

Interactive Products Division Numonics Corporation **Case Studies**



Numonics Intelliboard Brings District Learning into the 21st Century

By Susan Brooks - Young

Calhoun County Schools serve 1140 students in the communities of Arnoldsburg, Grantsville, and Mt. Zion, West Virginia. The district has two preK-4th grade schools, Arnoldsburg Elementary and Pleasant Hill. Students in grades 5-12 attend Calhoun County Middle/High School. As is the case with many small rural districts in the U.S., the district faces declining enrollment due to high countywide unemployment rates and an aging population. Many of the high school's graduates would prefer to stick close to home, but their employment options are limited. The primary employers are the school district and the local hospital, along with its associated clinics. District officials know that various technologies can be leveraged to enable former students to remain in the area and are committed to help students see beyond geographic boundaries by teaching them 21st century skills that will enable them to land well-paying jobs and stay in Calhoun County.

Superintendent Ronald Blankenship is a technology visionary with a plan for specific strategies for using technology to teach 21st century learning skills. Two critical elements of this plan are local professional development to support teachers and installation of technology-based instructional tools in every classroom in the district. When Calhoun County was awarded an Enhancing Education through Technology (EETT) grant, Blankenship set the plan in motion. He and Greg Cartwright, Director of Curriculum and Instruction began by hiring two Technology Integration Specialists (TIS) to provide on-site, continuing professional development for teachers. Once these positions were filled, Cartwright began ordering the hardware and software that would be installed in every classroom, including Numonics Corporation's new-designed interactive whiteboard, the Intelliboard (referred to as I-Board).

When connected to a computer and LCD projector, the I-Board creates a large interactive projection screen. Available in three sizes (47", 62" and 77") I-

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Boards are compatible with Windows and Macintosh computers. Virtual WhiteBoard software eliminates the need for traditional chalk or whiteboards because all text and drawings are automatically saved to the computer. DIGITAL Electromagnetic Technology makes I-Boards fast and reliable, offering quick calibration and accurate capturing of writing and drawing. The multimedia pen has full mouse capabilities so users do not need to use a keyboard to execute any commands. Seventeen user-definable Softkeys may be used to launch programs, applications, macros, websites, and media files, as well as 14 different Presentation Tools.

When reviewing new technology deployments, it's not unusual to find a small pilot project or even a school wide effort. An initial implementation on the scale tackled by Calhoun County Schools is less common. Training responsibilities were divided by the new TISs. For example, Vickie Baker worked with staff at the middle/high school throughout the 2006-07 school year to provide training and on-going support. "We began training during our required continuing education days at the beginning of the school year," reports Baker. "I followed up with on-site support as needed and also held two after school refresher sessions to review specific skills with teachers." A Numonics representative helped out by meeting with groups and individual teachers to answer questions. Baker also held regular mini-sessions with teachers and included suggestions for using the I-Boards in monthly newsletters. Once teachers had the basics under their belts, the Numonics representative returned to lead ½ day meetings with small groups to answer additional questions and help teachers expand their use of the I-Boards. Baker is certain that this level of support is leading to positive results. "I am seeing more interaction between teachers and students and increased instructional time. Paper-based review activities that once ate into the class period are now completed in much less time using the I-Board for class discussions. And teachers are increasing the number of project-based activities used in classrooms because they have a mechanism for showcasing results." She also reports that students are demonstrating greater proficiency in technology and content area skills. Baker plans to focus next year's training and support on increasingly sophisticated use of I-Boards in lesson planning.

Teachers echo Baker's enthusiasm. Charles Thomas is a 1st grade teacher at Arnoldsburg Elementary School. This 22-year veteran is pleased with his students' response to the I-Board. After the initial training, Thomas purchased speakers for his classroom and a wireless mouse and keyboard so that students can interact with the I-Board from different locations in the room. "This year's class was a high-energy group. I-Board activities held their attention and encouraged greater student participation, leading to much more productive instructional time." Thomas uses interactive web-based review activities provided by the reading and math textbook publisher and also develops his own I-Board specific lessons in math, science, and social studies using RM Easiteach software. "The I-Board is in use nearly all day. When we're not engaged in group activities on the rug, students use the interactive whiteboard in one of their reading centers." In fact, Thomas' students have become so proficient at using the I-Board that when school board members visited Arnoldsburg Elementary last March, the 1st graders used the technology to make a presentation to their guests.

Sharon Pitts has taught for 29 years. Her current assignment is at the high school where she teaches Science 9, Advanced Chemistry, and Conceptual Technical Chemistry. She too is sold on the benefits of using the I-Board.

“My students like science classes because they’re hands-on, but there are concepts that are difficult for them to master. The I-Board enables me to bring in a variety of support materials that address all learning modalities, making it easier for all students to achieve success.” For example, Pitts now routinely uses vodcasts, Shockwave multimedia animations, and unitedstreaming video clips to illustrate concepts. She also regularly checks for student understanding using short quiz questions projected on the I-Board and answered by students using a Classroom Performance System. Another benefit of the I-Board is the graph paper feature which Pitts uses regularly when demonstrating how to set up graphs. “This technology makes it possible for me to pace activities in ways I couldn’t before. We can move more quickly when students understand a concept and I can easily bring in a clip or other supporting material when additional explanation is needed. I am a more efficient teacher today and my students are gaining a deeper understanding of science.”

Impact on teaching:

- Greater use of web-based resources including vodcasts and video clips.
- Higher rate of teacher/student interaction during lessons.
- Increased job satisfaction. For example, one teacher refused a position in a district closer to her home and another postponed retirement because they didn’t want to give up working with the I-Boards.

Impact on students:

- Increased engagement in classroom activities.
- Growing confidence as they learn to create and give presentations.
- Improved grasp of difficult concepts.