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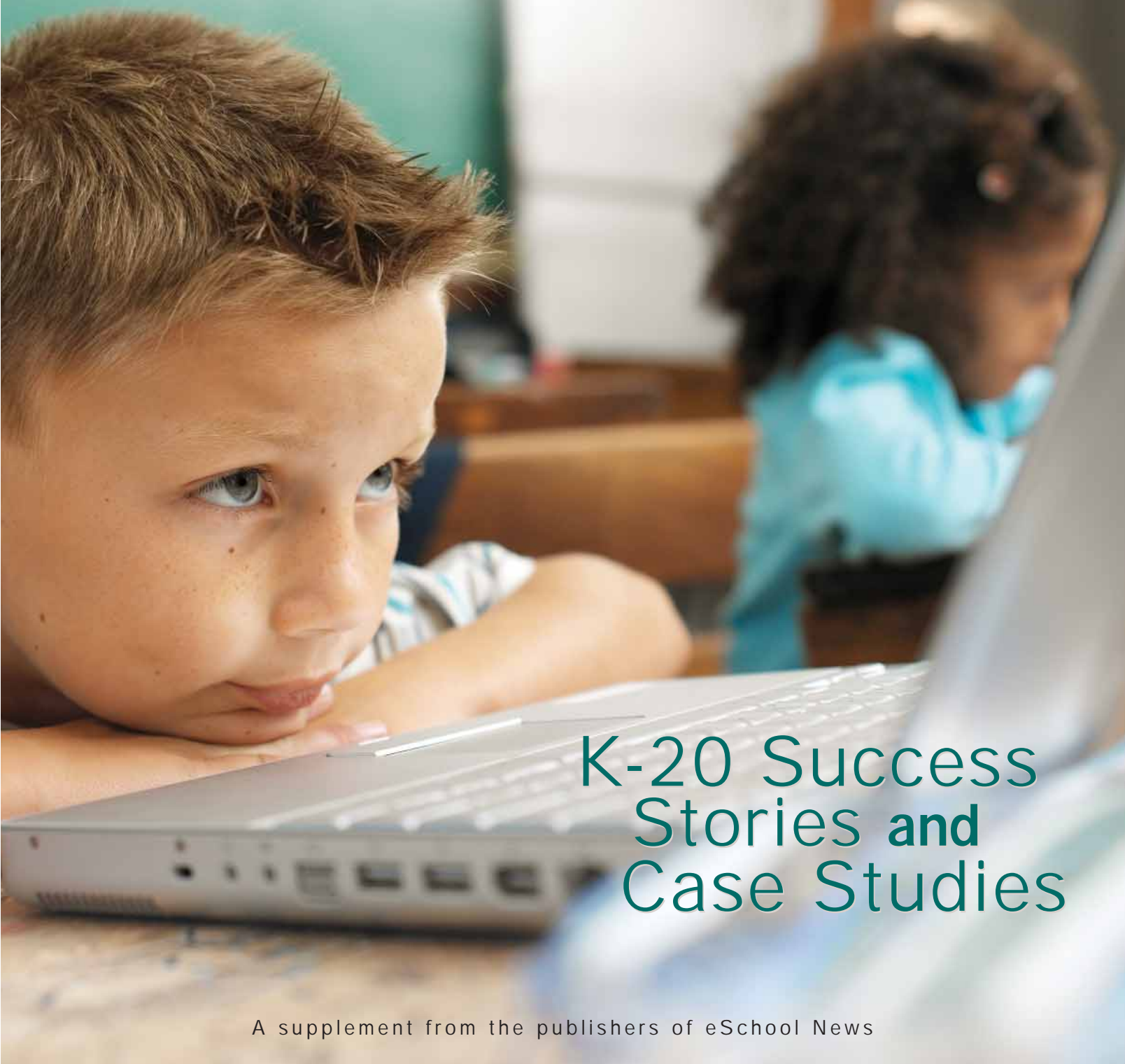
BEST PRACTICES
in School Technology

K-20 Success Stories and Case Studies

A supplement from the publishers of eSchool News

Contents

Atomic Learning Helps Echo Horizon School Effectively Implement 1:1 Laptop Program

Echo Horizon School, located in Culver City, California, is a progressive pre-kindergarten to sixth grade private school dedicated to providing all students with equal access to technology. Echo Horizon has implemented a 1:1 laptop initiative for all fifth and sixth graders. And, to ensure all students and teachers can effectively use these laptops and the accompanying software, Echo Horizon has chosen Atomic Learning as part of its technology training solution.

Echo Horizon School Adopts Laptop Program

Technology coordinator Elaine Wrenn, who is also an Apple Distinguished Educator, explained that Echo Horizon saw the release of Apple's iBooks in 1999 as an innovative learning opportunity for both students and teachers. Starting out with purchasing two iBooks for each of their 5th and 6th grade classrooms, Echo Horizon immediately saw positive results.

The iBooks gave students the ability to learn and work anywhere, anytime—in their desks, on the floor, in a quiet corner. Other classes could also borrow the laptops from each other so that more had access to technology throughout the school day.

Echo Horizon began planning to increase the use of laptops throughout the school, starting with shared laptop carts. The next school year, they began a teacher laptop pilot program with goals of increasing the integration of technology in the classroom, increasing student access to technology, and improving teachers' skill and comfort levels with technology. After seeing the impact of the teacher laptop program, Echo Horizon gradually went to a 1:1 laptop program for all 5th and 6th graders, reaching this goal in 2004-05.

Atomic Learning Helps to Maximize Echo Horizon's Investment in Technology

Echo Horizon chose Atomic Learning to help get the most out of their large investment in hardware and software. Technology staff members make a point to promote the resource with teachers and students at the beginning of each school year through emails and posters around the school.

Elaine reported, "The students love the AL post-it notes and keep them right on their laptops as a constant reminder of the learning resources they have at their fingertips." Information about Atomic Learning is also placed in packets that go home with students the first day they take their laptops home, so that parents are aware of their access to the resource.

> *"All of this was possible because of what Nathan learned from Atomic Learning!"*
>
> – Elaine Wrenn
> Echo Horizon Technology Coordinator

How One Student Found Inspiration with Access to Technology and Atomic Learning

Elaine is especially excited about how the students at Echo Horizon School have benefited from their 1:1 laptop program and Atomic Learning. She talked about Nathan, a fifth grade student at the time, who took the initiative to design a website focused on a service project his class was participating in to aid tsunami relief. Nathan used Atomic Learning to learn about Dreamweaver, a web design software.

After finding success with the Dreamweaver tutorials, Nathan went on to explore other things he could learn from Atomic Learning. Nathan used Atomic Learning extensively to teach himself Flash animation. When he reached sixth grade, students began to notice his animation work and started asking him to show them how to use Flash. Nathan asked his teacher if he could teach a class on Flash animation once a week during their lunch period. Many students came faithfully to Nathan's class each week. Elaine said, "He was an excellent teacher; both patient with and responsive to his students. As a follow-up, students were able to use Atomic Learning to review concepts Nathan had taught them. As a result, several of these students ended up creating Flash animation projects as a way to show what they had learned in social studies and science classes."

By having access to technology through the 1:1 laptop initiative, learning Flash techniques from Atomic Learning and teaching others to use Flash to create their own works of art, Nathan received an award from the California Student Media and Multimedia festival for his work in Flash animation. "All of this was possible because of what Nathan learned from Atomic Learning!" said Elaine. BP

