pilot project at one campus. This year they expanded to middle schools and next year will complete the project in the high schools. FISD is currently looking at smaller "Netbook" type devices for 5th and 6th grades.

<https://webapps.forneyisd.net/forney/newsposting2/asp/newsposting.asp?id=1313>

**Highland Park ISD** generated funds through a bond election, which allowed them to equip their students with Apple computers in grades 6-12. During the 2005-2006 school year, a program was made possible through a partnership between the HPISD community and Apple Computers, providing a laptop for all secondary students. All HPISD teachers and students received laptops, a wireless network was added throughout the district and Administration building, and staff development began to implement the program. Laptop availability makes it easier for teachers to communicate with parents and the community: Teachers are able to e-mail parents with discipline problems as well as to facilitate general awareness of their child's academic activities. Teachers are also able to publish lessons on their web sites.

<http://www.hpsid.net/vnews/display.v/ART/44d34f79580c1>

**Irving ISD** has established 1-to-1 laptop programs at the high school level. Over 10,000 laptops have been issued to faculty and students. Students have access to the laptops on a 24/7 basis.

<http://www.irvingisd.net/technology/publications.htm>

<http://www.irvingisd.net/one2one/main.htm>

**Klein ISD** has placed technologies such as interactive white boards, document cameras, and networked student computers in all core content-area

classrooms. The district also offers a technology professional development program that combines year-round district classes with campus-based technology professional development. In 2006, several KISD high schools began one-to-one computing programs.

<http://www.kleinisd.net/default.aspx?name=iss.itc.home>

<http://www.kleinisd.net/default.aspx?name=iss.itc.tl2.home>

**Manor New Technology High School** goal is to prepare students to excel in an information-based and technologically-advanced society. MNTHS is committed to leading educational reform and our instructional program encourages students to learn through collaboration with peers, businesses, and the community. Students develop problem-solving skills, interpersonal skills, and the resiliency they need to succeed in a rapidly-changing and competitive world. The 21<sup>st</sup> Century curriculum brings together the strength of modern technology, community partnerships, problem solving, interdisciplinary instruction, and global perspectives in a student-centered, collaborative, project-based community.

<http://www.manorisd.net/newtech/>

**McAllen ISD** provides a web-based communication system that allows the school community to connect and collaborate. The district provides e-mail accounts for students and parent website accounts. Additional website features include interactive calendars and classroom websites, which are updated by teachers weekly.

<http://www.mcallenisd.org>

**San Marcos CISD** has instituted both 1:1 immersion projects and iPod 1:1 projects. Over 1100 iPods have been distributed to students district wide, PK-12. Introduced this year is the Sony Portable Playstation gaming curriculum. The focus is on reading and math. It

combines a targeted direct teach, independent practice and gaming on the PSP. The software is Plato Achieve Now. Additionally, Palm TX devices are used with all 3rd and 4th grade students at Bowie Elem.

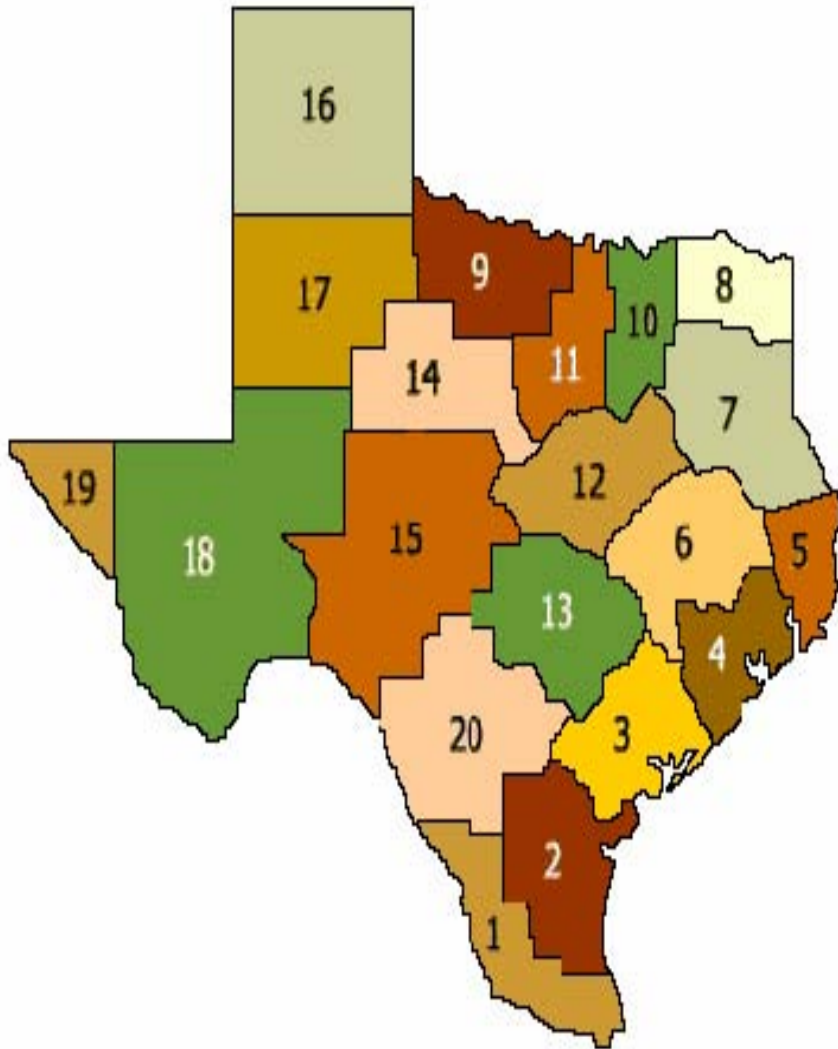
<http://web.mac.com/ronda.stonecipher/iWeb/Site/iPod%20ELL%20%26%20Bilingual.html>

<http://web.mac.com/ronda.stonecipher/iWeb/Site/Palm%20TX%20Project.html>

**Texas School for the Deaf** employs the use of hardware such as Promethean ACTIVboards, Elmos, laptops, and projectors in many classrooms and computer labs in each department, allowing their students to be active participants in the learning process. The TSD Laptop Initiative provides high school students laptops to use in and out of class. Professional development is in place to ensure that staff knows how to use the hardware and software resources available to them.

[http://www.tsd.state.tx.us/Curriculum/cur\\_tech.html](http://www.tsd.state.tx.us/Curriculum/cur_tech.html)

## Education Service Centers



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19. El Paso
20. San Antonio



Region One Education Service Center, Edinburg, Tx  
956-984-6000, [www.esc1.net](http://www.esc1.net)



#### **DEMOGRAPHICS**

Number of Districts 43  
Number of Students 383,460  
Hispanic Students 96.9%  
Economically Disadvantaged 85.2%  
Limited English Proficient 39%  
At-Risk 67.1%  
Migrant 5.2%

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 383,460 students attend schools in the region's 43 school districts. The Region One student population has been 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. Our Technology Plan reflects the goals and objectives that make access to technology a reality for all students.

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#### **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 a variety of new services have been developed. ESC-1 continues to develop new services and encourages educators to think creatively when investigating ways in which educators can positively impact student learning. Region One supports district technology efforts through a variety of initiatives including the following:

- ◆ 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
- ◆ Utilization of ESCONETT, the regional network, a high speed, high performance intranet for the K-12 environment
- ◆ Various Technology Advisory Committees for disseminating information, providing best practices presentations, networking and collaboration 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:

- ◆ Intel Teach to the Future –Essentials for Learning and Thinking with Technology
- ◆ Technology Academy which includes a teacher assessment component and modules for training of trainers, high school technology applications, and technology integration for all levels

- ◆ T-STEM Center provides technology integration training for math and science teachers
- ◆ Technology planning and training
- ◆ Training and support for school librarians
- ◆ Annual Technology Conference
- ◆ Assistive/adaptive technology training
- ◆ Regional Cisco Academy support
- ◆ Technical training for district staff responsible for maintaining district infrastructure
- ◆ Availability of multipoint videoconferencing equipment for delivery of instruction and training
- ◆ Implementation of web-based professional development and live webinars

### **Leadership, Administration and Instructional Support**

One of the objectives of Region One ESC is to assist school districts in operating more efficiently and effectively by providing technical support and professional training in the student and financial accountability arena. 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-1 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, utilizing existing networks in a secure and economical manner
- ◆ Development of specialized reports to increase data accuracy, analysis, and projection capabilities of districts
- ◆ Technology planning support and training
- ◆ E-Rate support

### **Infrastructure for Technology**

The ESC-1 network, referred to as ESCONETT, connects over 250 campuses in the Region One area. ESCONETT connects every school district with a minimum of one T1 connection. ESCONETT also has connectivity to The University of Texas – Pan American. Region One and their 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 with the 2<sup>nd</sup> year of a Distance Learning Consortium
- ◆ Free Internet email services to include 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 training, 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 to all school districts
- ◆ VPN services to requesting school districts
- ◆ Reporting services for student related information



## **Region 2 Education Service Center Corpus Christi, Texas • 361-561-8400 • [www.esc2.net](http://www.esc2.net)**



The ESC-2 currently serves 42 school districts and 7 charter schools in 11 counties over a 10,738 square mile area, including about 106,650 students, 7,100 teachers on 237 campuses. 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.

Corpus Christi is the seventh-largest city in Texas and fronts one of the most beautiful bays on the Gulf of Mexico. The region is bordered by the longest barrier island in the world and an ecologically valuable bay and estuary. Region 2 is almost exclusively rural, with significant agricultural production. ESC-2's mission is to be a catalyst for change resulting in student improvement and efficiency and economy of school operations.

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### **Teaching and Learning**

Needs assessments and contact meetings have yielded the districts' continuing need for relevant, just-in-time training and support for teachers as they learn to use technology tools in their classrooms.

- **CSCOPE:** (<http://www.cscope.us/>) in collaboration with other Education Service Centers across the state, Region 2 provides support, training, and resources to teachers and administrators to enable them to use this comprehensive, quality, online curriculum system. Region 2 content specialists and technology specialists work together to support and train district professional staff to use and customize units and lessons to fit their students' needs.

- **DMAC Solutions:** (<http://www.dmac-solutions.net/>). DMAC (Data Management for Assessment and Curriculum) is a web-based software that assists districts in using data to develop and manage curriculum choices and assessments that align to state standards, to current curriculum, and to students' needs. Developed and maintained by Region VII ESC, the software allows us, as their partner, to offer our districts an affordable, user-friendly set of components designed to make data an integral part of curriculum and assessment planning.

- **Distance:** The ESC-2 provides the network connections and personnel to support distance learning throughout the region. Students, faculty members, and the community can participate in courses offered without distance barriers. Some courses offered to students include dual credit, concurrent enrollment, and high school credit courses. Virtual tours are also offered for K-12 students, which are two-way interactive videoconferences available worldwide. Staff development trainings, continued education and professional development, along with community courses are available. Special programs are also offered across the network, including health related topics, holiday learning opportunities and informational programs.

### **Educator Preparation and Development**

The Region 2 Instructional Technology Team continues to monitor and revise workshop sessions based on expressed and data-driven needs. One such need is the desire for on-your-own-time, just-in-time professional development.

- **Online Courses:** (<http://online.esc2.net>) ESC-2 provides a number of online, on-your-own-time-and-schedule workshops for teachers and administrators. Teachers gain access to course videos and resources from any Internet-enabled computer, and thus can access instruction and resources without leaving classrooms, and at their best pace for optimal learning.

