

Distance Learning Initiative Provides Rigorous STEM Courses for Gifted and Talented High School Students

Participating School Districts



Panhandle Area Educational Consortium

Patrick L. McDaniel, Executive Director

Calhoun
Franklin
Gadsden
Gulf
Holmes
Jackson
Jefferson
Liberty
Madison
Taylor
Wakulla
Walton
Washington



Heartland Educational Consortium

Tom Conner, Executive Director

DeSoto
Glades
Hardee
Hendry
Highlands
Okeechobee



North East Florida Educational Consortium

James Surrency, Ph.D., Executive Director

Columbia
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Goal One of the *FloridaLearns STEM Scholars* Project is to “positively impact gifted and talented high school students’ perceptions, knowledge and skills” in the study and integration of Science, Technology, Engineering and Mathematics (STEM). One of the ways this goal is being met is through the Project’s Distance Learning Initiative.

The *FloridaLearns STEM Scholars* Project is funded through the Florida Department of Education’s Race to the Top award and involves a partnership among Florida’s three educational consortia, which provide critical educational support services to Florida’s small and rural school districts. The consortia are Panhandle Area Educational Consortium in northwest Florida, Heartland Educational Consortium in south central Florida, and North East Florida Educational Consortium in the northeast part of the state. The project is focused on affording increased access to rigorous STEM courses, providing collaborative problem-solving experiences, and ensuring students are well informed about STEM career options.

The Distance Learning Initiative focuses on providing students increased access to rigorous STEM courses. Through this initiative, a variety of distance learning equipment has been previewed, and suitable options have been identified and made available for districts to use for this purpose. Due to the success of this initiative, the number of gifted and talented students in Florida’s small and rural school districts who are enrolled in Level 3 STEM courses is increasing significantly.

Distance learning is currently being used to deliver rigorous Level 3 STEM courses in Holmes, Walton, Washington, Calhoun, and Liberty Counties. Dual Enrollment Trigonometry for college credit is being taught at Holmes County High School and sent to Ponce de Leon High School. Tutoring in Robotics provided at Bethlehem School is being received by students attending Poplar Springs School. In Walton County, AP Calculus, taught at South Walton High School, is being provided to students at Walton High School. College Trigonometry, being taught in Washington County’s Chipley High School, is being made available to Vernon High School students. A college Trigonometry class at Calhoun County’s Blountstown High School is being transmitted to Altha Public School, and Liberty County High School and Blountstown High School are receiving Honors Chemistry instruction from a highly qualified chemistry teacher located in Crestview.

Recently a Distance Learning Showcase was held, featuring four of the eleven distance learning sites that are currently in place in high schools in the PAEC area. During the Showcase, members of the *FloridaLearns STEM Scholars* Project staff from PAEC and the Heartland Educational Consortium were joined by district and school administrators from the showcased sites, and school administrators from Taylor County. Taylor County will be implementing distance learning next year as they partner with North Florida Community College to make dual enrollment Mathematics available to students at Taylor County High School. In addition to the partnership with Taylor County, North

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Florida Community College to make dual enrollment Mathematics available to students at Taylor County High School. In addition to the partnership with Taylor County, North Florida Community College will also be partnering with Jefferson County. Gadsden and Wakulla Counties are planning to increase their rigorous STEM course offerings in the upcoming school year through a partnership agreement with Tallahassee Community College.

Showcase observers were able to visit both sending and receiving schools during the event, and watch as students at the sending site interacted face-to-face with highly qualified teachers, while students in a neighboring town received the same instruction at the same time. This was accomplished through the use of Blackboard Collaborate, a live web conferencing platform, or Polycom's video and audio collaboration technology. Both technologies utilize two-way audio equipment, multi-point video cameras and interactive whiteboards so the teacher and students can see and hear everything that is going on in the other classroom. In addition to receiving instruction, students in both classrooms are able to participate in the discussion and class work, and receive immediate feedback as the teacher hears and responds to their questions.