Sarasota County School District: Ensuring Equity in K12 Education
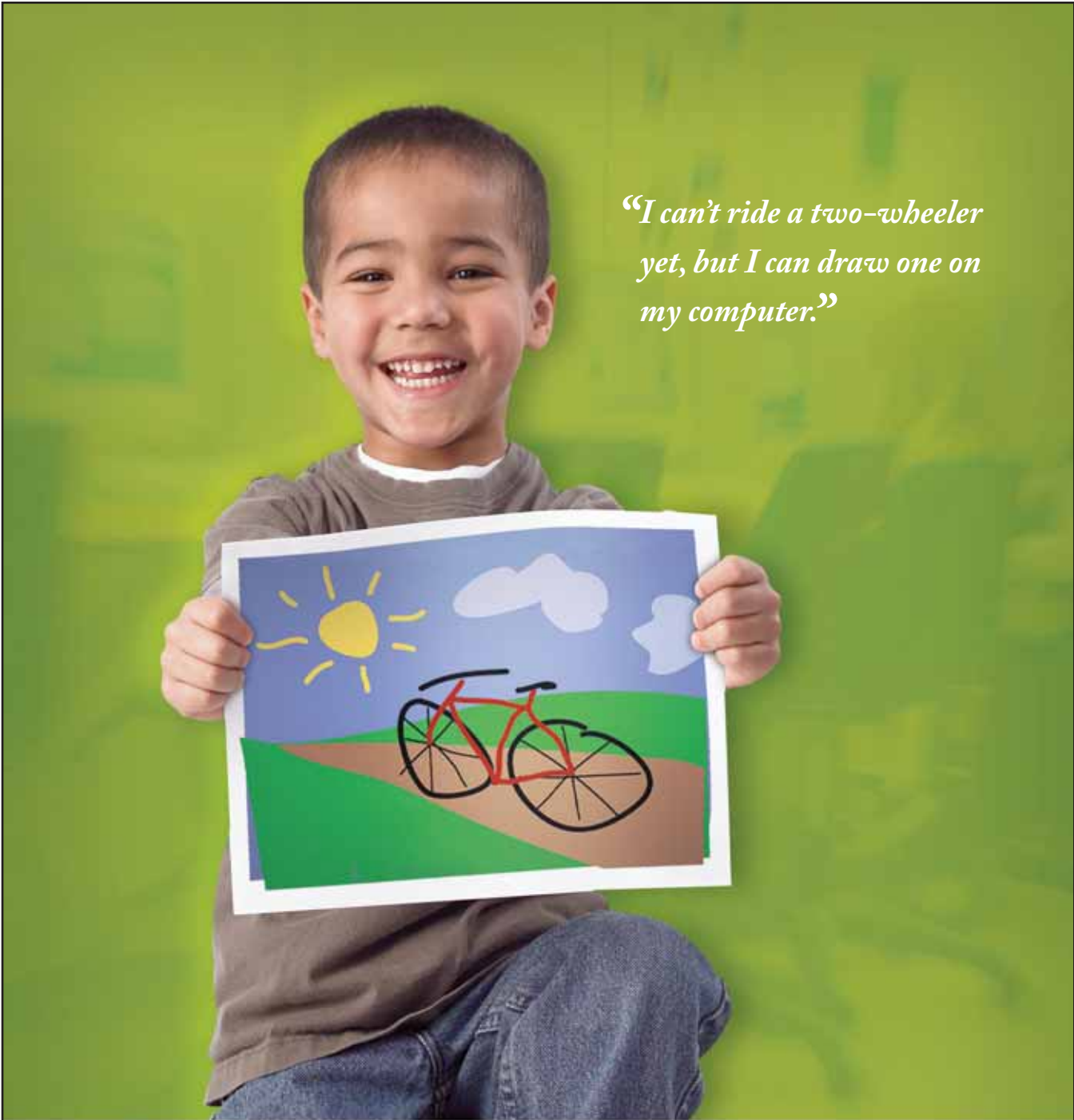
Sarasota County School District in Florida has a mission to help every teacher and student reach their potential in the classroom using the technology tools students love to learn from. Yet, like all districts, equity of access has challenged each teacher and principal. This mission is now taking a major step forward as this district is committing to outfit each and every classroom with the dynamic all-in-one interactive learning solution called the ActivBoard+2.

Heather Monks, Geometry teacher, North Port High School

The Promethean Activboard+2, the world's first all-in-one adjustable interactive solution, consists of an interactive whiteboard, short-throw projector (a projector requiring only three feet of throw distance), an adjustable mount and integrated software programs that enable delivery of hundreds of thousands of digital learning resources.

As part of the NeXt Generation Learning Program, Sarasota County is installing Promethean's Activboard+2 in all 3,300 classrooms, which will make the implementation the largest interactive whiteboard project in the US and the first district to install this exciting teaching tool. The school district is moving forward with this plan and will have all classrooms installed and all teachers trained within a 12-month period.

NeXt Generation Learning is the strategic plan put in place at Sarasota County School District. Its goal is to acknowledge real world situations and implement the best technology in the schools to prepare their students. Sarasota County School Board sought the ActivBoard+2 solution when their analysis revealed the essential need for each teacher to be able to project learning resources for student instruction in a visible and dynamic way that everyone could see. The ActivBoard+2 was the only resource that fully addressed their needs.

Sarasota County School District piloted the solution in two schools and found incredible results in student engagement and teacher motivation.

"We wanted a system that provides our teachers with state-of-the-art technology and works with the curriculum and lessons already being used in the classroom," said Mike Horan, Director of Instructional Technology. "By implementing the Promethean Activboard+2, we are able to save one year of installation time and resources."

Because the all-in-one system is installed on the wall and the projector is attached to the mount, Sarasota was able to save money and installation time. The original technology plan called for installing a projector in the ceiling of each classroom, which requires special wiring and resources.

"Promethean helped us realize greater potential than we imagined as we put together our NeXt Generation Learning plan. With the Activboard+2, they are raising the standards for technology in the classroom," said Joe Binswanger, Sarasota County Instructional Specialist.

Teachers in Sarasota County School District will have access to many professional development options provided by Promethean. The professional development program includes classroom instruction, video modules, and online instruction coupled with assistance from a team of Promethean Teaching and Learning Consultants (TLCs). Each Promethean TLC is a former K-12 classroom teacher that works directly with schools to implement the best instructional practices using interactive whiteboard technology.

To insure their success, Sarasota County is also committing to two half-day training sessions for each teacher. The training will be delivered in small group settings and with a focus of hands on activities. The first training teachers receive will fall within a week of the Activboard+2 installation. The follow-up training will be a few weeks later and will focus on content delivery. And, district leadership is ensuring that all district curriculum training integrates the Activboard+2 as the main delivery source.

Sarasota teachers will also have access to thousands of ready-made lesson plans, all aligned to state standards, in a searchable database called Promethean Planet (www.prometheanplanet.com). Promethean Planet is a free website and education community that includes video, tips and tricks, and a forum where teachers can connect with educators around the world.

"Although the Activboard+2 is simple to use in the classroom, I have enjoyed the new lessons and resources I can find on Promethean Planet," said Heather Monks, Geometry teacher at North Port High School in Sarasota County. "Each day, I learn something new and can tailor it for my students' needs," Monks added.

By implementing the Activboard+2 in every classroom in the district within one year, Sarasota County School District is implementing its goal of realizing equity in the classroom. Including Promethean with Sarasota's NeXt Generation Learning Program, students are being prepared for a path to succeed and a promising future. BP

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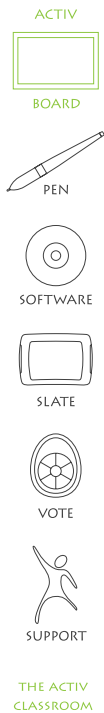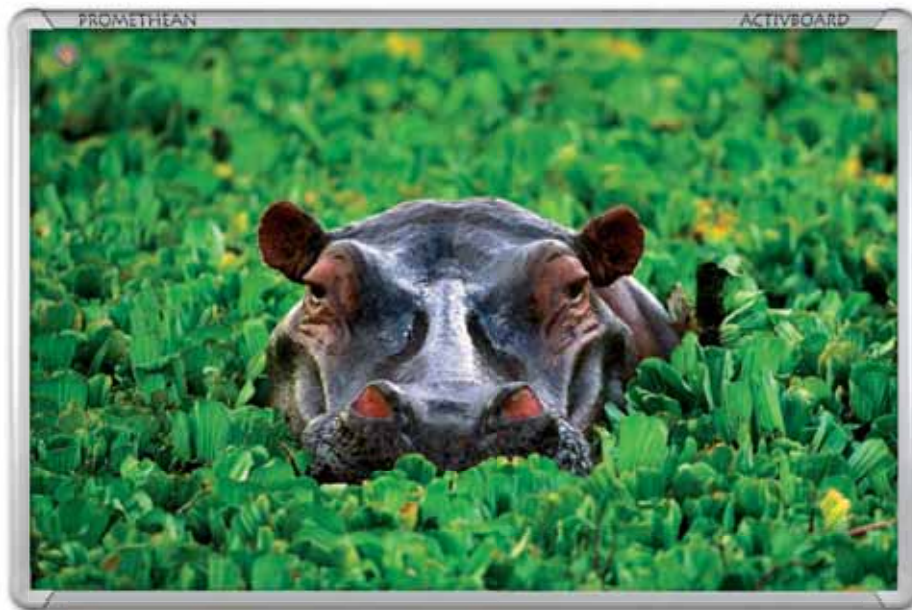
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"Our organization is strongly committed to supporting the nation's schools. Developing a simple program that is beneficial to every school was our way of strongly demonstrating our continued support to the educational community. We hope to see every scholastic customer take advantage of this great program," said Jim Troxell, president of Troxell Communications.

Troxell Communications partnered with many top manufacturers of audio visual products to offer schools a vast selection of quality AV solutions for virtually any application. Participating manufacturers determine which products are available through the program and their associated rebates. Troxell handles the administration—tracking your school's purchases, generating a detailed program purchase statement, and disbursing the rebate checks.

Mardee Barnett, *Executive Director of Aldine ISD Technology Services, and Board President Rick Ogden were presented with an education rebate by* **Adela Briner** *with Troxell Communications.*

Best of all, your school determines how your Grant Rebate money is used! Since the program's inception less than two years ago, Troxell has sent Grant Rebate checks totaling nearly $200,000 to almost 700 schools that have used their supplemental funding for things like:

Creative & Elective Courses	Scholarships	Projectors & Other Classroom Technology
General Scholarship Funds	Classroom Computers	Interactive Website Development
Emerging Needs Fund	Honors Day	Lending Library Support
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Education Foundation Support	Art on Campus	Tuition Assistance
Teaching Excellence Awards	Playground Equipment	Recognition of Academic Excellence
Band Trips & Uniforms	Facility Maintenance/Repair	Library Books, Equipment & Furniture

Mardee Barnett, executive director of Aldine Independent School District's Technology Services was recently presented with a $1,000 Grant Rebate check. Ms. Barnett said, "On behalf of the youngsters in Aldine (TX) who want to go to college but don't have the money, we are very grateful that Troxell has this program. Someone in Aldine is going to get to go to college next year who would not have been able to go otherwise. That is a huge benefit to the child and to society as a whole."