- The ESC 2, Technology Applications Preparation and Certification Program is a rigorous program, which focuses on practical, effective teaching strategies. Participants with at least intermediate level computer skills take the five modules completely online. Participants are expected to complete all required course work to mastery level. Courses and assignments are monitored by instructors regularly to ensure maximum benefit to participants. Participants receive training and resources to enable them to teach the required technology applications courses in grades 8-12.

- **DKC/Library and Media Cooperatives:** The ESC-2 Regional Librarian provides training and assistance for librarians and media specialists, including regular contact meetings, as well as telephone and on-site assistance with a multitude of tasks and issues facing school libraries. The Media Cooperative provides training for librarians, media specialists, and teachers, provides telephone assistance, and allows on-site training, and assistance with digital media. Specific topics include Nettrekker DI and Facts on File, United Streaming digital media, and others.

### **Leadership, Administration and Instructional Support**

ESC2 serves our districts in relation to funding and grant opportunities through employment of a full-time Grant Writer, who both trains and assists with grants for and with districts. In addition, districts are provided assistance with e-Rate discounts through training sessions and technology cooperative on-site expertise. Quarterly Technology Contacts meetings give district technology directors a forum for helping one another.

ESC2 maintains a Certiport Testing Center, which offers district staff and students training and testing in Microsoft and Adobe Certifications, as well as Internet and Computing Core Certification.

Districts receive timely assistance and training in technology planning, entering ePlans into the online system, and completing teacher and campus STaR charts. Technology Plan reviewers are also trained and monitored to ensure quality reviews and help to district plan writers. Region 2 consistently has all submitted plans approved by TEA. We seldom have more than two districts who do not enter plans into the ePlan system.

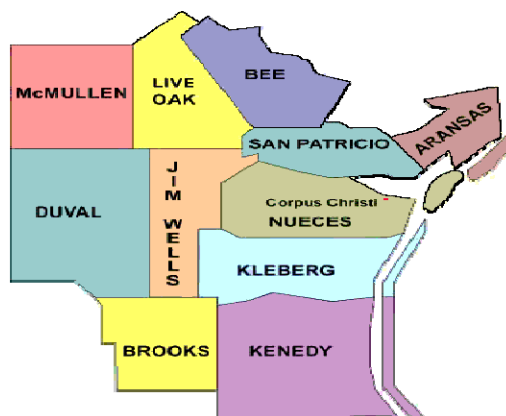
**SmartWalks:** ESC2 provides training and support in a walk-through system called SmartWalks for administrators. The system allows administrators to spend a few minutes walking through a classroom and observing key factors of teaching and learning. The walks give both the administrator and the teacher a chance to reflect on classroom practices – both successful and unsuccessful. Using Eduphoria online software, principals may enter information from their observations into an accessible template created for their campus and teachers.

### **Infrastructure for Technology**

The Coastal Bend Network, CoBeNet, is a sophisticated and complex wide-area network (WAN) developed by ESC-2. The network includes approximately 32 school districts, 2 charter schools; Nueces County; 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. The network has access to 150 Mbps across two internet paths.

CoBeNet (Coastal Bend Network) 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). 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 currently has a capacity of 64 devices connecting to the bridge to support 107 video endpoints to the 34 districts participating. Additional capabilities include archiving of video conferences and digital streaming of archives and live video conferences.

We are currently researching possible Webinar/Web conferencing applications and archival, along with enhancements to online/on-demand training capabilities and instructional management components.



Region 3 Education Service Center (ESC-3), an ISO 9001:2000 Certified Management System since 2005, serves the Crossroads of South Texas. It is centrally located between San Antonio, Corpus Christi, Houston and Austin. ESC-3 provides programs, products, services and support to 40 school districts and one charter school in 11 counties. 53,009 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 13,745 students. Four districts have student populations in the range of 2,343 to 3,966 and seven districts are within the student population range of 1,252 to 1,837. The remaining 29 districts serve less than 950 students per district, with eight of those serving a population of less than 100 students. Demographics for the region are: 56% - economically disadvantaged; 10.9% - African American; 47.3% - Hispanic; 40.4% - White; 1.2% - Asian/Pacific Islander and 0.2% - 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 ESC-3, with 100% participating in Instructional Resources and 99% in the regional network (NET3).

### **Teaching and Learning**

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 10 technology checkout labs including: laptops, digital microscopes, eInstruction Classroom Performance System, AlphaSmart lab, SmartBoard, eInstruction ChalkBoards, Garmin Global Positioning System, Palm Zire 71 classroom set, digital cameras and a video 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 yearly 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 utilization 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 07-08, there were 41 courses delivered to 1554 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 is 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. 42% of all workshops offered at the ESC utilize instructional technology strategies to improve student achievement.
- Encourages ESC-3 staff use of distance learning technologies in delivering professional development to teachers across the region. As of 07-08, 100% of the staff employs distance learning technologies in their program offerings.
- Provides 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

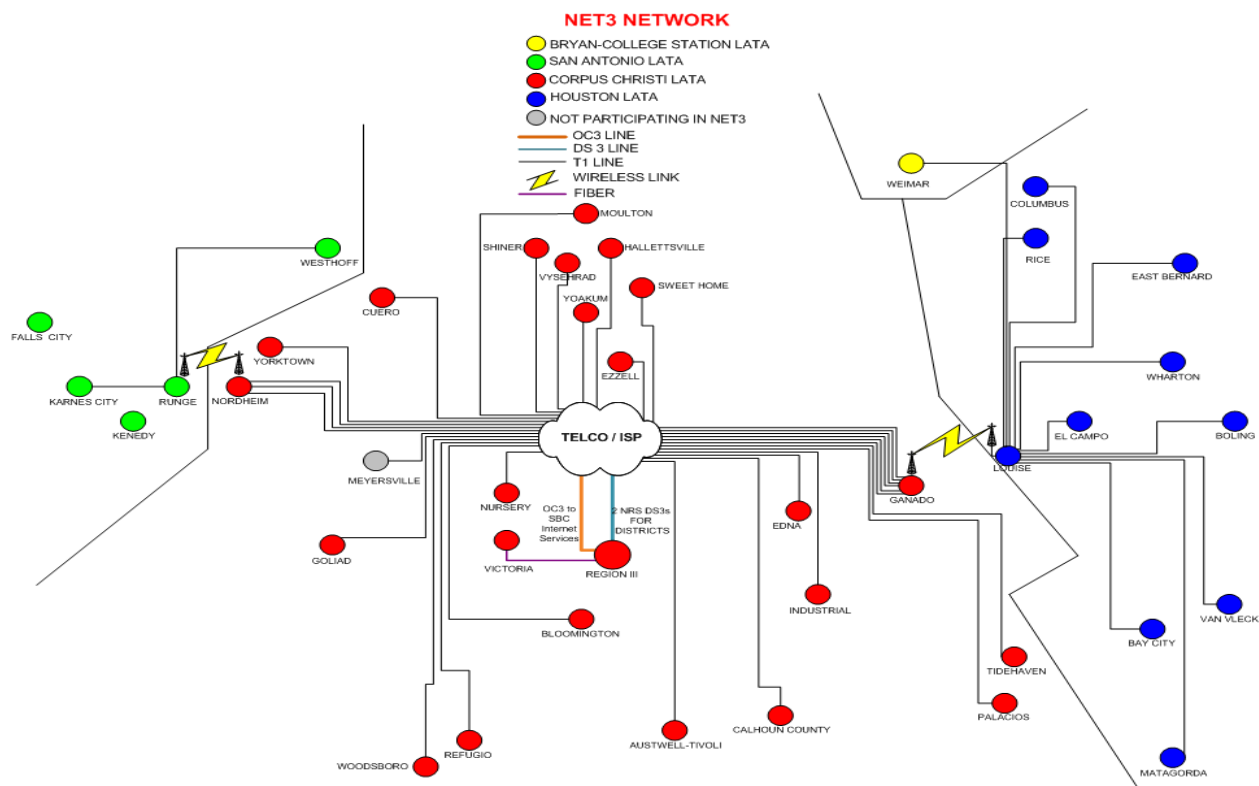
### Region 3 Education Service Center:

- Provides 33 districts Management Information Services (MIS) through support of student and/or business operations with RSCCC and WinSchool 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 monthly technology meetings. E-Rate provides an average of 74% discount on telecommunications and Internet access across the region resulting in \$2,580,099 funding to 38 districts in 07-08.
- Facilitates 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 for Technology

### 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.
- Implements open-source technologies for web services to continue to provide required resources to districts at nominal expense. Web and email hosting services supplied to 23 districts.





Region 4 Education Service Center Houston, Texas • 713-462-7708 • <http://www.theansweris4.net>

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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 1,038,480 students, almost one-fourth of the state's total student population, and 81,244 professional 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 119 students to more than 202,000 students, the largest in the state, seventh largest in the nation. Within Region 4, 54% of the school-aged children qualify as economically disadvantaged. TAKS student achievement scores continue to be above the state average.

The Support Services Division provides technology support and services to internal and external clients. The division coordinates technology initiatives and products for the Center.

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### **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 for secondary students. Established in August of 2000, all TVS courses meet or exceed state requirements and are taught by Texas certified teachers trained specifically for the online instruction. All Texas students are eligible to participate in programs provided through the Texas Virtual School.
- Provides BlackBoard, a leading online learning management system, support for state, national and international programs in alternative teacher certification, gifted and talented teacher certification, assistive technology programs, and online teacher programs.
- Online teacher certification program developed for Texas teachers has been approved by the Texas Virtual School Network (TxVSN), one of only five organizations approved to provide this required training for teachers who will lead TxVSN courses.
- Offers the Comprehensive Curriculum, Assessment, and Professional Development system (CCAP). CCAP is 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.

### **Educator Preparation and Development**

Region 4 Education Service Center:

- Provided alternative certification preparation through distance education for 43 areas of certification.
- Trained 2382 candidates through distance education in the domestic alternative certification program.
- Trained more than 538 candidates for EC-4 Bilingual Generalist through distance education at sites in Mexico and Puerto Rico.



## **Leadership, Administration and Instructional Support**

### **Region 4 Education Service Center:**

- Provides the Texas Cooperative Purchasing Network to assist in purchasing technology equipment. 14 ESCs and 250 school districts statewide have purchased more than \$40 million in technology from September 2004 to June 2006.
- Facilitates the Technology Leadership Group, representing each of the 54 districts, that meets quarterly to share information and give leadership throughout the Region 4 service area.
- Sponsors workshops presented by TEA personnel on Discipline/Chapter 37 and the Student Attendance Accounting Handbook.
- Provides professional development on the PEIMS data standards, EDIT+, and the Student Attendance Accounting Handbook.
- Performs reviews of PEIMS data and processes with a focus on capturing all available state funds. Fifteen districts have undergone this Region 4 review process.
- Provides training on data visualization software. Over 20 schools and the Department of Criminal Justice have participated in this training.
- Subcontracts services to the TXPEP program. Region 4 supplied TAKS Scores analysis booklets to approximately 375 campus principals.
- Develops administrative tools for managing resources (facilities, staff, time and effort, scheduling, etc.) based on the latest programming languages and database techniques including ASP.NET, C#, XML, SQL, JAVASCRIPT, AJAX, and Crystal Report.NET.
- Develops web-based applications using state-of-the-art languages like ASP.NET and encryption methods to provide interactive and secure database-driven systems for real-time customer services including on-line registration, credit card payment, continuing education unit (CEU) management, lesson plans, and an electronic document portal.
- 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.

