

Eastern Upper Peninsula Intermediate School District



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 to create effective, viable, and robust reform in education and improving the way teachers teach and students learn.

Michigan's EETT Competitive Grants

In Michigan, the goal of the ARRA grant program was to provide educators with an opportunity to differentiate and individualize instruction to improve student achievement utilizing state and local student data. Projects included providing professional development on how to use data to inform instruction and how to individualize instruction to better meet the needs of students.

Sparking Broadband Use in the Eastern Upper Peninsula of Michigan Eastern Upper Peninsula Intermediate School District (EUPISD) September 2010-August 2013

The purpose of the Sparking Broadband Use in the Eastern Upper Peninsula of Michigan project was to increase the use of broadband in rural communities. The program leveraged ARRA EETT funds, Broadband Technology Opportunities Program (BTOP)¹ funds, and local funds. The goal was to address the expanding digital divide between rural and urban residents by providing opportunities to students and their parents to access educational resources both in school and at home or in community centers. Teachers participated in ongoing professional development in Web 2.0 tools, online course content development, and data assessment.

Demographics

In Michigan, Intermediate School Districts serve public school districts, charter schools, and private schools. The Eastern Upper Peninsula Intermediate School District (EUPISD) is an extremely rural area in Northern Michigan, covering over 4,000 square miles. In some areas, the one-room schoolhouse concept still applies as grades K-12 are housed on one campus. In this region, there are 7,400 students in 50 buildings across 17 school districts. There is a high concentration of Native American students across in the region with a range of 10% to 99% by district and an average of 30% in the EUPISD.

Project Description

Prior to this grant, teachers and some students had some access to technology, and teachers were provided with technology integration training, content management tools, and software, but lack of access both on campus and at home led to minimal use. This new project focused on increasing broadband access and 1-to-1 student access to maximize technology integration including, but not limited to the use of online content and data systems. Essential to this grant program was the widespread training opportunities for students, teachers, parents, and the community at large. The program leveraged grant funds from multiple funding streams including ARRA EETT, BTOP, and local funds.

ARRA EETT Grant Details	
Grant Focus	Technology Infrastructure and High-Access, Technology- Rich Learning Environment
Beginning/End Date of Grant	September 1, 2010-August 31, 2013
Locale	Rural
Funding	\$3,165,207 Federal BTOP Funds \$273,000 ARRA EETT Funds \$1,275,000 Local Funds
Grade Level (s)	7-12
Number of Teachers Impacted	420
Number of Administrators Impacted	56
Number of Students Impacted	4,200 directly (with netbooks); 7,400 by extension via teachers trained in enhanced technology use and broadband support to families and communities

The EUPISD project

implemented a 1-to-1 netbook program in grades 7 to 12. EUPISD worked with local broadband providers to offer discounted home broadband connection costs using a \$100 per family voucher system. The voucher was a one time offering to offset any initial connection fees or monthly fees for first year. Professional development was provided using workshops including 50 full or half day sessions on a variety of educational and Web 2.0 tools topics in the summer of 2011 and throughout the school year. In addition, training extended into the community promoting broadband adoption and the use of technology to support learning, finances, business opportunities, health care, and community outreach. Additional support was provided from one instructional technologist and three computer system technicians from the district.

Project Implementation

Beginning in the fall of 2010, the netbooks were distributed to students in grades 7 to 12. All students received a half-day session training on basic device use, how to access files remotely using cloud computing, and how to address technology issues and repairs. Parent meetings were held simultaneously where acceptable use policies were reviewed, the voucher system for broadband connection was explained, and the entire project was

described. Local district staff, teachers, administrators, and technologists received support via workshops on Web 2.0 tools, Moodle (the district's adopted online management system), Compass Learning (a modular-based learning product), and progress monitoring using the existing regional data system. Face-to-face sessions and webinars provided the initial instruction, and the instructional technologist visited districts and/or schools for follow-up support. After the trainings on basic use and software, participants discussed opportunities and methods of integrating technology into lessons. The data systems training helped teachers to use the netbooks to conduct more

The grant has allowed students to unlock their potential in and out of the classroom. Students find it easier to complete work such as note taking, presentations, and papers. Students are growing with the exposure to the technology, being able to understand and execute technical functions that may have seem foreign less than a year ago, but are essential in a post graduate world.

- Jason Byma, K-12 Music Teacher, St. Ignace Area Schools

frequent, online assessments that helped to guide instruction and aid in differentiation. Conducting pre- and post-assessments focused on the standards became easier. Data was used to help target whole class, small group, and individual instruction. Other regional professional development offerings supported the broadband effort including training that was part of the Mid-continent Region for Education and Learning (McREL)'s "Using Technology in the Classroom that Works." This three-day training, occurred throughout the academic year and linked integration of technology with research-based instructional strategies at the classroom level.