It's easy to enroll and participate in the Education Scholarship Grant Rebate Program. All products available through the program are displayed on www.trox.com along with their corresponding rebate amounts. All public or private, accredited, not-for-profit, K-12 schools, colleges and universities in the United States are eligible to participate.

"It is simply a way for Troxell and our vendor partners to express our interest and support of the education process," said Adela Briner, Troxell's Houston-based account executive. "Our program has proven to be successful and rewarding for many Districts. It has also been very rewarding for Troxell to know we are taking a part in helping to support students who want to go to college but may not have the financial means to do so. We take great pride in knowing that we are making a difference in student's lives," she said.

Troxell Communications Inc. is based in Phoenix, Arizona with more than 50 offices strategically located nationwide. Troxell has been providing audiovisual solutions to schools, businesses and government facilities since 1946. Currently they are the leading supplier of audiovisual equipment to the U.S. scholastic market. For more information, please visit *www.trox.com*.

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From At-Risk to Increased Achievement
Texas Instruments Mathematics Intervention Initiative

At Lake Highlands Junior High in Richardson, Texas, something exciting is happening. Math classes are alive with activity. In fact, they're down right noisy – that's okay. Just ask the teachers. They'll tell you that their students are no longer timid about asking questions, calling out answers and sharing ideas with others.

Math is fun and the students are taking an active role in learning critical problem-solving skills. So much so that these students' average scores on the Texas statewide standardized mathematics test have actually increased. This is especially relevant given that the school's student population includes a large cross-section of minority and economically disadvantaged 7th and 8th graders – and the district overall has been seeing a decline in scores.

Thanks to a joint mathematics intervention initiative between the Richardson Independent School District (RISD) – located just north of Dallas, Texas – and Texas Instruments (TI), the passing rate on the Spring 2006 TAKS™ (Texas Assessment of Knowledge and Skills) mathematics test jumped to 33% among a group of students who had *all* previously failed the test. This was nearly double the passing rate among students at another demographically-similar RISD junior high school not participating in the intervention program.

Seventh graders at Lake Highlands Junior High use the TI-73 Explorer™ graphing calculator to solve math equations while their teacher monitors individual and class performance with the TI-Navigator™ system.

"The test results prove that when you provide care, time and technology and have high expectations, the students are going to rise to the occasion."

– Lorine Burrell, Principal
Lake Highlands Junior High School

The Intervention

Prior to the start of school, RISD and TI worked closely together to define the blueprint and goals of the mathematics intervention, which included TI educational technology and professional development, as well as specialized instructional and curriculum changes.

RISD and TI conducted a pilot program during the 2005-2006 academic year at Lake Highlands, one of eight RISD junior high schools. Among the students identified to take part, 79 had failed the statewide test the year before.

Specific instructional changes were made to support the goals of the pilot program. Daily math classroom learning time was doubled from 50 to 100 minutes. The teacher-student ratio was improved. An accelerated curriculum was put into place. Higher learning expectations of students were established and reinforced by teachers.

TI handheld and classroom educational technology, designed to support middle grades concepts, was incorporated to not only enrich classroom instruction but also to enable real-time assessment of student understanding. In addition, TI delivered professional development to the teachers that encompassed both content and how to effectively integrate the technology into the classroom.

"We made significant changes in our approach to mathematics education for at-risk students, creating a total solution that encompassed every facet of our mathematics program," said Lorine Burrell, principal of Lake Highlands Junior High.

Integrating Technology

Important to the intervention pilot program's effectiveness was the use of TI educational technology: TI-73 Explorer™ graphing calculators designed specifically for learning middle grades math concepts and the TI-Navigator™ classroom learning system, which provides wireless communication between students' graphing calculators and the teacher's computer.

By integrating the TI-73 Explorer graphing calculators and TI-Navigator system into daily instruction, students were able to visualize math concepts and see their progress in ways not possible without the technology. The teachers were able to quickly transmit problems or quizzes to each student's calculator, collect class assignments and homework, and monitor individual performance. The TI-Navigator system's real-time student feedback allowed teachers to instantly assess student understanding of the subject matter, as well as create a more engaging and interactive classroom learning experience.

> *"We would like to duplicate this thousands of times all across the state. This is absolutely the standard – the gold standard."* [1]
>
> – Florence Shapiro, Texas State Senator

"The real-time feedback provided by the TI-Navigator system enables teachers to decide what to spend more time on and what to spend less time on almost immediately," said Melendy Lovett, president of TI's Educational & Productivity Solutions business. "The feedback helps them to immediately adjust what they're doing in the classroom and assess the different levels of understanding they are working with."

According to Lake Highlands algebra teacher Katie Whitsett, math class is no longer a drag for students. "Now they get to play with (math), discover it," she said.[1]

The Outcome

As a result of the intervention initiative, 33% of the pilot students who had all previously failed the statewide mathematics test successfully passed. All pilot students increased their individual scores by an average of six points or more. In comparison, students in other district junior high schools actually recorded a decline by nearly one point on a scale used to compare tests between years.* The pilot program's students also showed continual improvements on benchmark assessment exams given throughout the year.

"The test results prove that when you provide care, time and technology and have high expectations, the students are going to rise to the occasion. Parents and teachers alike have noted a positive difference in the children's performance and attitudes," said Burrell.

The positive impact of the mathematics intervention has contributed to RISD's improvement from "acceptable" standing to "recognized" under the Texas accountability rating system. Both the district and junior high school successfully met "Adequate Yearly Progress" (AYP) standards under the federal No Child Left Behind rating system.
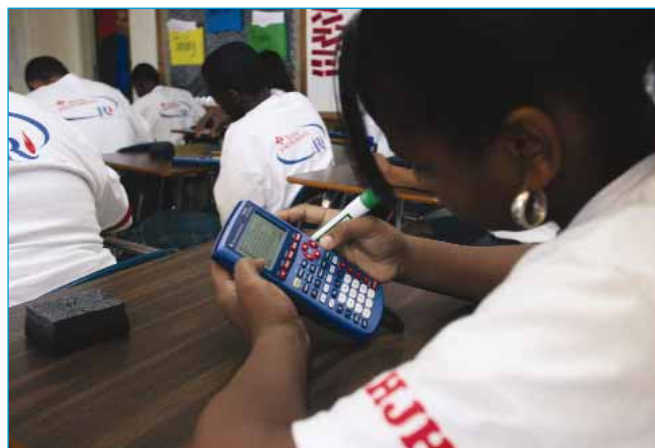
By using the TI technology, students in the intervention became more engaged in the mathematics, improving their chances to pass the statewide assessment exam.

Reaching even more students

RISD and TI plan to expand the successful intervention initiative during the 2006-2007 academic year, reaching four more RISD junior high campuses as well as following the 8th grade pilot students into their 9th grade algebra class. TI is also planning intervention initiatives with three other school districts in Texas, Ohio and Florida during the 2006-2007 academic year.

"We would like to duplicate this thousands of times all across the state," said Texas State Senator Florence Shapiro at a news conference held earlier this year announcing the intervention pilot program's successful results. "This is absolutely the standard – the gold standard."[1] BP

The results were reported by independent researchers from Winick & Lewis Research, LLC, and The University of Texas at Austin. For more information about the Mathematics Intervention Initiative, visit education.ti.com/research.

For information on TI classroom technology, curriculum and professional development resources, visit education.ti.com

TAKS is a trademark of the Texas Education Agency (TEA).
*According to the Normal Curve Equivalent (NCE) index.
[1] Source: Dallas Morning News, August 25, 2006 issue, "Calculating higher success rates" by Kristine Hughes

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CCC! Video on Demand Helps Schertz-Cibolo-Universal City ISD to Engage and Motivate Students

As technology coordinator for the Schertz-Cibolo-Universal City Independent School District (SCUCISD) in Schertz, Texas, Bill Salt believes in the power of technology to help transform education—-but only, he says, if it is capable of engaging students and supplementing the curriculum.

Knowing that technology would play a key role in preparing the district's students for the future, Salt and his team sought to find a solution that would enable educators to present subject matter in a way to which today's learners could relate. What they found was CCC! Video on Demand.

"I think most teachers very much appreciate having good tools as a means to present a concept or to help students reach that 'ah-ha' moment," Salt said. "Digital video seemed an obvious choice in our effort to deepen understanding, differentiate instruction, and improve test scores. CCC! Video on Demand's system is the most flexible that we tested, with superior picture and core curriculum content."

Created by New Dimension Media, CCC! is a video-on-demand system that delivers standards-based content from a dedicated video server placed on a school's or district's network. This intranet solution does not rob valuable bandwidth or slow down network traffic. By using a school's internal network, CCC! is able to encode their videos at a higher bit rate, using H.264, the industry standard for high definition. This results in the highest quality full-screen picture in the industry. "Kids today grow up in a very visual world, with high-definition television and video games," Salt observed. "To show them grainy video encoded at 300 Kbps will not grab their attention."