## **Infrastructure for Technology**

### **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 hardware and software support.
- Maintains e-Registration and online 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. 21 districts representing 357 campuses are members of the Region 4 Videoconferencing Network.
- 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 increasing the security and expertise available.

## Region 5 Education Service Center Beaumont, Texas • 409-838-5555 • [www.esc5.net](http://www.esc5.net)

The Region 5 Education Service Center (ESC-5) serves 30 public school districts and five charter school campuses in the southeast Texas area, which is composed of Hardin, Jasper, Jefferson, Newton, Orange, Tyler and a portion of Galveston County. These counties are predominantly rural areas with few high-wage employment opportunities. The employment situation accounts for 53.5% of our students being classified as economically disadvantaged. Students in the area fall into two major cultural groups: 55.7% white and 30.2% African American, with a small Hispanic population (11.3%) and an even smaller Asian and Native American population comprising the balance of the region's approximately 80,510 students. Region 5 schools continue to improve student achievement results with the percentage of students passing the TAKS and meeting the state standards. Region 5 boasts an attendance rate of approximately 95%.

Region 5 ESC provides a variety of technology training to support the Long-Range Plan for Technology.

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### Teaching and Learning

Region 5 ESC operates Technology and Distance Learning Labs in both our Beaumont and Silsbee locations, as well as wireless laptop carts that can be used in the traditional meeting rooms.

The Distance Learning (DL) Program offers dual credit classes through partner universities, professional development courses, and shared instruction classes. A snapshot of Region 5 Technology and DL Program offerings for the 2007-2008 school year reveals that as of May 1, 2008 more than 10 virtual field trips were broadcast to 18 campuses, and 23 dual credit courses were delivered to 379 students on 16 campuses. Also, the Region 5 DL program offered three Spanish courses delivered to 639 students on seven campuses.

### Educator Preparation and Development

Through a variety of delivery methods, Region 5 ESC has developed a cadre of district technology support services and well-trained staff who serve as campus resources and help local instructors integrate the use of technology into the curriculum. The ESC provides online courses, and continues to increase online offerings, that help meet the demand of professional development for educators without taking them out of the classroom. ESC 5 hosts a Technology Integration Conference that focuses on technology integration for educators. Community members are also encouraged to attend, allowing parents to view the technology that their children are exposed to on a daily basis.

Regularly scheduled user support group meetings via The South East Texas Telecommunications Education Network (SETTEN) Distance Learning Network offer follow-up and review sessions, which enhance the successful implementation of these local resources. The system reduces travel costs and time for participants as well as eliminating the need for hiring a classroom substitute. A sample of ESC 5 technology professional development includes, but is not limited to; Intel training, Office training, Adobe Dreamweaver, Flash, Fireworks, and Photoshop Training, Clay Animation training, United Streaming, MovieMaker training, Digital Storytelling using Movie Maker 2, Podcasting, Web 2.0 tools, and TMDS/TSDS.

### Leadership, Administration and Instructional Support

Region 5 ESC held an Administrators' Technology Academy that focused on the 21<sup>st</sup> century technology and how it can help administrators. This workshop allowed school administrators to receive up to 36 hours of technology professional development. The South East Texas Telecommunications Education Network (SETTEN) broadcast programs at districts' request and is the medium of delivery for the monthly user support group meetings. SETTEN also had a positive impact at a recent legislative update that was part of state mandated training for School Board members. The update allowed school board members to attend the training in their own community, saving time and money for the ISDs as well as the ESC.

The Technology Assistance project helps districts update their technology plan, secure grant funding from a variety of sources, and apply for E-Rate discounts for telecommunications services. In addition, training enables technical support staff to obtain the skills needed to maintain hardware and networks in their local districts.

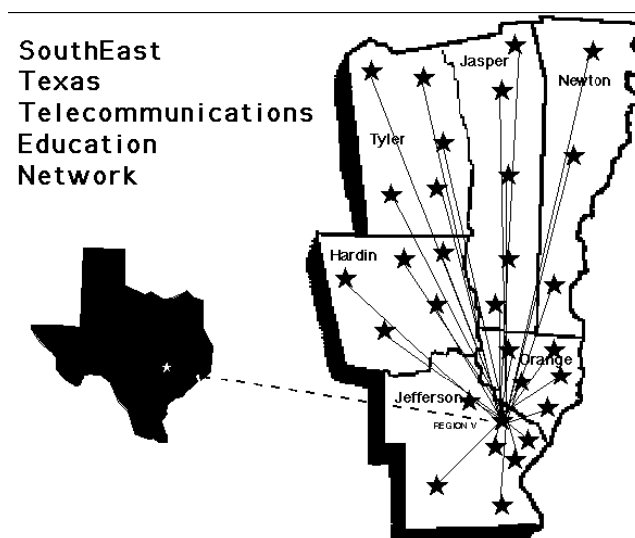
### **Infrastructure for Technology**

SETTEN provides over 5600 educators with e-mail, Internet/Internet 2 access, and video-conferencing. The Service Center continues to support a hardware-purchasing cooperative and provides a collaborative E-Rate application for all schools connected to the network. Instructional and administrative training, network monitoring for efficient use of resources, as well as comprehensive event scheduling are all provided through sustained support from the Service Center.

With the continuous demand on our ISD'S, video conferencing is proving to be key in allowing districts to operate more efficiently and effectively through shared instruction and dual credit courses that allow students to gain credit for high school and college courses without leaving the school district. Educators are also impacted in a positive way through access to training opportunities that are timely and relevant. With expansion of our wide area network, more data from TEA will be accessible by more people so that more effective decisions can be made regarding needs of teachers and students. With access to this wealth of data and tools, teachers will be better prepared and all students will have a greater opportunity to achieve academic success.

Region 5 ESC is also a member of the TETN+ network which provides our districts connection to other districts throughout the state and provides Internet 2 access.

### **Southeast Texas Telecommunications Education Network**





Region VI Education Service Center (ESC VI) is located in beautiful southeast Texas in the piney woods, 60 miles north of Houston. Region VI encompasses 12,400 square miles that includes 15 counties, 56 school districts, and various private schools serving over 161,000 students and over 22,500 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 44% of the students are eligible for free or reduced-rate lunches. Nevertheless, the districts in Region 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**

Region 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.

The Distance Learning Program at Region VI provides extensive video services to the 48 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 Region VI Distance Learning program offerings for the 2007-2008 school year reveals that as of June 1, 2008 more than 1,100 educators participated in 65 professional development workshops; 28 virtual field trips and special events were broadcast to over 7,500 students on 49 campuses; 32 dual-credit courses were delivered to 689 students on 20 campuses; and 105 students received high school credit instruction on three campuses. One of the special events was the first annual Barbara Bush Reading Event held in partnership with the George Bush Presidential Library. Mrs. Bush read a portion of a book called "Wackiest White House Pets" and then answered questions from children all across the region via videoconference.

### **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 other resources, to integrate technological resources into the curriculum and develop technical skills to support those resources

Examples include:

- Texas Math Diagnostic System
- Texas Science Diagnostic System
- Geometry Sketchpad
- Graphing Calculators
- Online Databases
- Digital Storytelling
- Virtual Field Trips in Science and Social Studies
- Online book studies using Moodle in ELA, Social Studies, and Master Reading
- Technical assistance in the implementation of the K-12 Technology Applications TEKS

- The use and integration of video streaming resources.

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. Support has been provided for the state Technology Planning Model (ePlan) and Star chart evaluations for Teachers, Campuses, and Districts. Online resources for teachers and administrators including WebCCat, NovaNET, FAKSONLINE and the Education Service Curriculum Collaborative are made available to Region VI districts.

### **Leadership, Administration and Instructional Support**

Administrative support that is offered by Region VI ESC 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 administrators is provided. To support these services, Region VI maintains on staff a technology integration specialist, a library 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 for Technology**

Each year the number of districts with a communications infrastructure has increased. CommNet, the regional network in Region VI, includes more districts each year that are directly connected for Internet access, e-mail services, and distance learning. Region VI 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 Region 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 campus-wide networks with local area networks (LAN). Regional Connectivity provides the following capabilities:

- Internet
- E-mail
- Spam/Virus Email Filtering
- Direct Connectivity to the Texas Education Telecommunications Network (TETN), allowing point-to-point access to all 20 Education Service Centers and all school districts attached to their networks
- Direct Connectivity to the Internet2 Consortium via the TETN Network
- Direct Connectivity to Blinn College, Sam Houston State University, and Net-Net Managed Web Hosting
- Circuit Coordination
- Maintenance and Support on all District Internet Routers
- Network Design Consultation
- Technical Support Resource

Eight years ago CommNet consisted of a network of 19 school districts. Bandwidth for each district consisted of 256 Kps to Region VI. The Internet pipe consisted of two T1s totaling three Mps which was shared by all 19 school districts. Today CommNet consists of 39 school districts plus Region VI as the hub site totaling 40 sites. Each district has at least one full T1 circuit connected to Region VI which translates to a data transfer speed up to 1.5 Mps. The current Internet bandwidth is up to 100 Mps which is shared by all 40 sites.





1909 S. Longview Street \* Kilgore, Texas  
903-988-6700 \* [www.esc7.net](http://www.esc7.net)

Region VII Education Service Center (ESC-7), located in Kilgore, Texas, provides services to 96 districts in 17 counties. Most of the region's school districts are rural and include 164,246 students and 24,023 professional educators and support staff. 54% of the students are economically disadvantaged. TAKS student achievement scores show continuous improvement each year and are above the state average.

Region VII 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 VII assists teachers and administrators in meeting Technology Application TEKS proficiencies providing training for teachers and administrators for technology integration into the curriculum. The following lists contain examples of activities available through ESC-VII.

### Teaching and Learning

Region VII 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 ESC-VII web site.
- 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.
- Collaborates and provides staff development for the STAR grant with various schools. The grant allows online workshops to be built for math and science. Workshops contain information from DMAC, United Streaming, web resources, 5E Lesson Plan sharing, successful video tips and ideas, and introduction and summary modules as well.
- 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 utilizing the latest technology, including videoconferencing, is currently under construction.
- Designed, created, and delivered an online survey that resulted in a detailed prescriptive plan for addressing the gaps in the technology competencies recommended by SBEC. This tool is being redesigned in collaboration with a

partner company to provide a more "hands on" evaluation of a teacher's skills.

- 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.
- Provides United Streaming video-on-demand student and teacher resources, including videos, teacher tools, digital media, professional development enhancements, and administrative tools.
- Delivered Spanish I, II, and III via videoconference to schools that are not able to provide a qualified Spanish teacher in their district.

### Educator Preparation and Development

Region VII 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.

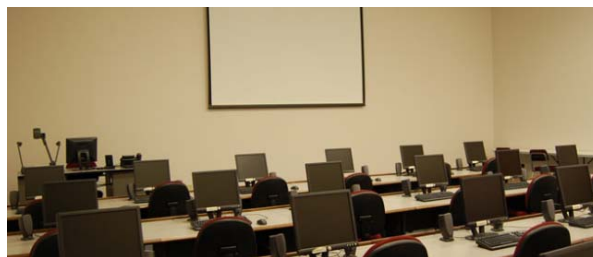
- Provides professional development via distance learning, distributed learning web site resources, and on-site staff development.
- Provides training and technical support for Moodle, an online course management system.
- Identifies web sites suitable for student research and data-gathering that can 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 current classroom teachers.
- Correlates all professional development offerings to the SBEC standards as well as the Technology Application TEKS.