The online management system and courses that were accessible to the rural students provided meaningful alternative learning experiences and assisted in credit recovery. Likewise, students were able to take courses offered at other schools using Moodle. Other online opportunities and content were utilized, including courses from Michigan Virtual High School, Florida Virtual High School, and WAV, a British online, project-based program.

The student netbooks and availability of broadband access at home provided new opportunities for the entire family. Each semester, community programs were offered at the schools, which typically served as community centers. Topics were selected to serve this remote area, providing access to information that typically community members would have to travel considerable distances to obtain. Topics included online banking, online business set-up, and instruction on online courses enrollment for adults. Students also provided support to their parents and other community members. Through the program "Teaching Through Generations," students helped adults with tasks such as setting up email accounts and uploading photos. Additional community sessions will educate community members on the availability of online health care services, including the option to teleconference with doctors.

Classroom Examples

- In EUPISD, only five schools have Spanish teachers. This program has allowed schools to share teachers more efficiently across the region. For example, a Spanish teacher at a very small high school can offer classes at two other nearby schools without having to drive approximately 30 miles to the other schools. DeTour High School's Spanish teacher used Moodle to deliver her online course to all of her students in the three schools. The course included the audio files and opportunities for students to practice their Spanish speaking and written skills. Ms. Livingston traveled to the nearby schools at least once a semester but utilized the existing IATV (interactive television) rooms to provide instruction. Spanish students would meet in the IATV room to take the class and "meet" with Ms. Livingston. Typically, the classes formally met face-to-face once a week and "as needed" for individual student support or conferencing.
- Les Cheneaux High School social studies teacher used what she learned from the training she attended at McREL to apply research-based instructional strategies in her classroom. The teacher worked to improve her students' note taking and research skills. Students read information both online and in print. Using their netbooks, they wrote five summarizing sentences and found five visual representations or images to represent each sentence. This technique was utilized often for a variety of research topics and not only engaged students but solidified the research process. The teacher also integrated smartphones as a means of collecting information to bring into class. Students would take pictures using their smartphones and email the images to themselves and classmates. This grant program implementation provided many opportunities including the ability for students to post their assignments online. The teacher integrated online discussions into her assignments.

Evaluating Effectiveness

District Data

- Enrollment in Moodle courses increased from 0 initial users to over 1,000 by Fall 2011.
- The number of student users in Compass Learning tripled to over 2.000.
- Improvement in summative test scores in grades 3 to 8 students who scored proficient or advanced in reading:
 - ✓ 2008-2009, 82% students
 - ✓ 2010-2011, 85% students
- Improvement in summative test scores in grades 3 to 8 students who scored proficient or advanced in mathematics:
 - ✓ 2008-2009, 85% students
 - ✓ 2009-2010, 85% students
 - ✓ 2010-2011, 88% students

The state-level, summative test scores for both reading and math have improved overall and the gap in scores between the largest ethnic groups, Native American and white, has been essentially eliminated. In addition to the increase of use of data in decision making, teachers increased the integration of online content in their instruction.

Moving Forward

All EUPISD districts are working on a shared sustainability model that includes replacement of devices every three years as well as increased classroom level technologies, including the addition and upgrade of interactive white boards. Districts have provided matching funds of \$50 per year per device for maintenance and upgrades.

Some local districts have been fortunate to pass technology millages, which have helped expand 1-to-1 laptops to sixth grade and enhance classroom level technologies such as interactive whiteboards, digital cameras, and interactive response devices.

The district-level technology, general education, and special education staff will continue to support technology enhanced teaching and learning beyond the term of the grant.

Resources

Eastern Upper Peninsula Intermediate School District www.eup.k12.mi.us

Michigan Department of Education http://www.michigan.gov/mde

Broadband Technology Opportunities Program (BTOP) http://www2.ntia.doc.gov/

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

¹ American Recovery and Reinvestment Act provided the Department of Commerce's National Telecommunications and Information Administration (NTIA) and the U.S. Department of Agriculture's Rural Utilities Service (RUS) with \$7.2 billion to expand access to broadband services in the United States. Of those funds, the Act provided \$4.7 billion to NTIA to support the deployment of broadband infrastructure, enhance and expand public computer centers, encourage sustainable adoption of broadband service, and develop and maintain a nationwide public map of broadband service capability and availability.