> "CCC! Video on Demand's system is the most flexible that we tested, with superior picture and core curriculum content, and exciting new features like iPod and webcast capabilities."
>
> – Bill Salt, Technology Coordinator, SCUCISD

In addition, CCC! is TRUE video on demand. There is no need to schedule "video on delay" downloads. With CCC! you can take advantage of the teachable moment and access the video at a moments notice.

The CCC! server does more than just host video. It is also capable of storing and playing flash, text and audio. CCC! is a true "media center in a box". Supplemental materials available for each title help teachers integrate a program into their curriculum. Each title comes with a teacher's guide, student activity and knowledge check, which is graded for the instructor and archived on the server to use as an assessment or formative check. The server also can send, receive and store webcasts to bring the world into the classroom as well as the classroom to the world.

CCC!'s liibrary of over 2,000 titles contains content relevant to grades K-12. CCC! stands for "Core Curriculum Content" and features programs specifically designed and produced for the classroom, as opposed to recycled television programming. The CCC! videos cover the entire scope and sequence of the K-12 curriculum and are designed to supplement and differentiate instruction. This flexible system allows users to search by content area, subject matter, grade level, or keyword. Plus, a unique feature allows users to search the database according to state standard, zeroing in on content developed to help students meet key requirements.

Salt said that the ability to search by the Texas standards—Texas Essential Knowledge and Skills (also known as TEKS)—is what sets CCC! apart from other school-based video solutions. With CCC!, he said, teachers can hone in on a specific TEKS objective they believe students need to work on, then use the system to "drill down" to find an appropriate video clip, in the hope that each child eventually comes away with a deeper understanding of the concept being taught. This ability to target instruction makes CCC! a valuable tool in helping student's meet and exceed state standards.

What's more, he said, the product is easy to use—a must when your objective is to get educators to use the technology.

What is particularly exciting are CCC!'s new features, Salt added. Digital Director has three components that allow teacher's to become their own producer and director. The **bookmark** feature allows teachers to bookmark specific in and out points in a video and save it as a customized asset. The **playlist** feature allows teachers to string together any number of CCC's nearly 30,000 teaching segments to make their own unique titles. Finally, CCC! enables teachers to add his or her own **school produced content**, which can be segmented and searched like any other CCC! title. Last, but not least, CCC! is the only system that allows teachers to download titles to iTunes and to be played on an iPod.

While the system has made life easier for teachers, it has made learning a lot more fun for students, Salt said. "I made it a point to get around to several classrooms, and when those videos were running, those kids paid attention." BP

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identiMetrics Brings Biometric Finger Scanning to Schools Nationwide

When most people think of biometrics, they think about high security technology - a technology that the government will use for passports and border control, that banks will use to combat identity theft, that police will use to find criminals, that we see in the movies. But the high cost, high security, futuristic biometric technology unthinkable in everyday applications just a few years ago, is here -

it's adaptable and affordable and ready to go in your school!

Wood County Schools are located in West Virginia. They have 27 schools: 19 elementary schools and 8 secondary schools - over 13,750 students. Foodservices employ 110 cooks and 9 warehouse and administrative staff serving over 1.8 million meals per year.

The Director of Food Service, Beverly E. Blough MS, RD, LD, is responsible for following all U.S. federal laws for the Child Nutrition Program. One of the requirements is accurate student identification for reimbursement. They were using student ID cards and a 9-digit PIN. This was just not working.

On some days, more than 80% of students would show up for lunch without their cards. This meant that the cook had to type in every 9-digit student ID number. Lines backed up, mistakes were made keying in the numbers and each month irritated parents called claiming their children did not eat the meals they were charged for and the school district had to bear those costs. "With all of the lost, stolen and damaged cards, sometimes I thought Foodservice was in the card business rather than serving meals to students! We obviously needed a better solution," said Beverly.

"We decided that finger scanning biometrics was the solution. Students would never forget their fingers. We found several cafeteria applications that sold a finger scanning biometric device, but all of them wanted us to spend thousands of dollars buying their application and replacing our already existing and working software," she added.

450 miles away in Hammonton, New Jersey, Jane Cora DTR, Supervisor of Food Service, was experiencing the same headaches. "We wanted something that students could not forget, lose, damage or steal. But it had to be compatible with our existing cafeteria software and it had to be cost-effective. We also needed biometrics that worked with 4, 5 and 6 year old children without any difficulties."

And in another part of the United States, Edgefield County, South Carolina, Greg Thompson, Principal of Strom Thurmond High School, had yet another requirement. He wanted to use finger scanning biometrics as a complete student identification system throughout his entire school, beginning with the cafeteria, then migrating to the library and finally in each classroom for period-by-period attendance so he would know where his students are throughout their day.

They all decided to use identiMetrics, the leader in biometric finger scanning in schools. identiMetrics' solution, identiFi™, scans a student's finger for identification. identiFi can operate in a single lunch line or provide identification throughout the entire school district. There's an added bonus: once identiFi is installed in the cafeteria, it can be used to identify students in other areas of the school like classroom attendance, library, nurse's office and for security access at the front door since the students are already enrolled. And it works flawlessly with children as young as four years old.

According to Greg Thompson, "Biometric finger scanning identification was well accepted by the Board, Superintendent, Principals, teachers, parents and the community. They all understood our need to correctly identify students and realized the time and money it was costing each day to administer the card program. Initially, there were questions regarding privacy. But identiFi doesn't take an actual fingerprint, just unique identifying points. Everyone felt comfortable that the fingerprints can't be recreated. The students are enrolled only once so we can roll out our finger scanning identification program to different areas of the school. Now, students ALWAYS have their ID with them!" he adds.

Cost-effective biometric technology is here today with many practical uses. It's a perfect solution for schools that are dissatisfied with the current student identification systems in place such as PINs and swipecards. Finger scanning biometrics provide irrefutable proof of identification. Unlike the complicated and expensive government systems in the past, biometric finger scanning systems can be simple, cost-effective and "technology" friendly. identiMetrics makes things work faster, safer, cheaper and more reliably. If children can do it, you can, too. It's just smart business!

Mission CISD Finds Direct Correlation Between Improvement in Accountability Ratings and *netTrekker d.i.* Usage

Award-winning Search Engine Positively Impacts Student Achievement

The Internet brings a multitude of new resources to the classroom, but, unfortunately, not all of the information is relevant or useful to teachers and students. Educators shouldn't have to spend time sifting through content online, deciphering what information is practical, legitimate and safe. To help teachers with classroom technology integration activities and to maximize productivity, Mission Consolidated Independent School District in Mission, Texas, decided to implement *netTrekker d.i.* from Thinkronize.

A rapidly growing school district in the Rio Grande Valley, Mission CISD schools and students are often recognized for their successes, which include several National Title I winners and two campuses recently deemed "exemplary" by the Texas Education Agency. All of this is accomplished with a population that traditionally struggles academically. Ninety-seven percent of the district's students are of Hispanic origin. Mission CISD has become very aware of the need to address student learning styles and provide additional enrichment activities in all content areas at all levels.

"General search engines provide too much information and it takes too much time to find something useful," explained Shirley Owens, Coordinator for Instructional Technology and Textbooks in Mission CISD. "Using a database of prescreened sites like *netTrekker d.i.* adds another level of protection for our students, which is a priority in our district."

netTrekker d.i. is a safe Internet search engine specifically designed to support differentiated instruction. The award-winning product provides students and teachers access to more than 180,000 educator-selected resources, including customizable ELL content, that support the complete K-12 curricula. In addition, *netTrekker d.i.* assigns each resource a readability measure based on Lexile ratings and other common methods. Recently, Thinkronize incorporated a new function within *netTrekker d.i.* called Read Aloud, which provides text-to-speech support, and has partnered with Hotmath.com to provide additional mathematics support through one convenient access point.

> ### "netTrekker d.i. has so much to offer our students and staff…"
> – Shirley Owens, Coordinator for Instructional Technology and Textbooks

In early Spring 2006, staff development was provided for all campus technology advisors and librarians on *netTrekker d.i.*, and then all teachers for grades 1-6 were trained on-site. "Our teachers who have used the program love it and usage continues to increase throughout the district," Owens added.

"We have encouraged teachers to use the program for research," said Cynthia Heyl, Campus Librarian at Leal Elementary School. "Our fourth grade teachers are using

Elementary students use netTrekker d.i. daily in Mission CISD.

netTrekker d.i. to gather additional information for their curriculum on Native Americans."

Asked to provide information on other instructional software used by the district, Owens compared *netTrekker d.i.* usage to the Texas Accountability Ratings for the Spring 2006 semester. Owens found a direct correlation between the accountability ratings and student use of the search engine - the

> ### "…the higher the number of netTrekker d.i. searches, the better the accountability rating," stated Owens.

higher number of searched pages on *netTrekker d.i.*, the better the accountability rating, with only one outlier. The outlier, Cavazos Elementary School, is one of the newest schools with a new administration and the latest technology.

