

### 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.

### Missouri's EETT Competitive Grants

Missouri's ARRA EETT competitive grants provided professional development for teachers to meet the demands for 21<sup>st</sup> century learning. Missouri's professional development follows a research-based approach to organizing instruction as a means of helping teachers integrate technology into the classroom by promoting inquiry-based and project-based learning.

### The Assess for Success Project Arcadia Valley R-11 School District, Missouri June 2009-July 2010

At Arcadia Valley R-II High School, in Arcadia Valley R-II School District, each student has access to a computer. With technology in place, the Assess for Success Project focused on using assessment data to provide appropriate, technology-rich activities in the core content areas. Teachers received instructor-led professional development, to educate teachers on using and developing assessment tools to better serve students.

### Demographics

Arcadia Valley R-II School District is located in rural Ironton, Missouri, 75 miles southwest of St. Louis. Ironton does not have any industry to speak of, and the primary employer is the school system. At Arcadia Valley R-II High School, 47% of students receive free or reduced lunch. The graduation rate is 96.9%. The post-secondary entrance rate based on Missouri's definition is 59.8%. Within the high school, there is a 1-to-1 ratio of computers to students. The technology was purchased with the Comprehensive School Reform grant, previous EETT funding, and Title VIB funds. The school was also the recipient of a Missouri's Instructional Networked Teaching Strategies program (eMINTS) grant prior to the implementation of the Assess for Success project.

## Project Description

The Assess for Success Project provided technology tools and professional development to all Arcadia Valley R-II High School staff with the goal to raise student achievement by planning instruction and remediation resources based on formative and summative assessment data. For this project, Arcadia Valley district pooled federal funds including Title 1 (formula), EETT (educational technology), and Title VI (small school) with district funds. Through analysis of assessment data, teachers recommended CAI (computer-aided instruction) for remediation, enrichment, and project-based learning activities for course content mastery. Students also completed grade-level technology projects based on the National Educational Technology Student (NETS) standards. In addition to professional development, grant funds were used to purchase interactive whiteboards, teacher laptops, classroom sets of student response systems, and computers to provide an additional lab for students.

ARRA EETT Grant Details	
Grant Focus	Technology-Rich Learning Environment and Assessment
Beginning/End Date of Grant	June 1, 2009-July 30, 2010
Locale	Rural
Funding	\$200,000
Grade Level (s)	9-12
Number of Teachers Impacted	29
Number of Administrators Impacted	2
Number of Students Impacted	359

## Project Implementation

Teachers aimed to provide technology-rich learning environments and received training in various areas, including sessions on the use of interactive whiteboards, student response unit setup, data acquisition, and data analysis.

Teachers also participated in a six-week online learning course, entitled Classroom Assessment Enhanced by Technology. In this course, teachers defined and identified strategies to better understand and utilize the relationship between classroom assessment and increased student achievement. The professional development helped teachers make better use of the technology in their classroom to enhance the presentation of the content during their lessons. Teachers also learned to use technology to develop various types of formative assessments. The formative assessment process allowed teachers to determine weaknesses in student perception and learning, and adjust their instruction accordingly. The student response systems successfully allowed teachers to incorporate the formative assessment process almost seamlessly in their

Technology is key to helping teachers modify instruction effectively.

- Arcadia Valley High School  
Teacher

classrooms. When applicable, summative assessments were also created and scored through the automated scoring devices. The early use of technology in formative and summative assessments allowed Arcadia Valley R-II High School to be at an advantage in moving to the newly adopted Common Core State Standards. The teachers have a sound foundation in assessment and are adjusting instruction to meet student as well as meet curricular needs.

In 2009, the language arts department took the lead in individualizing instruction by designing a technology-based class project requirement for all students. They also developed their own assessments to individualize instruction for students based on the assessment data.

### Classroom Example

- In an 11th grade English class, students completed a "History vs. Hollywood" research project. Students selected a movie based on a real event and researched the historical and literary aspects of the film via online resources. They prepared a slideshow presentation for the class to compare the accuracies and inaccuracies of the movie versus reality. The students then discussed the content of the slideshows in small groups.

### Evaluating Effectiveness

This project's goal was to have 80% of Arcadia Valley R-II high school students master 80% of the district's identified student learning objectives for each course as measured through technology-based summative assessments at the end of each quarter/semester during the 2009-2010 school year.

#### School Data

- Students mastered the unit objectives for each course as measured by technology-based summative assessments at an average of 83%.
- Students scoring 80 percent or better on the language arts culminating project as scored using department-created rubrics:
  - ✓ 74% of 10th graders
  - ✓ 68% of 11th graders
  - ✓ 92% of 12th graders

Arcadia Valley R-II High School has a relatively young, new staff that was eager to embrace technology tools as part of everyday instruction. Administrators provided the necessary professional development time so that teachers could learn how to utilize those tools, such as student response systems to assess students, and remediate and individualize instruction as necessary. Teachers also learned how to use the technology tools to increase student engagement on a daily basis.

## Moving Forward

Arcadia Valley High School has the technology tools and necessary professional development initiatives in place to continue to provide students with a high access, technology rich learning environment. Since 2010, the district continues to hone both formative and summative assessments to guide needed changes in instruction.

In 2011, the high school teachers continued to refine their teaching and evaluation skills to augment student success.

## Resources

Arcadia Valley R-II School District

<http://avr2.org/>

Missouri Department of Elementary and Secondary Education

<http://dese.mo.gov>

SETDA ARRA Information and Resources

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