

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.

West Virginia's EETT Competitive Grants

Based on research and the recommendations of the West Virginia State Technology Plan, this grant program's focus was to have a Technology Integration Specialist (TIS) provide and/or coordinate appropriate professional development activities for all teachers and administrators in West Virginia's Technology Model schools.

Sissonville High School Kanawha County Schools, West Virginia January 2010-August 2011

The purpose of the program at Sissonville High School was to improve academic achievement through technology integration, particularly math and reading proficiency, and to decrease dropout rates. The grant provided the support of a Technology Integration Specialist (TIS) to help teachers improve their technology skills, make curricular changes, and more effectively utilize existing technology devices and software.

Demographics

Sissonville High School is a public high school located in rural Sissonville, West Virginia, outside of Charleston. Sissonville is part of Kanawha County Schools (KCS), the largest school system in West Virginia. The district serves over 28,000 students in 44 elementary schools, 14 middle schools, 8 high schools and 2 career and technical education centers.

Project Description

Prior to the grant, Sissonville High School had adequate technology in place, including three school-wide labs and projectors with interactive whiteboards in many classrooms. As well, many state-funded software programs were available for teacher and student use including content sites such as TechSTEPS, ThinkFinity, and the online management system Edline. The mathematics department was scheduled to receive a mobile lab to support the Carnegie math curriculum funded by the county. However, even with the technology available, devices and programs were not fully

utilized, and often the labs were in disrepair with numerous computers unavailable. The faculty at Sissonville High School was eager, but they did not know where to begin to integrate technology. Hence, Sissonville High School was a good match to the state goals for this grant program and received a full-time TIS to provide on-going, embedded professional development for all staff members at Sissonville High School. With the local funds, each teacher also received a laptop and additional software, including Discovery Streaming Basic, GradeQuick, and Skills Tutor.

ARRA EETT Grant Details	
Grant Focus	High-Access, Technology-Rich Learning Environment, and Online/Blended Learning
Beginning/End Date of Grant	January 30, 2010-August 15, 2011
Locale	Rural
Funding	\$187,625 Federal Funds \$25,000 Local Funds
Grade Level (s)	9-12
Number of Teachers Impacted	60
Number of Administrators Impacted	3
Number of Students Impacted	630

Project Implementation

In the spring of 2010, teachers were issued laptops, and they received training provided by the district for some of the software programs. The TIS began the summer of 2010. He attended professional development provided by the West Virginia Department of Education during the summer of 2010. He also met with the staff prior to starting work at the school to assess their needs and to develop an initial professional development plan along with the teachers and administrators. Teachers attended subject-specific sessions during the summer of 2010, which allowed them to share ideas and learn how to better support one another. The TIS provided professional development workshops for teachers and administrators on various software applications and interactive whiteboard use. Teachers also received training in smaller groups or one-on-one in such areas as the use of Google documents for collaboration, content-specific software, and the content management systems. The majority of curricular support provided by the TIS occurred in one-on-one or small group sessions, utilizing teachers' planning time. For example, the TIS

worked with a teacher during his planning time to prepare a lesson. With a block schedule, the typical school day was three periods. The TIS would model the lesson during the first block. During the second block, the TIS and teacher would team teach. And, during the third block of the day, the teacher would teach the lesson with support from the TIS. The TIS also managed many technical issues, such as ensuring that all computer labs were fully functional and maintaining bandwidth support in the school. The TIS also built a cadre of teachers, an informal professional learning community, to support the staff. Some of the staff participated in a Thinkfinity community set up for the school to share their ideas and thoughts.

The TIS was instrumental in encouraging and assisting the use of state-mandated programs, such as TechSteps, a technology literacy curriculum and assessment tool. Teachers are required to use and assess TechSteps in grades K to 8 but optional for grades 9 to 12. By the end of the school year, 80% of teachers were using TechSteps' activities and tools compared to no teachers using the tool in the beginning of the year, its second year of implementation in the state. The TIS also worked with teachers using Edline, a content management system for posting classroom resources, setting up class webpages, and using as a parent communication tool. Teachers also used a shared Edline calendar to schedule computer lab time.

Classroom Examples

- In the 9th and 10th grade reading class, students worked to use vocabulary-building tools and increase self-esteem and participation. The students built an online dictionary by using PowerPoint to create their own Visual-Verbal Word Association charts, converted the files into jpeg format, and uploaded them to the class website. The students were able to see how others interpreted words and their meanings. The teacher found increased collaboration and interest among the students in completing this activity versus more traditional drilling and practice of vocabulary words.
- In an 11th grade English class, students studied types of rhetoric and writing persuasively. Students were provided online articles to read critically and annotate the rhetorical devices, exploring how devices were applied in the article. Then the students were given an editorial to which they annotated and responded using logos, ethos, and pathos. These responses were posted on the class website for comment and discussion amongst the class. Traditionally, the teacher simply explained logos, ethos, and pathos and how it was expressed in the works of William Shakespeare. Students preferred the online method of sharing their responses.

During the year, as teachers moved further into technology integration, I saw their teaching styles change to be more interactive and inquiry based; and with that came increased performance levels and more positive attitudes from their students.

- Kevin Goff,
Sissonville High School TIS

Evaluating Effectiveness

In examining the WESTEST, West Virginia's end-of-year proficiency tests, progress was made in each of the core subject areas, including math and English as indicated in the program's goal.

School Data

- English proficiency scores for the 2009-2010 school year to the 2010-2011 school year showed 11.14% improvement.
- Math proficiency scores from the 2009-2010 school year to the 2010-2011 school year showed 7.51% improvement.
- Science proficiency scores from the 2009-2010 school year to the 2010-2011 school year showed 11.12% improvement.
- Social Studies proficiency scores from the 2009-2010 school year to the 2010-2011 school year showed 8.92% improvement.

Moving Forward

Sissonville High School continues to move forward in their integration of technology in classroom instruction. While the TIS position was only funded for a year, a core group of tech-savvy teachers identified during the year of the grant continue to provide technical support and ideas for integration to improve academic achievement. In addition, teachers continue to meet during planning time to discuss ideas to improve classroom instruction and academic achievement.

Resources

Kanawha County Schools
<http://kcs.kana.k12.wv.us>

West Virginia Department of Education
<http://wvde.state.wv.us/>

SETDA ARRA Information and Resources
<http://setda.org/web/guest/ARRAresources>