

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.

New Jersey's EETT ARRA Competitive Grant Program

New Jersey's Talent21 (Teaching and Learning with Essential New Technologies in the 21st Century) program awarded ten districts grant funds, targeting sixth and seventh grade students. Students were provided a 1-to-1 mobile device, the use of Web 2.0 tools, and online collaborative learning opportunities. Intensive professional development for teachers and administrators provided participants with the ability to change the delivery of instruction through the acquisition of skills to effectively integrate technology and 21st century skills and themes across content areas using the Universal Design for Learning (UDL) framework. Teachers and administrators also developed a sustainability plan extending beyond the grant period.

Talent21 Grant, Lawrence Township Public Schools, New Jersey June 2010-September 2011

Lawrence Township was one of ten New Jersey districts that received a Talent21 grant. In Lawrence Township, each sixth grade student received a netbook for use in school and at home. Teachers and administrators engaged in summer and after-school professional development sessions, in-class coaching, and one-on-one consultation with professional consultants in the fields of educational technology. The focus of the training was on integrating technology into all curriculum areas, implementing student-centered instruction through the UDL framework, communicating more effectively within the school and community, using collaborative tools, and managing change.

Demographics

Lawrence Township Public Schools is a suburban school district located in Lawrenceville, New Jersey, geographically between Princeton and Trenton. It is a diverse community with over 40 languages spoken by students. The school system is made up of four elementary schools (K-3), one intermediate school (4-6), one middle school (7-8), and one high school (9-12).

Project Description

The Talent21 Project provided technology-enriched classrooms and professional development for schools. Grant funds included the establishment of a reliable and robust wireless network and a 1-to-1 wireless mobile computing environment. The grant required recipients to establish a formative assessment system and process to collect, manage, and analyze student data in order to allow for individualized instructional strategies. Lawrence Township's Talent21 grant focused on the use of technology to support and enhance instruction in the core content areas. Intense professional development for teachers and administrators targeted effective integration of technology and 21st century skills.

ARRA EETT Grant Details	
Grant Focus	Technology Coaches and High-Access Technology and Technology-Rich Learning Environment
Beginning/End Date of Grant	June 2010-September 15, 2011
Locale	Suburban
Funding	\$1,400,000
Grade Level (s)	Grades 6 and 7
Number of Teachers Impacted	62
Number of Administrators Impacted	9
Number of Students Impacted	598

Project Implementation

To accommodate the new tools, the one intermediate and middle school in Lawrence Township first increased its bandwidth to accommodate the maximum number of netbook users. Approximately 288 sixth grade students were issued a netbook during the summer of 2010 and 310 sixth grade students during the summer of 2011. The summers of 2010 and 2011 were filled with intensive professional development for staff, students, and parents. Teachers were instructed on using Web 2.0 tools, including Diigo, Google docs, Google Earth, Brainpop resources, Quizlet, Jing, and Wikispaces. November Learning consultants trained teachers on using the collaborative Google tools, including docs, calendars, forms, sites, and groups. The consultants demonstrated how to manage student work electronically and to communicate with students and parents through Google sites, Wikispaces, and Teacherspages. During this time, teachers developed collaborative sites by class and by content area as a way to better organize and communicate information. Teachers also transformed lessons to a digital format to allow students to access information from home. At the same time, administrators participated in professional development to learn new ways to communicate with parents, community members, and

There isn't a place in the school that isn't a learning space.
- Lawrence Township Assistant Superintendent

students through social networks, such as Twitter, blogs, and Facebook. Content supervisors investigated using new Web 2.0 tools to infuse additional technology resources into the curriculum. Supervisors also utilized new tools to disseminate information to staff. Parents participated in a series of workshops that introduced them to the Web 2.0 tools their children would be using, and they were provided helpful tips for internet safety and in managing “netbook time” at home.

Professional development continued during the school year through in-class coaching. Participating teachers received one day of content training with time to develop new lessons integrating technology. During the next week, a coach visited the classroom to assist the teacher in implementing the lesson. Teachers and students together became experts in learning, and developers of content, helping each other with the technology and the applications.

With the mobility of the netbooks, all corners of the school building were utilized for learning spaces. Engaged learning occurred in the classrooms and even hallways as students worked in small groups. Student activities incorporated collaborative learning, podcasts, and videos. Integrating technology tools and online content allowed students to understand global connections, differing points of view, and diverse cultural values.

Classroom Examples

- Language Arts students took a new approach to studying current events. Instead of clipping newspaper articles and bringing them into class, students used TweenTribune.com, a site featuring relevant news stories specifically for tweens and teens. After exploring and identifying proper web etiquette, students, as a class, set guidelines for using the TweenTribune website and leaving comments on the site. Students were tasked with reading articles, submitting comments to the teacher for review, and then posting comments. This process engaged the student and teacher in the writing and reviewing process. By posting comments on the site, students were able to share their writing not only with their classmates but with all TweenTribune visitors. Students were highly motivated to read current articles and craft thoughtful responses to elicit discussion.
- Mathematics students engaged in an ongoing stock market project throughout the school year. Early in the school year, students watched an online video and participated in discussions, which provided an overview of the stock market. Students tracked stocks using Yahoo! Finance and conducted independent, online research of various companies. From September through April, students selected stocks, tracked them, and graphed progress via desktop tools. When prices rose or fell dramatically, the teacher led a discussion on how major events (such as the Japanese tsunami) affected the stock market. As the culminating project, students worked in pairs and chose two competing companies, such as Adidas vs. Nike or Sprint vs. AT&T, and researched each company. Students chose one of the companies as a recommended investment and presented all findings to their classmates using presentation tools. Presentations were also posted online.

Evaluating Effectiveness

The key to this successful program was ongoing professional development. Teachers received support from administrators, coaches, and students. The teachers who received the coaching as part of this program will become the coaches to other teachers in the future. Other accomplishments included the establishment of a virtual professional learning community, teacher websites, and web-based lessons and tutorials for students and parents to access from home.

Students and teachers in the Talent21 program increased their technology proficiency. Based on the post-test results of a student engagement survey developed by the National Center for Student Engagement, the students in the Talent21 group outscored their peers, from a control group who did not experience the program, by 13 percentile points.

School Data

- Student technology proficiency increased from 75% to 87% in one school year as measured by the NJTAP-IN rubric from the New Jersey Department of Education.
- Based on results from the pre-test and post-test LOTI Digital Age Survey, the participating teachers increased their technology literacy by approximately 11% in one year.

Moving Forward

Building on the success of this program, the program expanded for the 2011-2012 school year. Eighth grade students received a netbook provided through local funds. Students moving from sixth to seventh grade were redistributed netbooks, and the new sixth graders were issued new netbooks as part of the Talent21 program. All middle school students will work 1-to-1 with the technology for the first time in the district's history. In addition, Talent 21 grantees, including Lawrence Township, now serve as best practice models for schools across the state in establishing and implementing 21st century learning environments.

Resources

Lawrence Township Public Schools

<http://ltps.org/>

New Jersey Department of Education

<http://nj.gov/education/>

SETDA ARRA Information and Resources

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