### **Leadership, Administration and Instructional Support**

#### **Region VII Education Service Center:**

- Assists schools and districts with data disaggregation and effective district and school 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.
- Trains and provides 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 for Technology**

#### **Region VII Education Service Center:**

- Maintains the telecommunication infrastructure for the regional network, ESC7Net, for 49 ESC-IIV school districts, colleges, charter schools, and private schools, using an IP backbone for data, voice, and video services.
- Provides assistance to schools and districts in technology planning, network management, network design, technology integration, Internet connectivity, distance learning, videoconferencing, hardware and software support.
- Provides forums for regional collaboration through advisory committees, grant writing, and planning meetings.
- Provides virus scanning and protection for over 5,000 e-mail accounts on the ESC7Net WAN.
- Implemented E-mail Archive service for districts and charter schools.
- Implemented Virtual Private Server service for districts and charter schools.
- Implemented a robust virtual server platform in an effort to consolidate current servers and provide future server growth.
- Added on-site technical support services for districts and charter schools.
- Participated as one of the original five pilot sites for the TETN Plus project.



Region 8 Education Service Center currently serves 48 public school districts in Northeast Texas has 56,778 students that include 61% White, 23% African American, and 15% 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: Superintendent and Principal Academies, Curriculum

Alignment and Planning, Formative Assessment of Knowledge and Skills (FAKS), Leadership for Changing Schools, School Safety Inspector Training, New Teacher Orientation, 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.

It is the vision of Region 8 Education Service Center to create a partnership between school districts, teachers, school board members, universities and community colleges, community members, and business leaders to provide quality services for school improvement that will prepare students to cope with the challenges of the future.

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### **Teaching and Learning**

Region 8 provides districts with a systemic curriculum processes to affect vertical alignment, instructional delivery, and assessment to impact student performance. This process is known as CSCOPE ([www.cscope.us](http://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. Additional opportunities for learning using technology are also implemented via Distance Learning, video streaming, and online research databases. An online assessment program ([www.faksonline.net](http://www.faksonline.net)) was developed by ESC consultants to provide teachers with access to a large database of questions designed to assess student proficiency in all TAKS tested areas. Students and parents may securely log in and see the results of the student 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 defines Professional Development as providing information in a formal setting 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. 21<sup>st</sup> Century Learning technology skills are being taught to teachers for classroom implementation. 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, Microsoft Office, and desktop publishing is provided to teachers and staff using LearnKey. CTE teachers and district technology personnel are the largest customer base for this training. Expansions in online professional development are being planned by providing follow-up training and new courses using a training portal. 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, 2006-2020. Data from this tool is reviewed to aid in planning for technology-specific training where needed.

### **Leadership, Administration and Instructional Support**

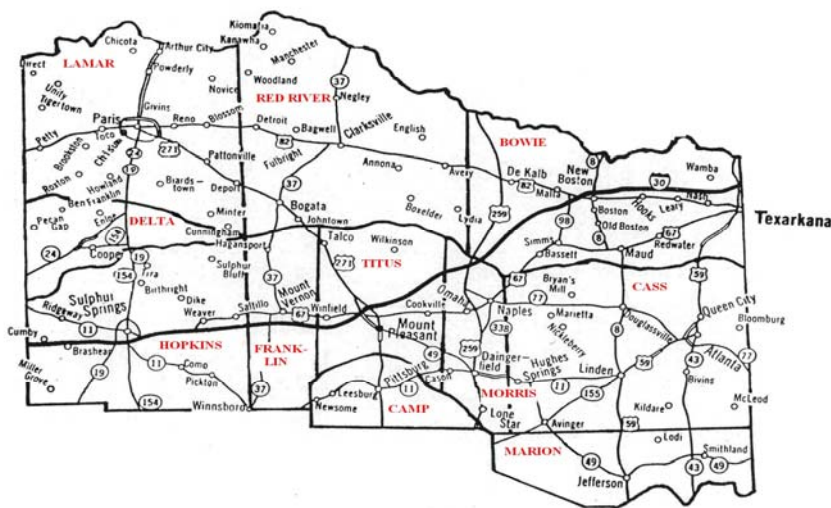
Region 8 offers data disaggregation training in ADM and INOVA to district personnel to assist them in data analysis. Training and technical assistance is provided for Technology Planning and the ePlan system, STaR Chart data gathering, and E-Rate. Regular meetings as well as email updates to district technology 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 transcripts. Districts also receive quality support and training for RSCCC and electronic grading and attendance management systems.

### Infrastructure for Technology

Employees of ESC 8 are provided with the technology tools (computers, printers, etc.) with which to do their job. Support is provided via an online support ticket system. ESC 8 provides 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. Region 8 is the home of the Northeast Texas Regional Education Telecommunications Network (NTRETN), a consortium of public non-profit education institutions to provide internet services. The 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 53 school districts and Region 8 ESC. NTRETN 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 will add another 20 port MCU before the fall of 2008 and will be able to 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. Additionally, wireless notebook computers are available for use in conference rooms. Each 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.

Planning is underway for ESC 8 to collaborate with the other ESCs of Texas to form an intranet which will connect them to the LEARN network and provide for access to Internet 2. This will provide access for districts to participate in higher learning and take advantage of Web 2.0 tools. It will also provide a platform through which ESCs can share their products and services to a wider audience of members. This project is currently named TETN Plus.





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, 1996-2020. 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 training 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.
- Electronic field trips coupled with Internet activities and other resources for curriculum integration.
- On-line resources such as Facts on File and on-demand video streaming.
- 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.
- Access to the Curriculum Leadership Cooperative (CLC) Program – a comprehensive curriculum alignment product that offers schools valuable on-line alignment resources for math, science, social studies, and ELA in grades K-12.

### Educator Preparation and Development

Professional development is another focus of the ESC-9 Technology Department. Our technology training labs are used extensively for planning, developing technical skills, and enhancing 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. 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 an 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. 16 portable distance learning systems provided through a RUS Grant has 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 utilized 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, special education training, and follow-up training sessions. The ESC-9 Technology Department continues to monitor and revise workshop sessions and develop new training based on data-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 FIRST (Financial Integrity Rating System of Texas). Due to the discontinuation of WinSchool software, ESC-9 continues to implement conversions and provide training on RSCCC student software applications. Training is also provided for AEIS-IT, a software product that enables users to disaggregate TAKS 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 ESC's Technology Purchasing



Cooperative allows our districts to acquire cost effective technology.

### Infrastructure for Technology

The Net9 project commenced on January 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 districts, Notre Dame Private School, two colleges, and one 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. Region 9 staff 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:

- Email
- Web hosting
- Virus protection
- Content filtering
- SPAM filtering
- Distance learning scheduling
- Help desk support
- On-site technical support

### Region 9 ESC's Net9 Network

Petrolia High School's Valedictorian graduated with 35 hours of college credit with the majority offered via the Net9 network.

Wade Wesley, Principal

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 10 Education Service Center serves 80 public school districts and 45 charter schools in eight North Texas counties. Our region has 710,590 students with 42% of those students identified as economically disadvantaged and 42% 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 174 students to a district with 158,659 students. Region 10 provides services to support 81,889 district staff members, which include teachers, support staff, campus and central administrators.

### Teaching and Learning

- The TaRGET American History project is dedicated to training Texas social studies educators in Teaching and Relating Great Episodes and Topics in American History.
- 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 utilize resources to meet student needs.
- Region 10 provides oversight and support for the Vision 2020 Grant. This grant provides funds for technology immersion and virtual learning to districts across the state.
- Students and teachers in Region 10 have access to educational videos on demand in their classrooms using Discovery Education Streaming. This TEKS-aligned online library provides over 4500 educational videos and 50,000 video clips for use in instruction. Students may take virtual field trips through Colonial Williamsburg and Immersion Presents.
- 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.
- Region 10 collaborates with Texas colleges and universities to provide dual credit and advanced academic coursework to district students and staff via the Region 10

videoconference network. During 2007-2008 39,584 hours of dual credit courses, virtual field trips, graduate degree programs and professional development were delivered.

- Student core and advanced placement coursework online is provided to participating districts through partnerships with BYU Independent Study, Texas Virtual School, and Pearson Digital Learning (NovaNET).
- Region 10 oversees Central Operations for The Texas Virtual School Network in partnership with the Harris County Dept. of Education to provide online courses to students throughout Texas.
- The Online Learning Center provides high-interest, media enriched, and interactive student content based on specific TAKS objectives. Each unit contains learning objectives, tutorials, and interactive activities. Units have embedded assessments so students and teachers can track progress on unit objectives.

### 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. Participants are grouped into elementary or secondary cohorts in order to form a support and idea exchange network for participants. TSI is provided in a face-to-face format and augmented by online modules.
- Intel Teach is a statewide program training classroom teachers to integrate technology into their lessons, and promote problem solving, critical thinking and collaboration skills among their students.
- WebCCAT is an online bank of performance-based assessment items 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 School Bus Evacuation.
- Region 10 collaborates with two universities to provide Educational Administration Master and Doctoral programs for principalship certification by videoconference.
- CSCOPE is a comprehensive, customized, user-friendly curriculum support system. In addition to the curriculum, CSCOPE encompasses resources for the implementation, monitors the curriculum and establishes an accountability process to ensure a quality implementation and is supported by Region 10.
- iCAT is an online vertical and horizontal alignment tool that provides districts with curriculum clarifications and performance descriptors to facilitate discussions and planning for gap analysis, curriculum development and alignment of expectations and instructional practices.
- Region 10 provides leadership for the Technology Application Teacher Network, which provides Texas teachers with resources to implement the Technology Applications Texas Essential Knowledge and Skills in the K-12 classroom.
- Quarterly eNewsletters for teachers provides timely updates on curriculum, resources professional development, and grants.

#### Leadership, Administration and Instructional Support

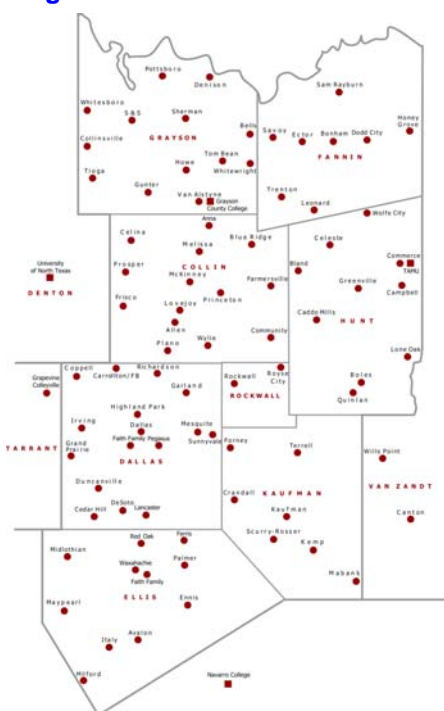
- EMPOWER Educational Data Warehouse is a service providing school districts access to data from their system for analysis.
- The Accountability Reference Tool quickly and efficiently displays information that previously was only accessible by reading multiple accountability and compliance manuals. It is designed to allow users to see data sources that drive the many accountability and compliance reports districts receive throughout a school year.

- The Division of Information Services offers a full range of software applications for student and business.
- Region 10 assists in revising and implementing PEIMS.
- AEIS-IT, an Education Service Center Curriculum Cooperative software tool for test data analysis allows teachers and campus administrators to access assessment results in a browser-based environment.
- The Teacher Job Network is a job database service for applicants to search for all professional educator positions.
- An eNewsletter provide quarterly updates for campus administrators on changes in standards and alignment, reporting requirements, legislative updates, and shares best practices in curriculum and instruction.