"The initial challenges of providing opportunities for teachers to use technology in the classroom and increasing student use of technology are certainly met through *netTrekker d.i.*," said Owens. Owens and her team plan to conduct a follow-up comparison at the end of the Spring 2007 semester.

"We believe that the use of *netTrekker d.i.* provides students opportunities to increase their own knowledge in non-traditional ways. As there appears to be a correlation between *netTrekker d.i.* usage and student achievement, we are looking forward to providing additional resources, such as adding Hotmath.com content to our *netTrekker d.i.* subscription," Owens concluded. [BP]

Case Study: Wireless connectivity solution is top of the class for Midview Local School District

When it comes to providing the best educational experience, many of today's schools are incorporating technology into the classroom to motivate and challenge their students. New interactive technologies provide students with a less passive learning experience and transcend the teacher's role from the center of the learning experience to more of a facilitator, delivering greater student satisfaction and higher rates of learning.

In 2005, the Midview Local School District in Grafton, Ohio completed the construction of three new elementary school buildings. Dedicated to raising the bar of academic excellence, the district invested in technology to provide a better educational experience for students. In addition to installing plasma displays and portable lecterns in every classroom, the entire school enjoys wireless connectivity thanks to a solution from Avocent.

Cut the cables, roam the room

For every school district, determining how to allocate technology dollars is a challenge. When Midview Local began construction of their new school buildings, they brought in systems integrator SoundCom Systems to help with the process. Serving the Ohio area and beyond for the last 30 years, SoundCom provides professional consulting, engineering and technical service to meet sound and communication needs across a variety of industries.

> *"It is impossible to find anyone other than Avocent who is doing wireless video graphics array (VGA) well... What sets them apart is their support through the process, willingness to work with us, an effective price point, and delivery of excellent video quality."*
>
> – Kevin Wenderoth, Operations Manager, SoundCom Systems

"Working with the school district, teachers and technical staff, we realized that the important factor that would transcend this from a good solution to a great one was if we had a way to transmit video from the interactive panel to the plasma display without being connected by cables," said Kevin Wenderoth, operations manager for SoundCom Systems. "Recognizing that the cabling was a hindrance, our engineers did a search and found the Avocent LongView Wireless extender solution."
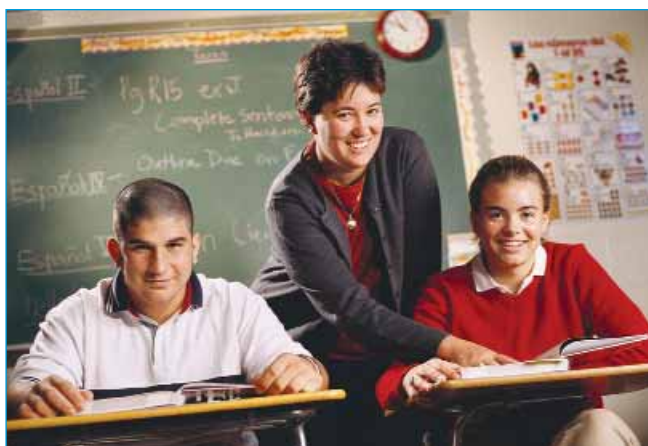
### Wireless connectivity without interference makes the grade

The Avocent LongView® Wireless extender connects computer-based audio-video and digital sources with display devices including LCDs, monitors, plasma displays and projection devices. Keyboards, mice and audio devices may also be connected at both the local (transmitter) and remote (receiver) locations.

Midview Local purchased 108 LongView Wireless LV3500W extenders for installation in every classroom along with a Polyvision Cordless Lectern and LG Plasma Display. Since the lectern is battery powered and the Avocent equipment transmits the audio and video to the display wirelessly, teachers are now able to move the lectern throughout the entire classroom without being physically connected to anything.

"What we were able to do is take the direct output from this lectern, which included audio as well as high resolution video, and transmit that wirelessly to a connection on the plasma display," said Wenderoth. "Avocent offers point-to-point communication technology so we are able to put multiple boxes in relatively close proximity without experiencing any interference."
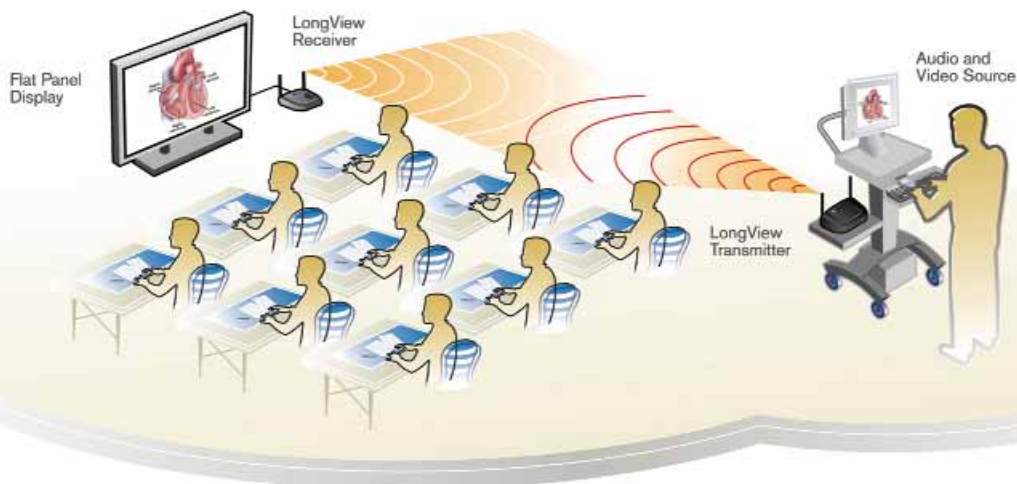
For Midview Local, the biggest benefit of the LongView wireless extender solution is that teachers are no longer tethered to the front or rear of the classroom. Now, teachers are able to roam the room, better engage their students and deliver an enhanced learning experience.

Reading, writing and resolution

Interference and the ability to transmit high-resolution video were two big concerns for Wenderoth – both of which were alleviated by choosing Avocent's field-proven technology.

Certain areas of the building hold as many as 14 classrooms and Wenderoth notes there was no interference between any of the boxes. The Avocent patented proprietary compression engine technology enables audio, video and PC content to be transmitted wirelessly from the source computer to the output device for point-to-point broadcasting. Depending on the LongView Wireless extender model chosen, the transmitter and receiver process analog video in a range of 100 to 3,000 feet.

The LongView® Wireless Extender

The solution's ability to handle transmitting video impressed Wenderoth. Because of the high quality video transmission, teachers are able to amend and annotate educational presentations like PowerPoint slides with no delay or lag time.

"It is almost impossible to find anyone other than Avocent who is doing wireless video graphics array (VGA) really well," he said. "What sets them apart is their support through the process, willingness to work with us, an effective price point, and delivery of excellent video quality."

Field-proven wireless connectivity

Combined with the battery-powered lectern, SoundCom's vision of implementing a totally wireless solution for Midview Local is realized through Avocent. Wenderoth notes that the solution is meeting the school's needs by providing a maintenance-free solution that delivers wireless connectivity without interference.

"There is no other application implementation like this anywhere else in the state," stated Wenderoth. "School districts have budgetary concerns and although the start up costs are slightly expensive, the Avocent devices do not require any maintenance expenditure, which is important for a district to look at when considering technology solutions."

For Midview Local, the biggest benefit of the LongView wireless extender solution is that teachers are no longer tethered to the front or rear of the classroom. Now, teachers are able to roam the room, better engage their students and deliver an enhanced learning experience.

For SoundCom, they are able to provide a solution to their customers who need or choose to implement wireless connectivity.

"There are many applications that we have with SoundCom that require us to transmit high-resolution video from a computer source to the display device," said Wenderoth. "In some cases it is not cost effective or possible to run the proper cable. The Avocent solution gives us the ability to offer field-proven wireless connectivity to our customers and we are confident knowing that if it is proven to work in a 108 room school building, it will work anywhere." BP

IMAGE CONSCIOUS!
PRESENTATION TECHNOLOGY TOP PRIORITY AT TROY SCHOOLS

"How is this technology going to affect the teaching, learning and growing of students within our district?" According to Steve Shotwell, Director of Technology for the Troy School District, Michigan, this question is asked at every presentation that he makes before members of the Troy School Board. At one meeting last year, Shotwell was prepared to answer the question before it was asked. While he usually addresses the board about computers, servers, wide area networks and the like, the focus of this particular presentation was classroom tools…instruments that represents the most advanced visual presentation technology available.

The Troy School District, which supports 12,000 students among 12 elementary schools, four middle schools, two high schools, and one alternative high school, was to vote on a $1 million proposal to replace and upgrade existing technologies in each of these schools. Due to the importance of this issue, a 10-member committee had scrutinized various options for months and conducted numerous meetings to review products, meet with vendors, formulate bid specifications, and conduct a bid to the business community in order to select specifications products that best suited the needs of schools within the district.

Leading-edge visual presentation technology

The Troy School District, recognized as a leader in instructional technologies, is committed to providing their students with the best resources available to prepare them for the future. Therefore, from its inception, the committee was looking for cutting-edge technology that would provide maximum image quality, color accuracy, trouble-free operation and ease of use.

