

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.

Alabama's EETT Competitive Grants

The goal of the Alabama Department of Education's ARRA EETT Competitive Grant program was to increase graduation rates. The grant program provided the equipment and professional development support to establish 21st century classrooms in grades 7 to 12. The focus was to model 21st century classroom instruction and to help increase student achievement statewide.

Alabama 21

Gadsden City Schools, Alabama November 2009-September 2011

The purpose of the Alabama 21 project was to immerse the 9th Grade Academy students of Gadsden City High School into a technology-rich learning environment to stimulate interest, promote learning, and improve achievement. Alabama 21 reformed traditional classroom instruction and learning opportunities by integrating 21st century technology tools.

Demographics

Gadsden, Alabama is located in Etowah County, in the foothills of the Appalachian Mountains and 65 miles northeast of Birmingham. Gadsden has been affected by the recent economic downturn. In the last decade, a major industry, Gulf State Steel, went out of business. There is now one major employer in the area, the Goodyear Tire plant. With a decrease in job opportunities, the population has also declined significantly. Gadsden City Schools is home to eight elementary schools, three middle schools, and one high school. The 9th Grade Academy is housed in Gadsden City High School. High school enrollment is approximately 1,600 with a free and reduced lunch rate of 71%. The 2011-2012 AYP report for the school indicates a "Clear" status for all 17 indicators and a 92% graduation rate. The school features a growing advanced placement (AP) program, offering 10-credit AP courses and 9 pre-AP courses.

Project Description

Alabama 21 focused on providing technology tools and professional development to participating ninth grade teachers to increase access to technology, student achievement, and technology literacy. Ninth grade is a pivotal year. Historically, it had the highest retention rate and lowest attendance rate. Also, grades 9 and 10 had the highest dropout rates. The Alabama 21 project centered efforts and funds on the 9th Grade Academy to engage students, increase achievement, and improve the graduation rate. Before the Alabama 21 program was implemented, the 9th Grade Academy classrooms each had one or two desktop computers with hardwire

internet access. In an effort to support this grant program, local funds were used to provide wireless access for the Academy. Alabama 21 provided devices, at a three-to-one student-to-laptop ratio, response systems, document cameras, digital cameras, projection systems, and interactive whiteboards. Ten technology-rich classrooms were established in the core subject areas of English, social studies, and science. The laptops were housed in five 30-station laptop carts and shared among the 478 ninth grade students. Ten ninth grade teachers received professional development via Moodle in designing project-based learning activities and cross-curricular activities, developing Alabama Learning Exchange (ALEX) lessons, and incorporating online resources.

ARRA EETT Grant Details	
Grant Focus	High Access, Technology-Rich Learning Environment, Ongoing Professional Development
Beginning/End Date of Grant	November 1, 2009–September 30, 2011
Locale	Rural
Funding	\$250,000 Federal Funds \$25,000 Local Funds
Grade Level (s)	9-12
Number of Teachers Impacted	10
Number of Administrators Impacted	1
Number of Students Impacted	945 (over two years)

Project Implementation

During the 2009-2010 school year, the focus was on acquiring and installing equipment, orienting students, and providing initial professional development on the use of the hardware. In the spring of 2010, ninth grade students and their parents were provided an orientation of the program, and full implementation began in the fall of 2010.

Alabama 21 grant technology—it has brought life to my classroom for my students as well as myself.

- Alexis Wise, English Teacher,
Gadsden City High School

Professional development was ongoing for the 10 Academy teachers, occurring on a formal and informal basis. Teachers initially worked with vendor-provided instructors to learn to use the new classroom tools. The school technology team, positions funded through formula EETT grant funds, provided ongoing support through coaching. Academy teachers also had the opportunity to work with visiting technology professionals, such as Wesley Fryer and Chris Lehmann. Overall, teachers received approximately one day per month of in-person professional development sessions. Three of the Academy teachers attended the ISTE 2011 conference and returned to share best practices with their colleagues. These teachers played a key role in the district-wide in-service day, EduTech. During EduTech, all instructional staff from the district attended training sessions conducted by outside facilitators as well as by Academy teachers. In addition, the Academy teachers, and other school technology leaders, provided valuable peer-to-peer training incorporating many of the technology tools and strategies from this grant project. Many of the teachers also had lessons accepted to Alabama's state portal, ALEX, which requires a stringent approval process before lessons are made available to teachers statewide. The project culminated in a Tech Saturday event in the fall of 2011, during which Academy teachers had an opportunity to present their technology best practices.