#### Infrastructure for Technology

- Region 10 continues to provide Internet, email, web hosting, DNS, filtering, listservs and access to online instructional tools. The videoconference network offers districts connectivity to TETN meetings and programs and Internet2 connectivity.
- The Wireless Internet Consortium, lead by Region 10, will be in operation for the 2009-2010 school year providing 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 105 public and charter school districts, and a large number of private schools. In the 2007-2008 school year the number of students enrolled in the public and charter school districts was 498,041. 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. 41.4% of school-aged children qualify as economically disadvantaged, 13% as LEP, 10% Special Education, 9% Gifted and Talented, and 12% are Bilingual/ESL. 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 menu of services that they can select from to meet their needs
- Provides assistance in implementing the Technology Applications TEKS PreK-12 through professional development, technical assistance, appropriate videostreaming and related resources, online tools including Facts-on-file, and more
- Facilitates preview, support, and training for the state-provided online databases and other licensed materials, as well as traditional textbooks and digital support materials
- Establishes and maintains partnerships with providers of instructional resources and regional and/or statewide group purchases of instructional materials to secure the best possible cost and accessibility for districts. Group purchases and partnerships include Discovery Education videostreaming resources, netTrekker, and others
- Coordinates districts receiving advanced math, science, foreign languages, and other courses via concurrent/dual enrollment videoconferencing. Additionally, coordinates districts sharing courses through the regional telecommunications network
- Provides TEKS-aligned electronic field trips via distance learning from an ESC-developed Texas network of specialized providers called Connect2Texas as well as from specialized providers worldwide
- Coordinates a centralized automated online library system to maximize district resources and to support libraries' uses of 21<sup>st</sup> Century resources and tools

##### 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 SBEC 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 comprehensive 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
- Utilizes distance learning methodologies to deliver professional development, including videoconferencing, online, 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 recommendations to TEA for approval to assist districts in obtaining E- Rate, NCLB, and other federal funds
- Provides an annual Technology Leadership Symposium for administrators
- Coordinates regional technology initiatives, and provides leadership and coordination/fiscal agent activities for collaboratives and grant proposals and implementations
- Provides technical assistance to districts' technology planning.
- Provides administrators and technology staff regular updates and communications through e-mail distribution lists and other Web tools
- Provides a statewide group purchasing consortium for schools to be able to purchase online and digital resources as a part of a large group purchase that secures volume-discounted pricing
- Supports schools and receives needs assessments from and through a Technology Advisory Committee consisting of designated representatives from each district
- Offers a Title IID collaborative to effectively and efficiently use the district's formula funding by providing free technology integration related professional development, free participation in the Texas Teacher Technology Competencies Certification program, and free TEKS-based electronic field trips
- Serves as the Cisco Academic Training Center and provides Cisco Academy coordination, leadership, training, and support for 13 Region XI high schools, six community colleges, and two 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

#### **Infrastructure for Technology**

- Designs, develops, operates, and manages the Region 11 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, including network design, hardware purchasing assistance, T1 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 [www.Connect2Texas.net](http://www.Connect2Texas.net) program and portal
- Coordinates collaborative grant writing, grant management, and implementation for schools to be able to take advantage of distance learning opportunities, including two Rural Utilities Services grants for a total of \$1,000,000 on behalf of 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





Education Service Center Region 12 Waco, Texas • 254-297-1212 • [www.esc12.net](http://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 charter schools and 20 private schools for the purpose of improving student performance for all students. Based in Waco, with satellite centers in Nolanville, Corsicana, Goldthwaite, Hillsboro, 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 34,500 students on 49 campuses. Within Region 12 approximately 52.9% of the school-aged children qualify as economically disadvantaged, and 47.4% of the districts are considered rural. ESC Region 12 continues 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 the instructional needs of educators and the learning needs of students in meeting the vision of technology in education.

- ♦ 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 web sites, and partnerships with video streaming and online database providers
- ♦ Access to valuable curriculum solutions such as Compass Learning and Comprehensive Curriculum Assessment Professional Development (CCAP) 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 student, 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. 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. Districts are using the Internet for lesson planning and sharing with other districts. Teachers and administrators are better prepared to interpret student formative data and develop supporting lessons that incorporate the use of technology.

- ♦ Approximately, 3742 regional professional development opportunities provided over the past two years for teachers via distance learning and face-to-face.
- ♦ Customized staff development activities provided for districts and campuses 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
- ♦ STaR 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.
- ♦ Videoconferencing utilized for SLP graduate classes, deaf education training, interpreter training, and TAKS-Alt training.

## 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 such as WebCCAT and AEIS-IT are provided to assist administrators in using modern information technology tools to analyze data for sound decision-making and continual assessment of effective technology for improving student learning.

- ◆ 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 completion 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 STaR, Vision 2020, NCLB and other grant writing and collaborative efforts
- ◆ 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
- ◆ Training on how to use technology to support business services and all 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 for Technology

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 regional multi-service and multi-capability Intranet wide area network with gateways to the Internet and other regional, local and statewide networks. EDLINK 12 connects 54 sites throughout the

ESC Region 12 service area including 37 school districts, 6 charter schools, 2 private schools, 4 ESC satellite locations (Nolanville, Corsicana, Hillsboro, and Teague), 3 colleges (Hill College, McLennan Community College, and Temple College), and 3 networks (TETN, RETN, and CTEN). This videoconferencing network experienced tremendous growth over the past 2 years and gained state and national recognition. 35,620 districts and students participated in student projects and virtual field trips. 761 students and districts participated in high school and dual-credit classes, and 130 staff development sessions/meetings were held. National Distance Learning awards included Outstanding Professional Development for Educators, Outstanding Collaborative Project, Technical Support of a Videoconference, and Technical Support of a Videoconferencing Network. State awards included the Don Foshee Memorial Grant and the Outstanding Commitment to Excellence and Innovation award.

- ◆ 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.





### Who We Are

Education Service Center Region XIII is one of 20 service centers that serve Texas educational needs. ESCs are non-regulatory entities whose relationship with school districts is collaborative and supportive. The goal of ESCs is to aid teachers and administrators in their role as the educators of children. ESCs also 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 providing consultation for both federal and state programs. ESCs are staffed with knowledgeable educators dedicated to excellence in education.

Although Region XIII provides services and tools nationwide, the assigned regional area encompasses:

- 60 School districts
- 19 Charter schools
- 17 Private Schools
- 345,758 Total Student Enrollment
- 8 Institutes of higher education
- 17 Counties

### 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 clients in the development of a quality educational environment
- Provide client-focused quality products and services in a timely and efficient manner to promote improved performance in schools
- Initiate collaboration with clients to close the gap between current and desired student performance

### Teaching and Learning

Region XIII provides districts with professional development and support to ensure that all students reach high academic standards of achievement. Professional development related to core content areas, inclusive practices for diverse learners, and support for English Language Learners and students in Advanced Academics is provided. Region XII provides:

- CSCOPE Curriculum
- Access to streaming video
- Cisco Networking Academy training
- Access to high school courses delivered via the Internet or Interactive Video Conferencing.

Region XIII's Distance Learning Network provides an opportunity for students in all districts to have access to high quality instruction in low incidence courses. This ability lessens the gap of available courses between large, medium, and small school districts, regardless of their geographic locations. In 2007-2008, the network carried:

- 8 high school credit courses for 320 students
- 18 dual enrollment courses for 154 students

- 365 electronic field trips to 10,430 students
- 98 student created video conferences
- 399 professional development workshops for hundreds of educators

This program saves districts thousands of dollars in transportation costs and time savings.

Courses delivered on a daily basis include Sign Language I, II, and III with instruction provided by the Texas School for the Deaf. Czech for levels I and II is delivered from Flatonia ISD and Spanish I, II, and III is delivered from Region XIII's onsite teachers. During the 2007-2008 school year, 6 districts received daily Spanish instruction for over 275 students.

The Online Learning staff has created over a dozen web-based courses for teachers. The staff also provides training for district personnel to develop their own effective online courses.

Region XIII also:

- Makes available assistive technology devices and computer access peripherals
- Offers assistive technology application training and assessment

- Provides technology integration “webinars” delivered via the Internet and Interactive Video Conferencing
- Holds quarterly advisory group meetings such as ViTAL (Visionaries in Technology and Learning) to share emerging technologies and solicit input and feedback from the districts

Region XIII provides Video on Demand to all regional districts that choose to participate. This resource allows educators to access full length digital videos and clips for concept development in their students. The video resources can be accessed on an as needed basis for “just in time teaching”.

### **Educator Preparation and Development**

Region XIII is committed to helping teachers use technology effectively to provide high quality instruction for all students. To meet this goal, the ESC prepares teachers by:

- Providing an online certification course for Career and Technical Education (60 teachers across the state received instruction in 2007-2008)
- Providing training for technology integration into Gifted and Talented, ESL, Literacy, Mathematics, Science, and Social Studies as part of Region XIII Institutes
- Enabling access to webinars for educators in Region XIII on technology integration as well as curricular topics
- Participating in the Fall, Spring, and Summer Region XIII Professional Development Catalog with a wide range of courses designed by Technology Services to serve the educator
- Offering a recognized alternative certification program which effectively blends face-to-face training with an active online community and continued online support

### **Leadership, Administration and Instructional Support**

Training and support for district administration is the foundation of successful technology integration in school. Region XIII meets this challenge by providing:

- eRate technical support, electronic updates, paperwork management systems, and training sessions
- Low-cost, high-end technical training in applications required by districts
- LISTSERV hosting services

- Support for administrative software, such as RSCCC and iTCSS (Region XIII provides onsite and remote support for these tools which manage school district finance, payroll, human resources, student information, and PEIMS)
- PEIMS training for all district and charter schools
- Ongoing support for Web-accessed Comprehensive Curriculum Access Tool (WEBCCAT)

### **Infrastructure for Technology**

Region XIII provides products, services, and support to improve district efficiency and effectiveness in the areas of operations, education, and use of technology.

The TXED Network is a regional telecommunications network that is available to all districts in Region XIII. Through this safe, reliable, and secure regional infrastructure, Region XIII is an Internet Service Provider (ISP) to many districts, providing:

- High Speed Internet Access
- Network Security Services
  - External Firewall Management
  - Email Filtering for Spam and Viruses
  - Intrusion Detection
- Web Content Filtering
- Network Monitoring
- Network Infrastructure Support
- Email Hosting
- DNS Management
- Consulting
  - Network Infrastructure Consulting
  - Network Security Consulting

### **Distance Learning Network**

The Distance Learning Network provides the technical and curricular support necessary for districts to connect with other schools, museums, programs, and experts around the globe. The technical support includes:

- Phone support for campus technology staff
- Recommendations for expanding Interactive Video units
- Connection support to other IVC locations
- Test calls and troubleshooting
- Professional development for using the hardware as well as curriculum application both at the ESC (through Interactive Video Conferences) and online
- Hosting a LISTSERV for communication between district campuses





Region 14 Education Service Center  
Abilene, Texas 325-675-8600 [www.esc14.net](http://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 4<sup>th</sup> 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

Region 14 Education Service Center offers hundreds of low cost professional development training sessions with an emphasis on technology integration into the curriculum.

One of the regional curriculum success stories of the 2007-08 school year was the Big Country Math/Science Enrichment Symposium February 2, 2008. Over 200 regional educators attended professional development workshops emphasizing technology integration skills. Funded by Title II D and local collaboratives, this popular event showcased whiteboard technologies, new software offerings, and shared the latest innovative ideas for mastering the TEKS and strategies for exit-level TAKS intervention.