"The brightness and clarity is far superior to other products we reviewed."
– Steve Shotwell, Director of Technology
Troy School District, Michigan

In 2004, when teachers were surveyed as to what technologies they most needed and wanted for their classrooms, their #1 priority was obtaining the latest ELMO visual presenters. After discussing these needs with Kevin Gibson of City Animation, an audio-video dealer based in Troy, the committee recommended replacing the existing document cameras and overhead projectors that had been used for years with ELMO P30 XGA visual presenters and Mitsubishi XD450U high-resolution digital video projectors. The P30 is an 850,000 pixel progressive scan CCD camera that allows live image capture at a smooth 20 frames per second. Shotwell said, "The DVI output of the presenter matches the

Hundreds of ELMO P30 XGA visual presenters, Mitsubishi XD450U digital projectors and portable carts were delivered to schools within the Troy school district.

DVI input of the projector to give us an ideal combination for the high quality images we were looking for."

Shotwell demonstrated the equipment to the Troy School Board last year, noting "The brightness and clarity is far superior to other products we reviewed." He proceeded to show how easy it is to present documents and pages from books to large groups of students; freeze images while flipping pages; zoom in for close-ups of everything from pictures to peg boards; and create snapshots of images that can be captured on SD memory cards and called up at will.

Displaying pictures to transparencies to moving images

The ELMO presenter is especially useful for displaying objects such as blocks, geoboards, geometric shapes, and the like for science or math instruction. Science specimens can be shown, as well as documents, books and transparencies. In addition to still images, teachers can create "movies" for their presentations with the ELMO P30. ⒷⓅ

CPSI Solutions Help Phelps Clifton Springs School District Achieve Their Ultimate Vision

Phelps Clifton Springs School District (PCSSD) in New York is one of 47 districts within the Genesee Valley/Wayne-Finger Lakes Regional Information Center (EduTech). PCSSD, with four schools, housing 1935 students and 240 staff, is the model district for EduTech's SIF horizontal integration Proof of Concept. EduTech envisioned an interoperable solution of automatically sharing data between applications, including the Student Information Systems (SIS), HR/Finance, network identity management, and others. By using CPSI's SIF Certified products, the vision has become a crystal clear reality.

The Problem

PCSSD' s challenges are like most school districts. Basically, none of the applications were sharing data. Applications were running on a variety of hardware and software platforms. The data was "owned" and maintained by different groups. One of the first data automation projects for PCSSD was to integrate student data with the ID Badge Maker system.

Before implementing the CPSI solution, information was so scattered that it usually took up to a week or more to get the data into each system. Student information was entered into the SIS. Then a form was created that contained basic information about the student, which was copied and sent by mail to the other departments. It was time consuming and the chance of human error multiplied with each entry.

"This was very inefficient and drove me nuts for a long time," explained Bill Gowan, PCSSD Technology Coordinator.

PCSSD and EduTech region needed a highly adaptable solution that would be reasonable priced. PCSSD and EduTech decided to use CPSI's SIF Certified product set to automate the exchange of data between systems. The objective was to have data entered into the SIS that would automatically populate the Active Directory, ID Badge System, and the Data Warehouse.

"We were not using a Data Warehouse solution before getting the CPSI Data Warehouse. Every office would take extracts from the SIS to use for mail merge and other applications," reports Gowan.

The Solution

Implementing CPSI's SIF products eliminated the prior dilemmas caused by SIF agents that were not fully functional and were poorly documented. The solution involved installing the SIF-Connect Server a (Zone Integration Server), Universal Agent Suite, Data Warehouse, and the SIF Agent for Active Directory/Exchange to automatically populate and manage the active directory.

"Let me explain," said Gowan. "We have an ID Badge maker system and the staff no longer has to enter duplicate information in the ID software. All student information is pulled from the CPSI Data Warehouse. Each school office enrolls its own students into PowerSchool. All this information is immediately (and automatically) transferred to the Data Warehouse. The person enrolling the student can then immediately open the ID maker software, find the new student, and take a picture and then print an ID card for the student to use. While this is all happening, the student has already been automatically entered into our café system, library system, and a network account with user name, password, and home folder has been created."

The next step for the district is to use the Universal Agent to "remap" all of the in-house Access databases developed throughout PCSSD directly to the SIF-Connect Data Warehouse so that users have current information all of the time.

The Results

After the implementation of the SIF-Connect Product Suite, PCSSD's productivity has increased due to a single point of data entry. Data is more accurate, information is delivered in a timely manner, and there is a substantial reduction in the time it takes to manipulate data.

"Now within about ten minutes, the student is enrolled, an ID card is printed and an account in the café system is created with all the contact information. A library system account has been created and the student has an active directory account plus a home folder to save files to," said Gowan. "Out of all the CPSI products, the Universal Agent with the mapper was definitely the feature that sold us on the products."

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School systems use ECS Bright IDEA® to improve special education services for exceptional children

Enterprise Computing Services' special education solution, ECS Bright IDEA®, provides states such as North Carolina and Michigan with an innovative approach to collecting, managing, and reporting data, to assist administrators and teachers in providing the much needed support for children with special needs.

North Carolina and Michigan, two states in need

Serving hundreds of thousands of young children and students, North Carolina's and Michigan's state special education agencies oversee the administrative funding of early intervention programs and services.

In supporting these children in the past, state administrators were forced to rely on data supplied by Local Educational Agencies, each of which maintained their own student data tracking systems. Yet as children and families transferred between districts, several problems occurred, leading to the duplication and inaccuracy of data, as well as a deterioration of the states' ability to efficiently provide special education services.

When relocating, families would often bring their child to their new Local Educational Agency (LEA) without notifying the previous one of their departure, requiring administrators and educators to wait weeks for hard copies of a student's record and IEP to arrive. In addition, a new and unique student record was entered into the data tracking system at the new LEA. As a result, multiple files for the same child were frequently submitted to state administrators for review, forcing them to spend countless hours reconciling a multitude of duplicate records. They found themselves struggling to support their students with an inefficient system that lacked the ability to provide access to centralized data or conduct an accurate analysis of student records.

Enterprise Computing Services satisfies state and district data requirements

ECS was contracted by North Carolina to develop a web-based data collection system, centralizing the information gathered and allowing for real-time and historical tracking and analysis. State administrators selected ECS Bright IDEA® to address the state's special education needs after administrators noted the success of Michigan's Office of Special Education and Early Intervention Services in implementing the ECS solution. This customizable workflow software solution is used to assist state and district-level agencies in assessing and improving the effectiveness of special education services provided to exceptional children, while meeting federal and state compliance and reporting requirements.

Core Capabilities

The system will track student information for over 200,000 EC students across school and district boundaries throughout the State. System highlights are shown below:

Data Management Capability	Description
Student-level Data Collection	Maintain local, state, and federal required information on children served and service providers.
Individual Education Plan (IEP) Workflow Automation	Automation of the IEP and related forms and workflow compliance.
EC Standard Reports	Continuous Improvement Monitoring, Behavior Intervention Services, Compliance Reports, etc.
Ad-hoc data analysis	Allows complex data analysis and outcomes evaluation for EC students.
State and Federal Reports (Child Count, End-Of-Year)	Generate appropriate reports for state and federal needs.
Custom Data Elements	Districts and schools can add and independently manage custom data elements.

Customizations available to meet states' or districts' individual needs

The ECS Bright IDEA® application met North Carolina's needs using the following customizable components:

- **Central data warehouse:** This uniquely devised product consolidated the vast array of district-level and state databases into one organized and comprehensive entity.
- **Customized web portal:** A highly secure Intranet interface was created to enable student data and IEPs to be instantly accessible statewide.
- **Decisive report creation and documentation applications:** ECS Bright IDEA® provided state administrators with concise reporting tools to meet Part B and Part C requirements of the Individuals with Disabilities Education (IDEA) Act of 2004.
- **Data cleansing:** The ECSUniqueID® component was installed to supplement ECS Bright IDEA®, providing each student record statewide with a unique ID, to prevent duplication.
- **Data validation:** ECS' innovative Form Assistant® was also implemented to assist teachers by automating the IEP generation and validation process.

ECS, building long-lasting partnerships with states and districts

The partnership built between ECS and states such as North Carolina and Michigan in implementing its special education solution, ECS Bright IDEA®, has proven invaluable. With instant access statewide to student data, LEA administrators and teachers can now use or modify an existing IEP within moments, thereby providing services in a more efficient and timely manner. Teachers also save critical time by using Form Assistant® to generate new IEPs. With the help of ECS, states now have an intuitive and vital data management system to assist in ensuring children with special needs can successfully navigate through the educational arena, now and in the future. BP

Classroom Instruction: Distributing software from a single district server saves time—and money

This ultra high-speed MAN supports virtually every aspect of the school system's operations—from electronic grading and attendance, to digital security cameras that monitor high school activity, to streaming video and videoconferencing. One of the many added benefits of this high-speed connectivity has been our ability to consolidate instructional resources and distribute them district-wide from a single, central location.

By Stephen L. Dantinne

A primary example is our use of SuccessMaker Enterprise software from Pearson Digital Learning. By consolidating all of our licenses onto a single, central server, we've saved time and money by simplifying our software installation, upkeep, and reporting. And we've also saved money by buying only as many licenses as we truly need.

