

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.

Arizona's EETT Competitive Grants

In Arizona, the ARRA EETT competitive grant provided funding to assist local districts in creating and expanding 21st century, technology-rich classrooms, and helped to ensure that every student is technologically literate by the end of eighth grade.

iAchieve Project

Creighton Elementary School District, Arizona March 2010-September 2011

Creighton's iAchieve project addressed specific academic needs by introducing an environment of high-access, 1-to-1 mobile devices to support instruction. The funding provided iPod Touches and iPod Learning Labs in 18 third grade classrooms across the district and two Spanish immersion classrooms in one school. Funding also provided training for teachers to manage and integrate the tools and online content into the curriculum.

Demographics

Creighton Elementary is a K-8 school district based in Phoenix, Arizona. The district has 10 schools with approximately 750 staff members providing instructional and support services to 6,848 students. The student population is 85% Hispanic, 6% Caucasian, 5% African American, 3% Native American, and 1% Asian. In addition, 94% have low socioeconomic status, and 31% of the students are English Language Learners. The majority speak Spanish at home and have little to no experience reading or speaking English before entering school.

Project Description

The iAchieve project was designed to create 21st century learning opportunities and to use technology to close the performance gap in third grade reading. Third grade students were identified as being at high risk to fail state achievement expectations. At the time of implementation, six of the seven project schools were in Title I School

Improvement, and the district had not achieved Adequate Yearly Progress (AYP) with three consecutive years of reading for the third grade in the English Language Learner (ELL) subgroup. At

one additional school, the project also supported English reading instruction and second language learning (Spanish) for native English speakers through math and science instruction in kindergarten. Grant funds were used toward the purchase of 700 iPod Touches and professional development training. Creighton Elementary School District has a strong tradition of supporting educational technology tools. Each Creighton teacher already had access to a laptop, classroom projector, and document camera. Adopting the use of handheld devices was a good match for third grade students. The devices were easily handled and managed by the students and many software applications were not only engaging to this grade level but also available at no cost.

ARRA EETT Grant Details	
Grant Focus	High Access, Technology-Rich Learning Environments
Beginning/End Date of Grant	March 24, 2010- September 30, 2011
Locale	Urban
Funding	\$400,000 Federal Funds \$105,033 Local Funds
Grade Level (s)	Grades Kindergarten and 3
Number of Teachers Impacted	27
Number of Administrators Impacted	10
Number of Students Impacted	700

Project Implementation

In June of 2010, participating teachers attended a week-long training session to set up their learning labs with the iPods and to practice using educational apps. The training also included Intel Teach's professional development components and instruction on project-based lesson planning. During the school year, teachers had access to two full-time Technology Peer Coaches formally trained in adult mentoring and coaching

The iPods are a great way to increase student engagement. One of the most essential things in teaching students is to have them engaged, excited, and wanting to learn.

- Third Grade Teacher

concepts. The coaches visited classes on a weekly basis, providing professional development throughout the school year. The coaches provided real-time, hands-on support in the classroom and in lesson planning. A project website was developed to share project successes and challenges, including staff blogs.

Students began using the iPods at the beginning of the 2010-2011 school year. Initial emphasis was on improving student reading fluency through iPod recordings. Students recorded themselves reading stories, passages, and high-frequency words. They worked independently or with a partner; one student would read the passage while the other listened, timed the reading, and recorded errors. Recordings became a digital running record for students, with rubrics being used to evaluate and set goals for the next recording. The iPods were also used to create flashcards and digital stories. A variety of educational apps and internet resources accessed via the iPod also supported the curriculum. In addition, two kindergarten classes at Squaw Peak Traditional Academy piloted a Spanish immersion program that allowed fluent English speakers to learn Spanish. The iPods were used to aid in their learning of Spanish while also supporting their developing literacy skills in English.

During this grant implementation, teachers utilized common planning, which was already in place, to make sound decisions on application use and integration. For example, teachers found that “drill and kill” apps did not have the impact or usefulness to students as apps where students created and shared products, such as “StoryKit” and “Sonic Pics.”

In the summer of 2011, three-day training was provided for returning and new teachers and presented teachers with an opportunity to share resources, lessons, and ideas.

Classroom Examples

- During a reading instruction, third graders learned about the organizational features of expository texts, such as a table of contents. Usually students explored books and completed worksheets to learn the concept. Using the StoryKit app on the iPod Touch, students created their own expository books that included these features. They drew pictures, wrote text, and included a table of contents, index, and glossary for their books. This app allowed students to record themselves reading their books and to share their products with classmates.
- In another example, while learning about persuasive text, third graders, in small groups, created a new brand of cereal and wrote commercials persuading others to buy it. Next, students presented the cereal commercials to their classmates. Students in other participating classrooms watched the

I like my iPod because it is like playing games all the time, even when you say we are learning!
– Eric, Third Grade Student

commercials via Skype, and parents were also able to observe and participate in the presentations because of the online access.

Evaluating Effectiveness

iAchieve third graders improved in reading proficiency and technological literacy, based on the spring 2011 assessments. On common formative assessments, where iPods were integrated into initial instruction of the performance objective, results in iPod project classrooms were significantly better than those in non-iPod classrooms.

School Data

- iAchieve third graders improved by 8% from 2010 to 2011 on the Arizona Instruction to Measure Standards (AIMS) reading assessment, while students in non-iPod classrooms improved by just 0.5%.
- iAchieve third graders achieved a 7% pre-post growth in student technological literacy.

In addition, concepts considered rote to teach and learn, like the organizational features of a book, came alive when students created their own digital books. The books included a table of contents and index, along with recorded audio explaining the purpose of the book features. When focused in this manner, students showed much greater content understanding and retention of knowledge, as observed by teachers.

Moving Forward

Moving forward, the Creighton Elementary School District will maintain one Technology Peer Coach. This coach, along with the district Technology Trainer, will continue to support iPod classrooms and will also help implement a small pilot of 60 iPads at two additional schools that were not part of the original project. The district used capital funds to purchase the iPads, demonstrating the importance the Creighton School District places on providing effective technology tools. In addition, administrators and teachers will continue to be cognizant of how software applications are selected and implemented into curriculum, considering age, content, and instructional appropriateness.

Resources

iAchieve Project
<http://tinyurl.com/74fztu5>

iAchieve Classroom Videos

- Students Training Students: <http://vimeo.com/2910318>
- SonicPics Tutorial Video: http://youtube.com/watch?feature=player_embedded&v=2ks_PbBz0A
- iAchieve Parent Video: <http://vimeo.com/28074929>
- High Frequency Sight Word Videos: http://creightonschools.org/?page_id=2599

Creighton Elementary School District

<http://creightonschools.org/>

Arizona Department of Education

<http://azed.gov/>

SETDA ARRA Information and Resources

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