Region 14 Consultant Cody Carson presents TAKS tips at the Big Country Math/Science Symposium

### Educator Preparation and Development

Distance learning usage continues to soar in Region 14 spurred by the pressing need to alleviate rising travel and fuel costs.

Many of our regional educators are assisting their students as young as the second grade in researching, developing, producing, and delivering education content through interactive video to other schools across the nation and world.

Five years ago Region 14 schools began to explore the possibility of using students to research, develop, produce, and deliver educational content using interactive video. This innovative program of student-authored DL offerings led to 42 campuses developing video projects to share with students across the nation and internationally. In the first three weeks of May 2008 alone, 72 student video projects originated from Region 14 schools and were eagerly viewed and discussed by students across America and the world.

**Re: "A Tour of a West Texas Town" presented by 2nd Graders at Snyder Elementary**

***"I thought it would be an adult from the wind farms doing the talking so that was a surprise to me. The students enjoyed it more coming from other students. I hope we can take part in more of these presentations. Thanks for a job well done!"***  
**Betsy Zadorozny - Cedar Vale Schools, Cedar Vale, Kansas"**

**Re: "Archaic Indians of the Lower Pecos" presented by 5th Graders at Gustine Elementary**

***"We were all equally thrilled by the experience and went off to our holidays with a great feeling thanks to your pupils. And it wasn't just our children. All of us adults that sat in on the session were equally excited about what we had witnessed. I shall talk to my colleagues and maybe come up with some ideas for presentations which you may like to receive during the course of next year. Another idea may be to share information about our school localities and conduct some kind of comparison. Mark Barrett - Llanishen Fach Primary School, Cardiff, Wales"***



## Leadership, Administration and Instructional Support

Region 14 provides extensive support for LEA financial software and PEIMS usage. Region 14 RSCCC and technology department staff utilize 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 continue to shine in participation rates for ePlans and Texas Teacher and Campus STaR Charts with 100% approval/completion rates for two consecutive years.

Region 14 offers cluster training for educators and support staff at fully-equipped ESC remote sites located in DeLeon and Snyder. The highly popular ESC 14 Road Show staff development extravaganza held each August in three cities continues to be an annual ESC 14 tradition and jumpstarts regional educators in the latest trends in teaching strategies and technology.

## Technology Infrastructure

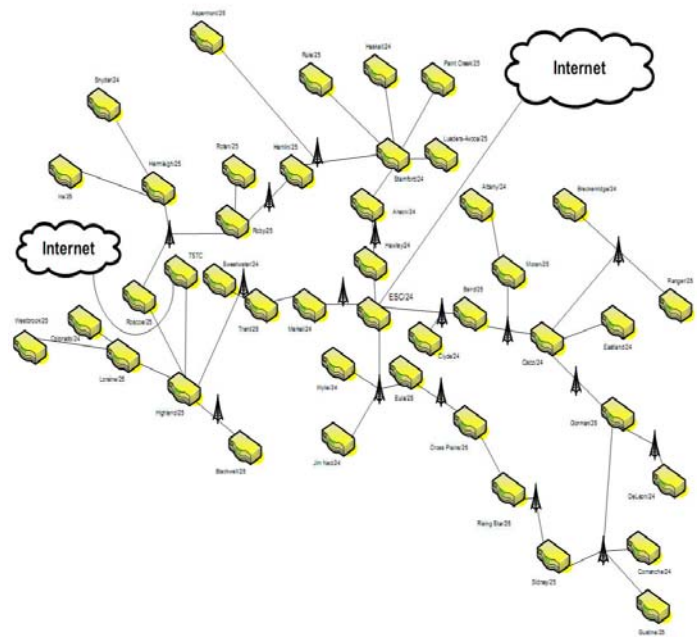
Region 14 ESC continues to be a driving partner in the WTTC (West Texas Telecommunications Consortium). Founded in 1996, WTTC is a strong collaborative with 55 members consisting of school districts, colleges and universities, libraries, museums, hospitals, and city and government agencies in the West Central Texas area.

WTTC entered an exciting new phase in 2007-2008 with a multi-million dollar microwave tower project designed to cut the ties to legacy T1 lines for members and increase bandwidth for 200 DL endpoints, 150 VOIP endpoints, and 11,000 computer workstations on the WTTC WAN.

***"This faster access will be a great asset to our teachers as they should be able to use the short video clips from Discovery and add them in to their whiteboard lessons or PowerPoint presentations on the fly. Also, students can access the clips in lab situations without too much down time." Linda Cross Jim Ned CISD Technology Director***



**Executive Director Ronnie Kincaid (left) at the annual Region 14 Road Show in Cisco, Texas with Keynote Speaker LaDonna Gatlin and Cisco ISD Superintendent Hal Porter**



## Region 14 ESC microwave Internet network



Education Service Center Region XV  
San Angelo, Texas 325-658-6571 [www.netxv.net](http://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 42 districts in Region XV are geographically dispersed across 25,000 square miles with 57.9% of the state average of 55.5% economically disadvantaged TAKS scores of economically-disadvantaged students continue to show gains. Progress toward implementing advanced technology has been tremendously enhanced because of the infusion of grant funds from a Rural Utilities Services, Distance Learning, and Telemedicine Grant. This award of \$462,271.00 RUS funds has provided ESC XV the opportunity of supporting and enhancing the infusion of technology into the curriculum, while continuing its commitment to increased student achievement.

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### Teaching and Learning

Education Service Center XV:

- facilitates the connection of 437 two-way interactive field trips to 11,806 students to support and enrich curriculum; approximately 201 dual enrollment courses delivered to 2,127 region high school students; and approximately 457 professional development workshops delivered via videoconferencing over the past two years
- 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 by providing students the tools they need to be productive, independent and successful learners
- supports Career and Technology Education to assist school districts in their efforts to offer effective Career and Technology Education programs that prepare students for further education and eventual employment. Career and technology education should complement and enhance academic preparation by enabling students to apply principles to a variety of community and career situations
- provides districts with the expertise, tools, and support needed to integrate video streaming into the curriculum
- provides participating districts with a comprehensive collection of current, relevant online resources that supplement and enhance K-12 instruction and digital literacy
- supports educators in determining progress toward meeting the goals of the four key areas of the *Long-Range Plan for Technology, 2006-2020* through completion of the Texas STaR Chart as well as meeting the goals of their district
- supports installation, upload, and training of AEIS IT, a comprehensive test data analysis tool. The AEIS IT web module allows 42 Region XV districts to access assessment results in a browser-based environment and have the ability to upload benchmark scan data
- supports 77 videoconferencing endpoints which provide students and teachers access to high school curriculum content, dual credit courses, electronic field trips and professional development

### Educator Preparation and Development

Education Service Center XV:

- develops and disseminates an electronic profile to evaluate educator proficiencies and to assist in determining training needs; has disseminated information relating to the best practices in educational technology
- offers multiple trainings based on Technology Applications TEKS focusing the district instructional personnel in the use of 21<sup>st</sup> Century educational software and hardware applications for the integration of technology to enhance classroom curriculum
- offers on-site and videoconferencing connections at LEA request, using locally available hardware, software, and network/Internet connectivity thereby providing opportunities for both incidental and focused instruction
- offers end-user training, as well as Instructional Design and Delivery training, for curriculum integration of 21<sup>st</sup> Century technology skills utilizing interactive whiteboards, podcasting, wikis, and blogs
- facilitates the use of the Intel curriculum in order to prepare students to become technology literate, develop critical thinking skills, and become decision-makers and problem solvers through effective integration of technology into the curriculum

## Leadership, Administration and Instructional Support

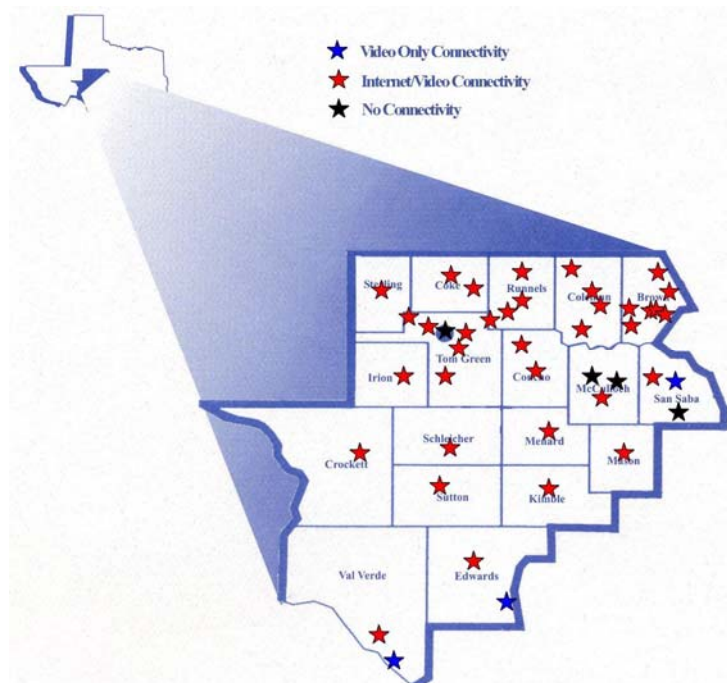
### Education Service Center XV:

- supports administrators with identifying 21st century standards, assessments, curriculum, instruction, professional development, and learning environments that are aligned to produce a support system that produces 21st century outcomes for today's students
- updates and expands website to provide a menu of services and contacts correlated to ESC Departmental areas as well as staff development resources; an online staff development catalogue; and an online registration, evaluation, and printing of certificates for staff development opportunities
- assists administrators, teachers, and other instructional leaders in the disaggregation of testing data. ESC XV has provided online access of data to LEAs, as well as training in utilization of this data for maximum instructional benefits
- assists in the development of partnerships between ESCXV, districts and community colleges in order to support and enhance the high school curriculum
- provides training and awareness session for local district E-Rate applications
- assists LEAs with grant proposals, including training and technical assistance in a variety of formats
- supports the cooperative purchase of FileBanc which provides a secure data backup solution for district data

## Infrastructure for Technology

### Education Service Center XV:

- supports in excess of 77 videoconferencing endpoints which provide access to high school credit, dual credit, electronic field trips, professional development, and professional certification/course credit
- provides network development assistance for LEA local area networks
- provides Internet connectivity, web hosting, and electronic mail services as well as data transfer and voice to 38 of the 43 school districts in Region XV through the regional network, NetXV. The other five districts are provided similar services through another provider. Thirty-nine of the 43 districts have interactive two-way videoconferencing connected to the ESC XV hub
- provides for regional cooperative purchasing in order to maximize the use of local, regional, and state wide technology infrastructure through the use of Discovery's United Streaming, Region 11 Library Collaborative, NetTrekker, Region 10 WebCCAT, and AEIS IT products
- provides a forum for regional collaboration through participation in the Distance Learning Workgroup and the Technology Task Force
- facilitates the deployment and support of infrastructure to ensure 24/7 accessibility through the online professional development/course support within Moodle
- prepares for equitable and cost-effective connectivity to a high-speed statewide telecommunications network through anticipated participation in TETN Plus





**Region 16 Education Service Center • 5800 Bell Street • Amarillo  
(806) 677-5000 • [www.esc16.net](http://www.esc16.net)**

The Texas Panhandle consists of 64 school districts 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. One rural school district in Region 16 provided a Texas Virtual School Spanish course for their students helping them meet graduation requirements. In 2007, 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 2007-2008, 91 videoconference Field Trips were scheduled for nine different districts enabling 2,737 students to participate in virtual field trips which varied in content from Texas heroes such as Stephen F. Austin to live open heart surgery.