A typical deployment of the SuccessMaker client/server solution involves a server installed in a classroom lab setting with 20 to 30 client workstations running from that server. That's how we initially deployed the solution ourselves: in isolated lab scenarios, with one server hosting 20 to 30 computers in each lab.

These lab setups were located throughout the district, for a total of seven computer labs with seven servers—each requiring its own separate administration. In addition, student and school data were isolated on each server, and data analysis would require the compilation of data from all seven servers to analyze district trends. Even worse, the SuccessMaker program was confined to these computer labs and thus was not equally distributed throughout the district. Only one of our four middle schools, and four of our seven elementary schools, had such a lab.

To solve these problems, we decided to consolidate all of our licenses onto a single server that resides at the district's NOC (Network Operation Center). Distributed access to the SuccessMaker software means the application is not limited to individual labs, but instead can be accessed through any of the district's 5,000 computers. The ability to use the program from anywhere on our network eliminates scheduling difficulties, opens up access to students in those schools without computer labs, and offers tremendous flexibility for teachers.

District studies found that all students in grades 2-10 could benefit from using the program. But at $1,000 per license, how were we to provide access to all 6,000-plus students in these grades? Again, our model of distribution from a single, central server provided an answer: We would buy only as many concurrent licenses as we thought we'd need. We settled on 250, meaning only 250 students can use the software at any given time.

Sharing pays off for Vineland, N.J., schools.

Because our high school students start their day at 7:30 a.m., they begin their use of the SuccessMaker program early in the day. Middle school students use the program later in the morning and also after school, when server use is minimal. Elementary students arrive at school after 9:00 a.m. and use the program throughout the day. As soon as a student logs off, his or her license is released to a new user. In all the time we've been employing this solution, we've only had one problem with access—and that was quickly resolved.

It's important to note that our robust network infrastructure allows us to employ such a model. Because the SuccessMaker program relies heavily on graphics, ample network transmission speeds are essential—figure 1.5 Mbps of bandwidth (or the equivalent of a T-1 line) for each client machine operating the software. With a Gigabit Ethernet network, we have plenty of bandwidth for 250 students to be using the software from a single server at the same time.

Sharing certainly has paid off in Vineland; by sharing costs, the city and the district were able to construct a robust, fiber-optic MAN that serves all our needs, and by sharing licenses, we can deliver instructional software to all students at a fraction of the cost of a traditional lab deployment. The fruits of Vineland's labor? We've increased productivity and student achievement, while reducing costs and network maintenance. BP

Stephen L. Dantinne is supervisor of technology for the Vineland Public Schools.

Henrico County Public Schools Block MySpace With 8e6 Technologies' R3000 Internet Filter

Like any other educational institution, Henrico County Public Schools was concerned with reducing inappropriate Web surfing, excessive IM and P2P usage and security risks such as spyware, phishing, and other malware. With over 45,000 student users, securing the online learning environment can oftentimes be time-consuming and stressful for IT staff.

However, all these problems didn't compare to the gigantic headache MySpace.com presented for school IT Administrators and staff.

As Jason Cope, System Administrator, recounts, "It exploded overnight. Suddenly everyone was trying to use it and there was a plethora of hits to multiple points of entry for the site." This increased traffic load was seriously degrading the school's Internet access to educational applications.

MySpace isn't just an irritant for school IT staff and teachers who have to constantly check that students aren't wasting school time surfing the site and chatting with friends. MySpace is a Pandora's box of trouble for school staff. Not only do sexual predators lurk on that site and other youth-based online communities in search of children, but much of the site's content goes against the Children's Internet Protection Act (CIPA).

Henrico found that 8e6 Technologies provided the best solution for its specific education needs. A security company dedicated to Internet filtering and reporting, 8e6 is the only single-source provider that uses a unique "pass-by technology" on a highly scalable appliance. Enabling educational organizations to secure their learning environments, 8e6:

1. Provides a safe and productive learning environment for both students and staff
2. Helps students and staff focus on their tasks
3. Eliminates exposure to Web threats such as malware
4. Minimizes staff time spent on maintaining the network filter
5. Allows IT staff to deal with only one vendor for service and support

8e6's R3000 Internet Filter is a high-speed filtering solution that integrates easily into any existing network infrastructure. Optimized as a stand-alone appliance, the R3000 eliminates a network of bottlenecks and downtime. Without the constant requirement to manage filtering, IT staff can focus on mission critical projects making their time more productive and cost effective.

The R3000 was able to block MySpace and other social networking sites through its Custom Feedback Module (CFM). This feature sends frequently visited non-categorized URLs to 8e6 Technologies for possible inclusion in the 8e6 Database. "We plugged in the 'MySpace' keyword filter and other telltale URL keywords associated with MySpace and locked them out. CFM helps to categorize any popular backdoors and running reports on popular hits also get these backdoors locked," says Mr. Cope.

"8e6 has better preparedness overall to handle the challenge of our users, a proven track record of commitment to make the product work and a good understanding of the unique needs of education."

– Jason Cope, System Administrator

In addition, the R3000 also allowed Henrico to block access to anonymous proxies, which enable students to access these otherwise blocked sites. Utilizing revolutionary Intelligent Footprint Technology™, 8e6's R3000 "Proxy Pattern Blocking" feature catches requests for anonymous proxies on the fly, giving organizations zero-day protection against many open-source proxies. Therefore, even if a site is not categorized as an anonymous proxy in the 8e6 Database, the R3000 will still be able to block access to it based on signature files in the Database.

8e6 Technologies
www.8e6.com/education | 888.786.7999

How can a Document Camera Help in my Classroom?

In the simplest terms, a document camera or visual presenter is the next-generation, digital replacement of an overhead projector. However, a document camera goes far beyond the simple functions of an overhead by allowing users to display not only transparencies, but documents, 3-D objects, microscopic images, moving objects, x-rays, slides, and more. With the ability to connect to a multimedia projector, monitor or TV, a document camera is able to display the presenter's thoughts, ideas, lessons and examples on a large screen format, live in vivid color and detail.

Especially beneficial for teachers and administrators, a document camera provides a large visual element to lessons and demonstrations. Showing documents and objects on a large screen format also reduces or even eliminates the need for multiple copies, illustrations or even textbooks. Some examples of document camera classroom lessons are:

- Demonstrating actual pen strokes of a writing lesson
- Solving a mathematical equation
- Showing how to sculpt clay
- Demonstrating a live dissection
- Displaying important book or textbook passages
- Displaying microscopic images
- Showcasing historical artifacts
- Much more!

By displaying these demonstrations on a large screen in one central classroom locations, students are better able to not only understand and visualize the content, but it also inspires interactivity and even helps students improve their own presentation skills.

Sustainable Technology

Implementing document cameras and other classroom technologies are an investment in not only progressive teaching standards, but they must represent longevity and sustainability to avoid continuous replacement and cost. Educational Service District 112 in Vancouver, Washington has realized this, and in turn created a cutting-edge standard for sustainable classroom technologies. Within the Sustainable Classroom Model, document cameras play an intricate role in the proven effectiveness of increased classroom technology.

A comprehensive White Paper developed entirely by ESD 112 (Tschirgi, Debbie 2006) describes not only the benefits of document cameras in the classroom, but specifically describes the successful integration of the AVerMedia AVerVision300p Portable Document Camera in the Sustainable Classroom Model.

Definition of Sustainable Technology:

"Sustainable solutions will stand the test of time. In five to seven years (or more), they will still be doing what they were meant to do at the time of their original implementation. This applies to both instructional practices and technological solutions.

Sustainable Instruction

Instructionally, there are some sound, practical teaching strategies that are research-based and proven to increase student achievement. Nine of them are identified in the book Classroom Instruction That Works (Marzano, Pickering, and Pollock, 2001):

- Identifying similarities and differences
- Summarizing and note taking
- Reinforcing effort and providing recognition
- Incorporating homework and practice
- Using nonlinguistic representations
- Involving students in cooperative learning
- Setting objectives and providing feedback
- Generating and testing hypotheses
- Using questions, cues, and advance organizers

Teachers are already using several of the strategies above to some degree in their classrooms, and are likely to continue because they are familiar and because of the results they get with their use.

Sustainable Technology

Schools that invest in sustainable technology solutions maximize their technology budgets and reduce their budgets for replacement cycles. In talking to several district technology directors in the state of Washington, it was learned that collectively, they define "sustainability" by using the following criteria:

Broad in scope:

This is technology that can be used in a wide range of settings: general classrooms, professional development, board presentations, and general meetings, such as PTA, community and staff meetings.

Applicable to most classrooms:

Sustainable hardware can be used in most, if not all, content and subject areas: math & science, language arts, social studies, health, technology, etc.

Easy to use:

The ease with which a piece of technology can be connected to something else and set up is a major indicator of sustainability in a classroom. For instance, document cameras are easy to connect to a projector and computer, easy to switch between itself and the computer, easy to zoom focus and reposition, and easily achieve high end results!

"Sustainable solutions will stand the test of time. In five to seven years (or more), they will still be doing what they were meant to do at the time of their original implementation. This applies to both instructional practices and technological solutions."

