



Progress Energy Foundation Gift Funds Digital Mathematics

Background

In June of 2009, SRI International, the Pinellas County Schools, and the USF St. Petersburg College of Education began a unique collaboration, SunBay Digital Math, funded by the Helios Foundation and the Pinellas Education Foundation. This innovative, digital program for advanced mathematics is designed to increase student achievement on the major topics of Florida's math education standards for grades 6-8. With a key goal of sustainable implementation, SunBay Digital Math is based on three integrated factors -- curriculum, technology, and teacher professional development -- within an educational system. The project is directly tied to STEM initiatives in the strategic plans of the College of Education, the school district, and the state of Florida. Success in math and science in the middle grades is directly correlated with future success in the advanced math and science required for access to college and to success in careers such as engineering. Success in school and access to higher education also has direct impact on the economic development of the region and the retention of intellectual capital.

Current Project

In the Summer of 2010, College of Education faculty from the SunBay Digital Math project will initiate a five-course sequence leading to a certificate in Digital Mathematics designed to expand current notions of a highly effective teacher of mathematics using increased technological knowledge and engaged teaching strategies. Advancing state of the art digital mathematics in 7th grade corresponds with one of the National Council for Teacher's of Mathematics' "Big Ideas" in middle school mathematics, proportionality in algebraic and geometric situations, using *SimCalc* and *Geometer's Sketchpad* activities.

Thanks to a generous gift from the Progress Energy Foundation, the project includes tuition assistance for interested middle schools teachers. Dean Vivian Fueyo serves as PI on the project.

“The project is designed to provide middle school mathematics teachers with technological knowledge based on digital enhancements to deepen the mathematical learning of their students,” Fueyo said.

Using a digital curriculum based on extensive evidence of effectiveness to teach algebra in 7th grade supports, several critical educational needs, including

- Student success in middle grades mathematics, directly correlated with future success in the advanced math required for access to college and success in the fields of Science, Technology, Engineering, and Mathematics (STEM);
- Sustainable implementation using curriculum, technology and teacher professional development;
- Conceptual understanding of teaching and learning mathematics ;
- Technological knowledge based on digital enhancements to deepen mathematical learning;
- Teacher effectiveness; and
- Universal design for learning to unify best practices across populations of students with special needs and those who struggle with challenging content

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