◆ The USDA Rural Utilities Services (RUS) division awarded a \$500,000 Distance Learning grant to Region 16 ESC and participating districts in 2006. The three year project installed new videoconferencing equipment which provided virtual field trips, live instruction through the sharing of teachers, streaming content of archived video sessions, and professional development for teachers and curriculum enhancement. The project serves approximately 12,573 students in the Texas Panhandle.

## 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, digital graphics, desktop publishing, video editing, and multimedia software. A webinar on Internet Safety was also offered to districts to address the increasing Internet safety concern for students. Many workshops address the use of technology integration to promote higher order thinking skills, and are offered for Advanced Academic Services credit. New in fall 2008, districts will 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, in order to meet these needs workshops are offered face-face, over videoconference, and online.

◆ 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.

◆ 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.

- ♦ In addition to professional development, Region 16 ESC Instructional Technology staff 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 20 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. Forty-six districts contracted to receive this service in 2007-08 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 AEIS-IT, CLASS, Compass, School Board Training, WinSchool, and PEIMS reporting. Most of this training is funded by district contracts with the ESC.

### **Infrastructure for Technology**

- ♦ As of 2008, all of the Region's 64 districts have direct connections to the Internet, and 95% of the classrooms are connected. Fifty-seven entities are supplied CIPA compliant filtering. Thirty-five districts possessing 43 videoconference units are supplied videoconferencing. Plans are in place to increase this number with funds from the current RUS grant.

- ♦ 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 utilizes Chapter 41 monies to maintain core network infrastructure as well as network security.



### **Teaching and Learning**

The Technology Component of Region 17 ESC supports implementation of the Texas *Long-Range Plan for Technology, 2006-2020*, with a full range of services, both in Lubbock and on-site at the districts. A 300 square foot teacher workroom, Creative Corner, provides teachers with access to computers, scanners, color printers, a wide format printer, laminating machines, and other state-of-the art technologies. A technology specialist and technology consultants offer software training and customized workshops in three fully equipped PC computer labs in addition to two mobile labs.

The Cisco Networking Academy Program at Region 17 ESC consists of six local schools: Lamesa High School, Levelland High School, Littlefield High School, Plains High School, Shallowater High School and South Plains College. Each year site visits are made to each academy. In the spring, the annual Cisco Academy Day is held at Region 17 ESC. Schools can use a Netlab to complete the labs associated with the courses.

The IT Essentials Program at Region 17 ESC consists of eight local IT schools: Amarillo ISD, Amherst High School, Dawson High School, Guthrie High School, Hale Center High School, Littlefield High School, Seminole High School and Sudan High School.

ESC 17 coordinates with Region 4 for the Texas Virtual Schools Program. Texas Virtual School provides Internet classes to students for high school credit.

### **Educator Preparation and Development**

ESC 17 provides a Blackboard server and administrative services to districts for curriculum content and delivery. ESC 17 offers technical assistance in helping local school districts match assistive technology to specific needs of students with disabilities. They also assist with the purchase and loan of adaptive equipment to local schools, including adaptive computer technology, positioning or mobility equipment, augmentative communication devices, and environmental controls when specified in the student's IEP and/or for assessment purposes. Training and information is provided for parents, through and with the school districts, in the use of adaptive/assistive devices.

The curriculum component offers the following training for contracting districts: AEIS-IT software enables users to disaggregate TAKS data according to selected performance and or demographic criteria; WebCCAT is a web-accessible bank of assessment items for grades 3-11 in core subjects; CLC is a web based application that contains a scope and sequence, lesson plan templates, and other TEKS/TAKS resources; Tableau is a software product suite for visual analysis and web-based analytics; and Infosource is a web based training site for technology applications and technology integration.

### **Leadership, Administration and Instructional Support**

Regularly scheduled meetings for administrators address the issues of technology planning, integration of technology into the curriculum, funding issues, and training. Erate, STaR Chart, and technology planning assistance are available to districts. ESC 17's web-hosting solution includes a content management application, NetStart. This gives districts a web-enabled tool for building and maintaining their web site. Through NetStart, the content on their web site may be delegated throughout their district to be created and maintained by appropriate staff members. NetStart is designed to provide a classroom site for every teacher in the district as well as pages for departments and organizations.

The Information Management Systems, IMS, Component regularly trains district personnel face-to-face as well as through remote access to their local computer on:

- State mandated data submission requirements (PEIMS)
- RSCCC business accounting software
- RSCCC student accounting software
- Win School student accounting software

PID errors are less than 1% for the region.

The Business Services component assists contracting districts with business office functions. Some districts contract with ESC 17 to process their payrolls, accounts payable, and other financial accounting and reporting functions. Other districts contract with ESC 17 for technical assistance and consultation on school funding issues as well as business office functions and duties. These services are provided to 22 districts. Business Services also manages the West Texas Public Schools Employee Benefits Cooperative as fiscal agent. The cooperative pools employees from 41 districts to provide cost effective benefits to the member districts' employees. ESC 17 offers an educator placement service that provides on line resources for posting and searching job vacancies in Region 17.

### **Infrastructure for Technology**

The Region 17 Video Network serves 58 school districts and five institutions of higher learning, South Plains College, Texas Tech University, Lubbock Christian University, Howard College, and Wayland Baptist University. The network consists of a central hub (two 40-port MCUs and a 10-port digital video recorder) with a smaller MCU in Spur. The network in Spur allows for continuing Internet service by the local telephone exchange carrier. The video network was awarded a Rural Utility Services (RUS) Distance Learning & Telemedicine Program Grant through the US Department of Agriculture. Mobile HD video systems were purchased for 19 elementary schools. These systems utilize a WI-FI connection that allows connectivity from anywhere in the building. A wireless video system was also placed at the Science Spectrum Museum which allows schools to participate in two-way interactive electronic field trips from their school. Through this grant and with matching funds, the data and video networks of Region 17 have been updated. New core routers were installed at three locations and all participating districts had new routers installed at their site. This allowed the video network to migrate from H.320 to H.323 allowing more compatibility with statewide video conferences, better scheduling tools and room to expand. Fifty-nine high school classrooms have been completely updated with state-of-the-art HD video conferencing equipment. These classroom sites have 42" monitors, microphones, a document camera, a CODEC, and tracking video cameras. Partial funding for this project was provided by a second RUS grant. ESC 17 provides the following services to participating school districts; Internet access, email services, firewall, and Internet and email filtering which are both CIPA compliant to meet NCLB and E-rate requirements. ESC 17 upgraded their Internet bandwidth to 60mg to meet the needs of their school districts. Voice Over IP, VoIP, was installed in the LAN Network of ESC 17.

A nine-member committee of superintendents and the Executive Director of ESC 17 manages the Region 17 Video Network. Members of the management committee are elected by the video membership of the regional collaborative to ensure representation by large and small, wealthy and poor, and urban and rural school districts. ESC 17 is the fiscal agent for the collaborative. The management committee determines priorities for the network programming. During the school day, high school to high school classes have first priority with advanced placement, dual-credit and graduate level courses the second priority. The other conferences are Virtual Field Trips and staff development, which are the third priority. In the 2007-2008 school year 100 courses were offered via ITV involving 57 sites, and schools participated in 107 Virtual Field Trips.



Region 18 Education Service Center (ESC18), located at Midland Air Terminal between Midland and Odessa in the Permian Basin, serves 33 school districts, four charter schools, and a state school, with over 6,000 educators and approximately 75,000 students. Region

18's geographic area is the largest in the state, covering over 37,000 square miles in 19 counties. While the agricultural and the petroleum industries remain the backbone of the economy, communities in the region have aggressively pursued new enterprises, from distribution centers to wind energy to atomic power.

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### **Teaching and Learning**

Region 18 ESC provides a wide variety of trainings to schools supporting the implementation of the Texas Long-Range Plan for Technology. ESC 18 regularly includes elements of technology integration in a wide range of professional development opportunities. These include trainings in core content, diverse learners, and training for technology instructors and coordinators. Software training focuses upon applications for the classroom. ESC 18 staff continue 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 AEIS-IT, a software program that allows district staff to more effectively analyze student assessment data to drive instruction; WebCCAT, a web-based bank of assessment items in the four core areas for assessing student understanding; digital streaming services for more effective utilization of multimedia in classroom instruction; and web-based instructional programs for credit recovery, and advanced coursework.

### **Educator Preparation and Development**

ESC 18 seeks to improve educator technology skills through a variety of approaches. Among the more innovative is the Technology on Wheels (TOW) project, created with Title II-D grant funds. A 38-foot Winnebago shell was custom-designed with a full computer lab and a vast array of technology-based educational tools, which include calculators, digital microscopes, science probes, and GPS units. The TOW vehicle, accompanied by ESC 18 consultants, carries these tools to students in districts with limited resources, as well as providing a base from which students conduct field-based activities integrating core content TEKS and Technology Application TEKS. ESC 18 provides support for the Teacher Technology Competencies Certification (TTCC) program. An extensive educator resources section is maintained on the ESC 18 website. The ESC 18 teacher certification program includes a required component of technology integration training. The ESC 18 staff continues to investigate new areas of technology, such as online learning and digital streaming, and works to provide access and training for their implementation by schools.

### **Leadership, Administration and Instructional Support**

ESC 18 provides a broad base of training for administration and support services. Training and support is provided on the implementation and administrative uses of business and student 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 support for administrators, federal program directors, information

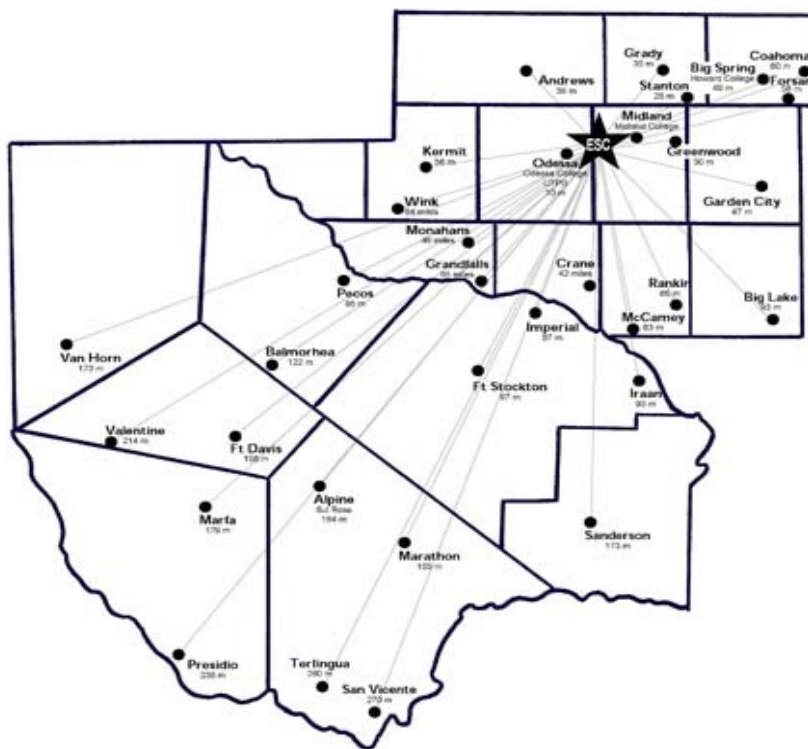
systems clerks, and business office staff. EDLINK 18 has established the infrastructure of an administrative videoconferencing network. Each superintendent in the region has a desktop videoconferencing system. Through this system, superintendents can communicate with one another or ESC 18 staff, with considerable time and travel cost savings. Through the EDLINK 18 Board, administrators help determine the systems and services needed.

