

Background

The *American Recovery and Reinvestment Act of 2009* (ARRA) included a \$650 million allocation in ESEA Title II, Part D, commonly referred to as the *Enhancing Education Through Technology* program (EETT). This case study was prepared by the State Educational Technology Directors Association (SETDA) – the principal association representing the technology leadership of state and territorial departments of education – to provide an example of ARRA funds working at the district and classroom level that creates effective, viable, and robust reform in education, and improves the way teachers teach and students learn.

Tennessee's EETT Competitive Grants

Tennessee's focused their grant on expanding opportunities for students to enroll and succeed in online courses through the Effective Engaging E-learning Environment for Tennessee (e4TN's) online learning program. Individual districts were encouraged to personalize the program and use the program as they see best to meet their students' needs.

E4000TN Statewide Stimulus Strategy e-Learning Program (e4TN) Tipton County, Tennessee January 2010-July 2011

The purpose of the e4000TN Statewide Stimulus Strategy e-Learning Program (e4000TN) was to expand the online learning opportunities across the state of Tennessee by providing funding and access to e4TN courses and establishing a regional consortium modeling the existing e4TN program. E4000TN provided funding and e4TN course "seats" to 60 Tennessee LEAs so that more districts would have exposure to the e4TN online content. Additionally, by establishing a regional model, the goal of the grant was to promote the sharing of teachers and courses across district lines. Through participation in the grant, students gained access to rigorous online content, as well as to certified, highly qualified teachers, and were offered opportunities to take online courses to achieve credits that may not otherwise have been available.

Demographics

Tipton County was the hub of the regional area served by this program as well as the fiscal agent. Tipton County, located in West Tennessee, is home to the 13th largest school system in Tennessee. The school system serves 11,947 students and is the largest employer in the county. In this area, there is decreased teacher availability for specific courses in the more rural regions, particularly in subjects such as foreign languages and physics.

Project Description

While online courses were available in Tennessee through the e4TN program, the enrollment and acceptability of online learning in Tipton County and western Tennessee was primarily low. Initially, 96 participating teachers received professional development and training to facilitate courses, which increased the number of online teachers and the variety of online courses the region was able to offer. The e4TN catalog included approximately 30 courses (primarily high school level) such as English, Computer Literacy, Wellness, Algebra, Geometry, Biology, Physics, French, Spanish, Latin,

History, Global Studies, Economics, Government, Personal Finance, Career Management, and Art Appreciation. Subject-matter experts (SMEs) and Tennessee certified teachers in the particular subject area developed the courses. As new courses were developed, they were subject to a rigorous beta test period. Once the 18-month test period was complete, courses became part of the regular e4TN catalog. Credit recovery and vendor courses were also made available through the program.

The program not only strived to provide access to courses that were previously not available, such as Art Appreciation and Latin, but also provided access to updated devices, a reliable network and the opportunity to increase technology skills using the online courses. Sixty districts, including Tipton County Schools, were each awarded \$20,000 to use for equipment or teachers in order to facilitate online learning, and 52% of ARRA competitive funds were used to purchase equipment. Twenty-nine districts used ARRA formula funds to purchase networking hardware resources and services. For example, in Sumner County Schools, a traffic analysis of the existing T1 lines showed that many of their schools maxed out their available broadband throughout the day. Teachers had trouble connecting to resources in the classrooms. Using these funds, Sumner County installed fiber connections in all of their schools and increased their bandwidth to 100 mbps in their high schools.

Regional, districtwide, and schoolwide professional development on topics including web tools and project-based learning not only addressed the use of technology for online learning but helped enhance overall technology integration into the classroom. The professional development also helped to grow local and regional technology experts.

