Upper Darby School District

ARRA case studies

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.

Pennsylvania's EETT Competitive Grants

Pennsylvania's ARRA EETT competitive grants focused on classroom technology tools and teacher training to help provide academic settings structured to develop 21st century skills, such as collaboration, problem solving, creativity, and innovation. Teachers participated in extensive training to develop rigorous, relevant, student-centered, technology-rich lessons.

Upper Darby School District Middle School EETT Project
June 2010-September 2011

In the Upper Darby School District of Pennsylvania, the EETT competitive grant focused on increasing teacher proficiency in technology, and effectively integrating technology in the middle school classroom through professional development and mentoring by an Instructional Technology Coach.

Demographics

Located just west of Philadelphia, Upper Darby School District is one of the most densely populated and urbanized townships in Pennsylvania. Over the past 23 years, the district has grown from 7,523 to 12,041 students, making it the 11th largest school system in the state out of over 500 Pennsylvania school districts. At the same time that enrollment has increased, the educational and socioeconomic needs of Upper Darby students have grown in complexity and severity. Almost 50% of district students meet the low-income standard set by the Free and Reduced Lunch Program, and 6 of the 14 schools receive Title I schoolwide services. Students also represent an increasingly diverse population: 43% African American, 39% Caucasian (non-Hispanic), 13% Asian/Pacific Islander, 4% Hispanic, and 1% other. Across the district, students speak 66 languages with the top 5 being Spanish, Bengali, Vietnamese, Punjabi, and Chinese. Upper Darby School District made Annual Yearly Progress (AYP), without qualification, in 2009 and 2010, after six years in District Improvement or Corrective Action status.

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Project Description

Upper Darby School district targeted the EETT grant for its two large middle schools to advance its strategic plan that would increase teacher usage and the integration of technology. The district had previous success in using an EETT grant to provide elementary teachers with laptops, and a Classrooms for the Future (CFF) state-funded grant provided laptops to selected high school teachers.

ARRA EETT Grant Details	
Grant Focus	Technology Coaches and High-Access, Technology-Rich Learning Environment
Beginning/End Date of Grant	June 2010-September 2011
Locale	Urban
Funding	$522,000
Grade Level(s)	Middle School (6-8)
Number of Teachers Impacted	215
Number of Administrators Impacted	7
Number of Students Impacted	2,707 students impacted due to teacher use of technology, with 832 eighth grade students impacted by direct access to classroom laptops

In the two Upper Darby middle schools, the goal was to increase teacher computer literacy in general and their ability to integrate technology into the teaching-learning process in particular. Specifically, the grant supported three major program components: 1) a laptop for each of the 215 middle school teachers; 2) professional development delivered by a full-time Instructional Technology Coach shared by both schools; and 3) four student laptop carts (2 per school with 30 computers each) to be used in the eighth grade Social Studies program. While this grant equipped all teachers with laptops, the district had invested in a new Social Studies program that included extensive technology resources, and the goal of increased technology integration was particularly extended to the seven Social Studies teachers for student laptop use in the eighth grade. As part of the initiative, the district invested its own funds in a wireless network for both schools.

In 2010-2011, with the implementation of the grant and additional district-funded technology purchases, the number of computers for instructional use increased from 619 to 881 computers with all of the oldest computers eliminated. Eighth grade Social Studies students were the only students who had direct access to the additional 120 laptop computers (60 per school).

Project Implementation

In June of 2010, the district conducted initial teacher training, which included an overview of the laptop functionality and instruction of specific applications. After the initial training and then throughout the summer of 2010, middle school teachers participated in one-day training sessions of 6.5 hours in groups of 20 led by the Instructional Technology Coach. This training focused on integrating technology into lesson planning and delivery, including how to conduct content-rich, visual lessons. During the 2010-11 school year, the Instructional Technology Coach worked intensively with subject area department supervisors and teachers to provide technology integration training specific to curriculum areas. The professional development included 1-to-1 sessions, small groups, modeling, and larger workshops. Teachers learned how to create solutions to technological issues, develop instructional materials, and utilize the technology tools for instruction. While all middle school teachers benefitted from the training and work with the Instructional Technology Coach, the Social Studies classrooms had access to the additional laptop carts to increase student hands-on time with the technology. In addition to the technology training, the 7 Social Studies teachers each received 120 hours of coaching from the Instructional Technology Coach. An additional 60 teachers received 5 hours of coaching by the Instructional Coach.

> Every time I mentioned to my class that we were using computers there was more excitement in the classroom. Computers allowed us to visit places we would normally only read about, from Yorktown to the Hermitage to Ellis Island.
>
> - Upper Darby Middle School Teacher

Classroom Examples

- Eighth grade students used online digital content to research the history of the Alexander Hamilton vs. Thomas Jefferson debate and developed group position statements, which students then presented via a wiki. The class also participated in a video conferencing session with a university debate team. To demonstrate mastery, the students created video podcasts (or vodcasts) of their debates modeled on the historic debate of Hamilton and Jefferson. The teacher posted lessons and student products online as resources for other teachers and students. Prior to the grant program implementation, the teacher typically assigned textbook reading, and the students created a poster.
- Technology coaches from across the state meet regularly for their own professional development and growth. This enables the coaches to connect teachers and students from different regions of the state to collaborate on projects. For example, the eighth grade students from Upper Darby connected with a third grade class in Punxsutawney, Pennsylvania, a small, rural town. Both groups of students were studying the Oregon Trail, so they made podcasts and shared them with each other. Through their collaboration, they learned and taught each other about the Oregon Trail. As well, students shared information about their hometowns and schools.

Evaluating Effectiveness

This initiative has had multiple benefits for teachers and students. Students benefitted from an engaging 21st century learning environment. Informal observations and data collection by the Instructional Technology Coach and administrators concluded that the integration of technology helped to increase comprehension and student engagement. In addition, teachers believe that their productivity and efficiency increased, as they were able to utilize the laptop computers for administrative tasks, such as attendance and grading. Teachers also reported more timely and effective communication with parents and students. In the past five years, the district has moved from over five students per computer to a little over two students per computer, in part thanks to this program.

School Data

- Based on pre- and post-tests, the middle school teachers' technology proficiency increased 47% to 60% in one school year on the SimpleAssessment Teacher Edition tool from SimpleK12.
- Student technology proficiency increased from 4% to 17% in one school year on the SimpleAssessment Plus tool from SimpleK12.

A primary condition leading to the success of this program implementation was the time and ability for teachers to work closely with one another, and the Instructional Technology Coach with support from the administration. This project also leveraged the technology tools and broadband access available prior to program implementation. Additional information is available on *Pennsylvania's Classrooms of the Future/EETT Evaluation Project* website accessible below in the "Resources" section.

Moving Forward

The district plans to maintain the equipment purchased for up to five years and will look to their district's technology budget to coordinate replacements. Technology integration continues to be encouraged; however, the Instructional Technology Coach position has not been funded because of district cutbacks.

Resources

Upper Darby School District
http://upperdarbysd.org

Pennsylvania Department of Education
http://www.education.state.pa.us

Pennsylvania CFF/EETT Evaluation Project
http://eett.psu.edu

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