Easy to integrate:

A technology solution that is easy to integrate into lessons and activities is very sustainable, as it is likely to be used more than a piece of equipment that takes preparation. Technologies that allow students and teachers to use actual documents and 3-D items and engage in real time learning are solutions that teachers will naturally embrace and use.

Minimal training and support:

Setup of a sustainable solution is less than an hour; training takes less than four hours; annual support takes less than an hour; and teachers can trouble-shoot easily.

Stands the test of time:

Five or more years from now, a sustainable solution will still be used to meet its original purpose, because it is intended to help achieve higher educational goals. Software upgrades can be downloaded off the Internet with ease.

Document cameras are sustainable solutions. They support research-based instructional strategies that teachers are

AVerVision Document Cameras are not only versatile and functional, but are easy to use for both teacher and student.

already using in their classrooms. In addition, their versatility and ease of use make them sure winners. Key decision-makers for educational organizations and institutions should consider the document camera as a standard technology solution that will provide visually-rich learning experiences for their students.

When compared against its competitors, the AVerMedia AVerVision300p digital document camera is superior in performance, durability, features and warranty. Its high-resolution lens, as well as its ability to capture, store and play back images, make it a useful multimedia tool for any classroom. Teachers will become comfortable using it in a very short period of time, and it will become the piece of equipment in their classroom that they simply can not live without. 🅱️

Tschirgi, Debbie (2006). White Paper, Sustainable Classroom Technology; Increasing Student Achievement with the AVerMedia AVerVision300p Document Camera. Retrieved October 23, 2006, from ESD 112: Educational Technology Support Center (ETSC) White Paper Archives Web site: http://www.esd112.org/ edtech/whitepapers/AverMedia300p_whitepaper.pdf

Marzano, R.J., Pickering, D.J., & Pollock, J.E. (2001). Classroom instruction that works: Research-based strategies for increasing student achievement. Alexandria, VA: Association for Supervision and Curriculum Development.

School Administration: Improved textbook management pays dividends

With school budgets stretched to their limits, educators are seeking every means to control costs without compromising the quality of education. Because textbook management is one of the areas in which expenses have soared, school leaders are looking at ways to control costs by minimizing losses from damaged or missing textbooks.

By Ed McDonell

At the 1,500-student Bolsa Grande High School in Orange County, Calif., a bar-coding system for books and for student IDs was combined with software designed to ensure accountability by students for the books they received. The result? A substantial savings in textbook costs, according to Margaret Walton, the school's accounting technician.

A number of textbook management software solutions are available. Virtually any would have been preferable to the triplicate paperwork system in use at Bolsa Grande prior to 1997. With the old system, Walton explained, there was a quagmire of paper, including three cards filled out for each book issued to a student: One was kept in a central card file by the textbook administrator for each student; a second was kept by the textbook administrator for each textbook; and a third card was kept by the teacher. Accountability was difficult to enforce, and reports on overall costs of lost and damaged books were virtually impossible to compile.

To solve the problem, Bolsa Grande searched for an automated system that provided flexibility and responsive technical support to help manage textbooks. The school selected a product from Salt Lake City-based COMPanion Corp., called Textbook Tracker (www.textbooktracker.com). Here's how it works:

1. Books are bar-coded individually.
2. Students receive bar codes on their IDs.
3. As students check books out, bar codes on the books are matched to the student ID number/bar code.
4. Textbooks can be classified by condition.
5. Reports can provide information on textbooks damaged, textbook surpluses, and shortages.
6. Reports show which students have which books.

Using this system, students are held accountable for returning all books undamaged and are notified during registration of fines from the previous semester. "We zap the student IDs and zap the bar codes on the books," says Walton. "We can check a student out now in a matter of minutes."

COMPanion Corp.'s Textbook Tracker software

Implementation of a textbook management system doesn't need to be overwhelming. At Bolsa Grande, the Men's League helped with this project during the summer of 1997 by bar-coding all textbooks. A catalog was then created of all students in the school. According to Walton, "Often, these data can be imported from the school's existing [student] information system."

Bolsa Grande's database of textbook and student information includes the following data and features: Lost or damaged textbooks by a specific student; the ability to charge fines for overdue books; the ability to send out notices of fines; the ability to see easily which books students have and when they are due back to the school; the ability to bar-code and check out any educational materials in addition to books (musical instruments, science equipment, etc.); and the total value of lost textbooks.

This information would have been cost-prohibitive and perhaps impossible to obtain with a paper-based tracking system. What's more, the payback on an investment in textbook management software often is achieved within a year. Depending on its size, a school can save from thousands to hundreds of thousands of dollars. Perhaps more importantly, such systems provide a means to cut educational costs without cutting the quality of education. "We never looked back," says Walton.

Textbook prices are "below the tip of the iceberg" as a cost of education. More attention is given to controlling costs related to facilities, special programs, or teacher's salaries. But improved management of textbooks is a painless way to reduce the cost of education. Sound textbook management tools provide the further benefit of teaching students accountability for their books and educational materials—which isn't a bad lesson, either. BP

Ed McDonell is an author and freelance writer with graduate degrees in library science and business management.

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SCHOOLDUDE CLIENT SUCCESS STORY

Franklin McKinley School District– San Jose, California

- 9,900 students
- 827 district employees
- 15 buildings and 1 large District Service Center
- Support more than 2,000 computers and 2,000 peripherals (phones, routers, switches, access points, and more)
- 7 employees on IT staff
- 1,232 incidents completed from May 1 – December 31, 2005
- 2005 annual IT budget = $291,300

In the early 1990's, Franklin McKinley School District was using a familiar method to capture their IT incident requests – the "pony". "When media aides identified a problem, they would fill out a paper request and send it to the school secretary. The request might sit 'in the pony' for several days, and most times the pony would eat it," said Delma Juarez, Director of Information Technology for the district. The "pony", also known as the plastic inbox, was the final resting place for many IT requests. The IT staff never received some of the incident requests, and when they did, the department still had no way of tracking or reporting on IT requests and incidents.

"An email system was difficult because there was no reporting function, and we had to retype all the data into Excel spreadsheets. We then tried a 'help desk solution,' but our users kept telling us it was too complicated and detailed. We dropped the vendor after four months."

In 2004, Delma's new supervisor told her about an IT incident solution from SchoolDude. "We were so pleased that it was designed with IT in mind – it had everything we needed in there."

KEY BENEFITS TO USING SCHOOLDUDE'S IT INCIDENT MANAGEMENT SOLUTION

- Designed specifically for schools
- Great interoperability
- Cost effective

IT DIRECT

Business Challenges
- Ensure receipt of IT incident requests
- Develop reporting capability
- Eliminate limitations on number of users
- Reduce high system maintenance
- Become more responsive to internal customers
- Eliminate wasted time/effort spent creating multiple back-ups and managing data corruption

Results
- Four IT technicians are effectively and efficiently managing 2,000 computers and more than 2,000 pieces of peripheral equipment.
- Web-native IT incident management solution tracks and routes all requests and IT incidents.
- IT staff can easily generate reports to track and show completion of IT incidents.
- All the more than 850 district employees can submit IT requests at no added cost.
- Web-based solution eliminates time to install shortcuts and client connections for requesters.
- IT staff can easily track, view and print out IT requests.
- IT staff can view incidents online from any computer and respond more quickly to requests, improving customer service.
- Improved department accountability by tracking costs and staff productivity.
- Improved IT incident reporting for presentations to administrators and school board.

"After my first two hours at SchoolDude University, I kept asking myself, 'Where did they find all these wonderful, supportive people?' SchoolDude has built a culture of friendly, knowledgeable, down to earth, common sense people. I have met with other software companies, and they have an arrogance. I prefer the sincere and honest manner of SchoolDude." – Delma Juarez

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You face the daunting challenges of managing ed-tech acquisitions and implementation, professional development, integrating technology into the curriculum, and much, much more. That's why *eSchool News* created the Educator's Resource Center (ERC). It's absolutely free, and it's your reservoir of on-point, time-saving assets for essential subjects ranging from "Formative Assessment" to "Professional Enrichment." Each ERC is crafted by the editors of *eSchool News* with your specific needs in mind.

The Educator's Resource Center is your one-stop clearing-house of in-depth information on topics as timely as today's ed-tech headlines. Part of the ERC's secret of its success lies in its flexibility and variety. The format allows for coverage of broader trends and issues such as network security or professional development while simultaneously delivering education-relevant insights on complicated and specific issues. One example is the "eRate Resource Center," a collaborative effort between *eSchool News* and Funds for Learning, LLC. This rich resource is replete with vital information: survival guides, funding tips and guidelines, instructions on free "eRate Checkups," and more. Because of this flexibility and utility, many of the world's leading technology companies have joined forces with *eSchool News* to continue to provide this in-depth, streamlined access to vital information on education's most pressing technology challenges.

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eSN's Video Resource Center is your window on the ed-tech world

Nothing brings ed-tech news and information alive like targeted video programming. That's why *eSchool News* developed the Video Resource Center (VRC). It's a free resource to help you keep up-to-the-minute on what's happening in your field. It also offers insights on how to make the most effective use of video in your classrooms and administrative offices.

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