ARRA EETT Grant Details	
Grant Focus	Online and Blended Learning and Digital and/or Open Content
Beginning/End Date of Grant	January 2, 2010–July 31, 2011
Locale	Rural
Funding	\$475,000
Grade Level (s)	6-12
Number of Teachers Impacted	96
Number of Administrators Impacted	86
Number of Students Impacted	2687

Project Implementation

The regional model allowed for training and professional development to be directed through three regional offices, one of which was located in Tipton County. The initial step in implementing the program was to increase participation of teachers and students. Recruited teachers received one-day training and participated in monthly meetings. The initial training included instruction in using the learning management system, expectations of an online instructor, and use of the technology tools. The Instructional Support Representative trained teachers and provided support throughout the year via email and phone as needed. Through the regional office, the Regional Services Representative worked with school districts to enroll, train, and support students across the region to participate in the courses. With the new program, there were 2,687 enrollments from the spring 2010 through summer 2011, up from the average of 500 enrollments each year from 2006-2009.

It is so important for others to understand that the traditional school setting does not benefit all students, especially since small schools are no longer the norm.
- Parent of e4TN student

The e4TN courses met student needs in multiple ways. The program provided necessary remediation for students including course recovery. This allowed some students to graduate with their class when they were lacking courses due to transfer from another state or district. In Shelby County, more than 150 students enrolled in the e4TN courses as part of the summer school program, in many cases eliminating the transportation barrier, which otherwise prevented these students from taking summer school courses.

Additionally, students who were otherwise unable to enroll in upper level courses because of scheduling issues or lack of qualified teachers were able to complete courses by enrolling in e4TN. In addition, e4TN served gifted students in the middle school by allowing them to take high school courses online without needing traveling to the high school each day.

Many of the e4TN courses offered access to innovative interactivity to give students virtual options that simulated a lab setting. Organ Trail, for example, was developed to be an in-depth simulator for e4TN's biology course. Students performed virtual dissections on specimens. The virtual environment was developed with the idea to teach organ recognition, show how organs relate to each other, identify general purposes of organs, and show how organs function in the complete biological system. Students were guided through the lessons by instructor dialogue describing what the student sees and the proper steps for dissection and identification. Virtual forceps and scalpels cut and removed organs, simulating the way an actual dissection would be done in a real laboratory. This type of learning allowed students the freedom to explore each specimen, zooming in and out on individual parts and interacting with specimens to compare and identify organ parts.

Classroom Examples

- In Milan County, eighth graders took Algebra I online. The course was facilitated by an experienced Algebra I teacher from Tipton County Schools. The Milan teacher was certified Algebra I teacher but had not taught Algebra in several years. By working along with the students and collaborating with the online teacher, the Milan teacher was better prepared to support the students and prepared to teach Algebra I during the next school year.
- Using the online foreign language courses through e4TN, the Tipton County Alternative Learning Center was able to provide Spanish and French to students to stay on target for graduation. The school does not have a foreign language teacher on staff. Using e4TN courses in a learning lab, students were able to complete courses in French or Spanish to complete the foreign language requirement for graduation. This provided an economical and equitable solution for the district.

E4TN has helped me continually challenge myself. I have been able to graduate early because of it, and I will always be grateful for the opportunities it has opened for me.
- Jordan, Dickson County Student

Evaluating Effectiveness

The external evaluation of the e4TN, as part of the EETT program, is still in progress and will be submitted to the US Department of Education in December 2012. The evaluation of e4TN is being compiled by TNCREED-Vanderbilt.

Moving Forward

As a regional office for the program, Tipton County relied on the state to provide the curriculum, learning management, and student management programs. The state of Tennessee owns the curriculum and has offered it to any school district in the state. The learning management and student management systems support is no longer available due to lack of funds. Tipton County will assess the cost of running a program for Tipton and others in West Tennessee.

New state legislation allows LEAs to open their own virtual schools in Tennessee. Some of these LEAs are collaborating with each other to offer online solutions, not only to students in their own district but to students in other districts.

Resources

Tipton County Schools
<http://www.tipton-county.com/>

Tennessee Department of Education
<http://tn.gov/education/>

SETDA ARRA Information and Resources

<http://setda.org/web/guest/ARRAresources>