Classroom Examples

- In a history classroom, before this grant, the class was taught using many handouts, textbooks, and teacher lectures. With the technology and professional development, the history class became more project-based. The teacher uses webquests as a way to introduce upcoming eras or themes. A webquest is a project where students are guided through research, working independently or collaboratively. Students organize their research into a final product that may be in the form of a letter, presentation, or game. Webquests help build background information and set a foundation for more focused classroom activities. For example, in studying World War II, students completed a webquest on the war. Students learned about the war through independent research and used that background information to tackle the next activity, interviewing a World War II veteran and producing a video. They were able to create more informed questions and present war information in their video. Students worked in small groups to plan their interview, record it using a Flip camera, and edit and produce the video using a laptop. DVDs were created of all the final products and issued to students, interviewees, and other teachers in the history department to share in their classes.
- Before the integration of technology, one high school English teacher taught parts of speech by verbally explaining rules, having students work in the textbook, and complete multiple worksheets. With the technology, the teacher presented information to her students with a PowerPoint presentation, and engaged the students with a mobile interactive whiteboard. Students took turns identifying

I believe one has to relate student learning to student experiences and by incorporating technology, students are more eager to learn due to the fact that they are using technology every day of their lives.
-Jeff Colegrove, History Teacher,
Gadsden City High School

which words in a sentence belonged to different parts of speech, then discussed and checked each other's work. They also used a student response system to practice identifying the parts of speech of shared words. The immediate feedback enabled students to learn from errors and take a more active role in mastering the concept.

Evaluating Effectiveness

State Benchmark indicators for student and staff technology skills and utilization increased, in almost all cases, beyond the goal levels of the project. Teachers were assessed using an online survey each spring, the IMPACT Teacher Survey.

Benchmark Data

- Benchmark 1.2: Percentage of students that make use of current and emerging technology in the learning process.
 - ✓ 2008—18 %
 - ✓ Target Goal—25%
 - ✓ Spring, 2011—33.8%
- Benchmark 1.6: Percentage of teachers that model the appropriate use of technology tools and resources.
 - ✓ 2008—42%
 - ✓ Target Goal—45%
 - ✓ Spring, 2011—59.6%
- Benchmark 1.8: Percentage of educators that use technology to communicate with stakeholders at the local, district, and state level.
 - ✓ 2008—53%
 - ✓ Target Goal—60%
 - ✓ Spring, 2011—67.18%
- Benchmark 2.1: Percentage of educators that foster and nurture an environment that supports innovative uses of technology.
 - ✓ 2008—36%
 - ✓ Target Goal—40%
 - ✓ Spring, 2011—52.3%
- Benchmark 2.2: Are technology resources provided to support the learning and technology needs of the school and community?
 - ✓ 2008—33%
 - ✓ Target Goal—37%
 - ✓ Spring, 2011—53.1%
- Benchmark 3.1: Teachers, administrators, and school staff are provided high quality, research-based, job-embedded, technology professional development that is aligned with local, state, and national standards and course of study content standards.
 - ✓ 2008—29%
 - ✓ Target Goal—33%
 - ✓ Spring, 2011—30.8%

Although the effect on the school graduation rate will not be realized for 2 more years, it is noteworthy that of the 31 students who dropped out of the high school during the 2010-2011 school year, only 3 (9.7%) were from the 9th Grade Academy. Historically, the majority of our high school dropouts leave school during their ninth and tenth grade years.

Moving Forward

The technology tools that were acquired for this project will serve the 9th Grade Academy for many years to come. Local funds provided through city government will be used to maintain equipment and provide periodic refresher training for teachers. Expanding the program to a full 1-to-1 initiative is a goal of the district. Funding is being sought and consideration being given to lower cost options, such as netbooks or tablets. The Academy teachers will continue to receive support from the school's technology team and the statewide program, Technology in Motion, funded by the state of Alabama. As well, the Academy teachers will continue to conduct their own peer training and mentoring within the district.

Resources

Gadsden City Schools
www.gcs.k12.al.us

Gadsden City High School
<http://gchs.gcs.k12.al.us>

Alabama's State Portal, ALEX
<http://alex.state.al.us/index.php>

Alabama Department of Education
<http://alsde.edu>

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