Left to right: Audie Ash, Taylor County High School Principal; Alicia Beshears, Taylor County High School Assistant Principal; Dr. Debbie Williams, Blountstown High School Principal; Ralph Yoder, Superintendent of Calhoun County Schools; Lisa Shin and John Varady, Heartland Educational Consortium Consultants and FloridaLearns STEM Scholars Project staff.

This highly successful initiative is growing as the benefits to students and districts become more evident. Comments from those participating in the Showcase were unanimously positive. Gay Lewis, Director of Instruction for Liberty County Schools was very pleased with the Honors Chemistry being offered at Liberty High School. She shared that in the past the district did not have a certified teacher to teach chemistry. "This has afforded us the opportunity to have a highly qualified teacher who is providing these students with rigor they have never seen before, and which will prepare them for college and career.

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We are blessed to have this program in our district.” Liberty High’s Assistant Principal Craig Shuler agreed and added, “This program is a major asset for a rural school because finding qualified teachers to teach subjects such as chemistry, calculus, and some of these other subjects is very difficult at times. It’s a major asset for us to do what we’re doing here.”



Gay Lewis, Director of Instruction for Liberty County Schools and Liberty County High School Assistant Principal Craig Shuler.

Calhoun County Superintendent of Schools Ralph Yoder commented on the economic advantages of distance learning to districts, in addition to the benefits to the students. He said, “In these times of shrinking budgets, allowing us to use technology gives us the opportunity to better utilize our resources. Using distance learning stretches our capability and allows us access to other instructors, either locally or away from our local area to give our students a great quality education.” He sees distance learning as “one component of the future delivery of education,” and believes that “although it will never replace teacher contact, it can be used as a part of delivering the best quality education that our students deserve.” He concluded his comments by stating, “I think it’s a “win/win,” and I look for win/win opportunities.”

Distance learning, through virtual classroom settings where courses are held online and students are able to interact with each other and the course teacher in real time, support a 21st-century teaching and learning environment. Distance learning also helps equalize education opportunities between students from large urban areas and students from small and rural districts. Successful distance learning programs, such as The *FloridaLearns STEM Scholars* Project’s Distance Learning Initiative enhances the educational experience and provides learning opportunities for many who might otherwise be denied them.

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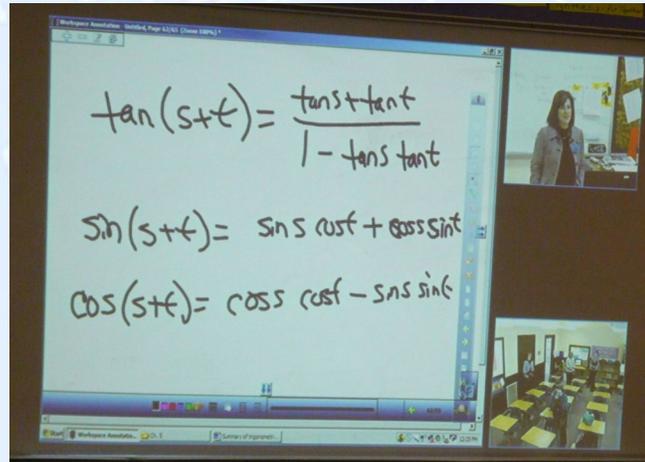
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College level trigonometry class being taught by Allyson Howell at Blountstown High School is received in the classroom at Altha High School. In addition to the teacher's work, both classrooms are visible on the whiteboard.



STEM Scholars Carson Flowers and Lee Lowery are in the Honors Chemistry class at Liberty High School, which is taught by a highly qualified teacher in Crestview, Florida. Both students indicated they felt their experience has been much better than that of the students last year whose only option was to take the course online, and said they would recommend this class to younger students who will be eligible to take the course next year. Lee said, "It's way better than online," and Carson added, "It's better because you have the teacher there. You can interact with her during class, and she also comes over once a month and does labs with us."