### Infrastructure for Technology

EDLINK 18 was organized in 1996 to construct and maintain an electronic network connecting educators and students in West Texas to the Internet. Since its inception, this network has offered Internet access, as well as a variety of other Intranet services to the districts in the region. All members of EDLINK 18 connect to the hub site located at the Education Service Center. EDLINK 18's services include extensive videoconferencing capabilities which link the region's schools, colleges, universities, and the ESC.



Through the EDLINK 18 videoconferencing system 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. The system now has the capability to connect to any other IP videoconference site in the world. In addition to the education services, the EDLINK 18 videoconferencing system has proved assistance to connect members of nonprofit boards and families to soldiers in Iraq. Other EDLINK 18 services include CIPA-compliant web filtering, on-site and remote help desk services, and hosting of e-mail and websites for districts. The ESC 18 technology team has worked tirelessly to provide a stable and reliable technology infrastructure and to proactively expand and adapt the system as technology changes to connect and serve the schools in the vast region of Texas.





## **Education Service Center Region 19**

El Paso & Hudspeth Counties

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### **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 utilize 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:

- AEIS IT - Allows districts an affordable means to purchase and utilize software with the capability of disaggregating student performance data
- WebCCAT – (Web-Based Comprehensive Curriculum Assessment Tool) provides educators with a repository of more than 33,000 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
- C-Scope - is a curriculum support system that is fully aligned to the TEKS designed to provide a common language, process, and structure for curriculum development

In addition, ESC-R19 collaborates with and assists local districts and charters by:

- Providing technology planning and support to districts and charters. Training and technical support is offered on Texas STaR charts, technology plans and E-Rate
- Responding to district/charter needs for information, orientation, and access to new technologies
- Providing technical support and customized training to local districts and charters
- Providing United Streaming videos to our districts and charters at cost-effective rates
- Inviting districts and charters to participate in distance learning activities

through Texas Connects and Connect to Texas.

- 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 the 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
- Expanding videoconferencing capabilities throughout the region to enhance teacher collaboration and project development
- Offering customized professional development to all districts

### **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 to seek recommendations and feedback. Additionally, staff and infrastructure have provided support for (via electronic video conferencing) graduate programs in speech therapy as well as Career and Technology certification training for area teachers. ESC-Region 19 is a Certified Microsoft Office testing center. Instructional staff offers Office certification training to area districts' personnel. E-Rate training is offered several times each year.

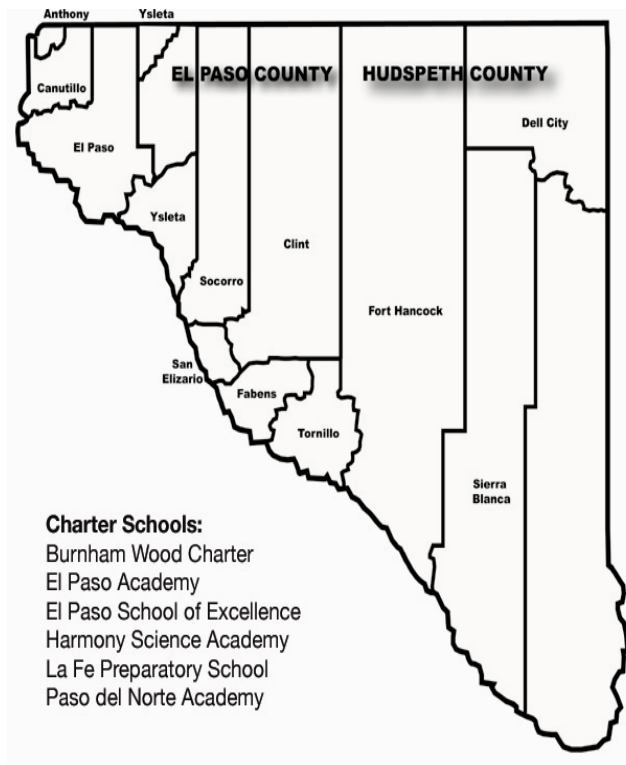


### Infrastructure for Technology

ESC-R19 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 connectivity to TETN *Plus*.

ESC-R19 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 access to data disaggregation tools and services.

ESC technical staff provides technical support for the Texas e-Plan system, STaR Chart, and technology planning.





Education Service Center, Region 20 (ESC-20) serves 651 schools in 50 school districts, 28 charter schools, and 91 private schools. The number of students enrolled ranges from 19 (Divide) to more than 81,860 (Northside) with 371,302 students region-wide. Within ESC-20, 62.3% of students qualify as economically disadvantaged.

Implementation of the Texas Long Range for Technology (LRPT) has been challenging for ESC-20 and the districts it serves due to limited funding opportunities to keep infrastructure technology current.

### Teaching and Learning

ESC-20 provides:

- Menus of services to districts through ESC-20 shared services agreements and cooperatives, which span the four strands of the LRPT. These offer opportunities for districts to create their own technology solution by choosing services that best meet their needs through online commitment form selections
- Educational Resources, Digital Knowledge Central, and Technology cooperatives offer Apple Education, Discovery Education, School Specialty Media, TeachingBooks.net, Facts on File, Netlibrary.com, netTrekker, ProQuest, Encyclopedia Britannica, EBSCO, Gale, NewsBank, HW Wilson, ThinkMap, WorldBook, and Adobe and Promethean
- The netVision20 Shared Services Agreement leverages resources and equity of access by offering products and services including PC Warranty Support, Content Filtering, Cisco Networking Academy Program (CNAP), Laptop Tracking/Recovery Services, E-mail Scanning, Online Resources, Remote Backups, Remote Support, Technical Support, Technical Training, and Videoconferencing
- Support and encouragement for student collaborative projects using videoconference technology and online communication tools that allow students to participate in group projects electronically
- One hundred and ninety virtual field trips to museums, zoos, universities, and other cultural and scientific institutions for 6,300 students at 38 campuses; over 30 content providers of professional development; 18 dual credit courses through a partnership with the Alamo Community College District (ACCD) to 165 students from eight campuses; eight certification classes to 31 adults and two graduate courses for 16 professionals via videoconference
- Technology leadership academies for administrators, iPod and Podcasting seminars for campus and district leaders, an academy for teachers as technology leaders and facilitators, the use of Web 2.0 tools to enhance teaching and learning, and promotion of information literacy skills
- Access, technical support, customer assistance, and training for state-funded K-12 Databases 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
- An annual textbook preview and display of teacher and student versions in the ESC-20 Resource Room with new proclamation instructional materials promoted each year
- Math Plus through a partnership with TEA, the Office of Migrant Education, and the migrant departments in Illinois, Wisconsin, New York, Arkansas, Montana and New Hampshire, classes for migrant students in grades K-8 via live, interactive satellite broadcasts for six weeks in the summer
- Digital Knowledge Central to more than 1,800 campuses with more than one million students participating.
- AEIS-IT, CSCOPE, NetTrekker and WebCCat in support of student performance and mastery of TEKS

### Educator Preparation and Development

ESC-20 provides:

- A monthly "Distance Learning News" newsletter focusing on distance learning opportunities, collaborative project ideas, and technology integration
- Instructional technology updates monthly at Technology Director's meetings, bi-annual Career and Technology Coordinator's meetings, and annual Charter School academies
- Leading with Technology Academies, Technology Leadership Updates, Teachers as Technology Leaders Institutes, and sessions covering technology standards for students, teachers, librarians, campus facilitators, and administrators
- Lesson plans for the database from ESC-20 teachers presented at the annual event
- Instructional Technology and Media professional development offerings that are content driven and use an inquiry-based approach to model 21<sup>st</sup> Century Skills
- Workshops on integrating videoconference resources into the classroom and collaborative projects
- 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. Solutions crafted following an initial consultation session to determine needs and goals
- Nineteen professional development workshops to over 93 teachers via videoconference including one of the most successful being the bi-annual @ Your Library Videoconference
- Over 70 CSCOPE webcasts; online content to special education teachers, administrators, and migrant staff; general curriculum and Gateways to history grant via streaming video

- Four K-12 Databases online modules (EBSCO Basics, EBSCO Advanced, Curriculum Integration, and Teacher-Librarian Collaboration) with hundreds of teachers and librarians taking advantage of these opportunities to receive three hours of CPE upon completion
- Through a partnership with the University of North Texas (UNT), LEAD online courses (Copyright, Reaching Reluctant Readers, Creating Collaborative Lessons and Grant Writing) with 1.5 hours of CPE upon completion
- Professional development opportunities that are research-based and include strategies, information, and tools developed by Intel Teach, the Library of Congress, Big6, the Inquiry Model, Edutopia, ISTE, Alan November, and the Apple Learning Interchange
- Use of professional journals available in the K-12 Databases program (specifically the EBSCO Professional Development Collection, ERIC, and Academic Search Complete) to stay abreast of current practices and info
- Access to Campus, District, and Advanced Technical Support Specialist Certification training
- Leading with Technology Academy for Administrators to assist with documenting teacher technology competencies and to ensure the district vision, expectation, value, and assessment for the effective use of technology provides a true measure.

#### **Leadership, Administration and Instructional Support**

ESC-20 provides:

- A newsletter containing information on grants and funding opportunities including information about and assistance with state grants
- The Library Resource Roundup (an annual conference) for library media specialists and library leaders each Fall with an average attendance of 400, plus keynote speaker and 65 exhibitors
- An annual Tech Fiesta held in April averaging 750 attendees, 85 exhibitors, and hundreds of sessions showcasing products and services
- Monthly Technology Director's meetings September through May hosting guest vendors to introduce and explain new product offerings
- Collaboration with Content Specialists regarding needs via workgroups
- Wireless access for all district personnel attending workshops
- Training to ESC staff on technology usage including applications, equipment and collaborative products such as Bridgit and Sharepoint
- A disaster recovery template for use by districts in filling in the blanks regarding actions that will be taken in the event of a disaster and steps to continue business and/or review of existing Disaster Recovery Plans

#### **Infrastructure for Technology**

ESC-20 provides:

- T-1 through gigabit speed bandwidth for districts to obtain their internet, video, and data access
- A backup, storage area network (SAN) and virtualization solution to scale server resources while expanding available space, time to production, and speed of recovery
- A Benefits Cooperative with online enrollment for rural districts and an ESC-20 online leave system
- Connectivity to Internet-based Texas Computer Cooperative Software (iTCCS) and Regional Service Center Computer Cooperative (RSCCC) products in support of training and support of school operations
- Access to the Texas Educational Telecommunications Network (TETN) Plus network and Internet 2
- ESC-20 representatives in distance learning workgroups, CORE group, and Technology Task Force forums
- LearnKey online training for ESC-20 staff and K-12 school districts in certifications, multimedia, and Microsoft Office
- Disaster recovery, ePlan, e-rate, and STaR Chart training and technical assistance through face-to-face training sessions, onsite workdays, leadership meetings, leadership academies, technology updates, critical issues luncheons, electronic correspondence, and phone calls including all stakeholders

The cover art titled ***Everyone Can Learn*** by **Rita Yeung**, from Garland High School in the Garland Independent School District, was included in the 2007-2008 Texas PTA Reflections art exhibit. The exhibit featured award-winning pieces displayed at the Texas Education Agency, the Texas Commission on the Arts, and the Legislative Budget Board from April 21 through August 29, 2008.



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