



2004 Highlights

Intel and Scholastic
Schools of Distinction

Intel Corporation, Scholastic Inc., and Blue Ribbon Schools of Excellence, Inc. are pleased to announce the 20 recipients for the 2004 Intel and Scholastic Schools of Distinction awards. We are greatly honored to recognize these outstanding schools for their dedication to provide a quality educational to meet the needs of their students.

State	Category	Winner
California	Academic Excellence	Whitney High* Cerritos, California
California	Community Involvement	Abarham Lincoln High* San Jose, California
California	Involved Parents/ Teachers	Cornerstone @ Pedegral Elementary* Rancho Palos Verdes, California
California	Professional Development	Sherman Oaks Community Charter* San Jose, California
Florida	Teamwork	Kendale Elementary School* Miami, Florida
Georgia	Best of the Best	Houston County High School* Warner Robins, Georgia
Kansas	Partnership	Edith Sheuerman Elementary* Garden City, Kansas
Kentucky	Involved Parents/ Teachers	Summit Elementary* Ashland, Kentucky
Massachusetts	Teamwork	Arthur A Coolidge Middle School* Reading, Massachusetts
New York	Academic Excellence	KIPP* Bronx, New York
New York	Community Involvement	Townsend Harris High* Flushing, New York
Ohio	Partnership	New Albany High* New Albany, Ohio
Ohio	Technology Excellence	Beachwood Middle School* Beachwood, Ohio
Oklahoma	Professional Development	Deer Creek Prairie Vale Elementary* Edmond, Oklahoma
South Carolina	Technology Implementation	Irmo Elementary* Irmo, South Carolina
Tennessee	Technology Excellence	Greenville Middle School* Greenville, Tennessee
Texas	Technology Implementation	Walnut Hill Elementary* Dallas, Texas
Texas	Best of the Best	MacArthur High School* Irving, Texas
Texas	Innovative Use of Technology	Bishop Dunne Catholic* Dallas, Texas
Washington	Innovative Use of Technology	Talbot Hill Elementary* Renton, WA



Case Studies

- Learn how MacArthur High School has succeeded in technology integration, professional development and leadership. [Learn How](#) (PDF, 8 pages)
- Learn how Houston County High School has transformed to one of the most technologically advanced learning communities in North America. [Learn How](#) (PDF, 8 pages)



innovation in
education

MacArthur High School Puts Technology in Hands of Every Student

MacArthur High School in Irving, Texas, is a large, comprehensive high school that serves a racially diverse population. Some 40 percent of the 2,400 students meet federal poverty guidelines, and more than 60 languages are spoken in students' homes. In a strategic effort to improve results for diverse students and prepare them for success in the Twenty-First Century, the school has brought technology into every aspect of teaching and learning. Technology integration, professional development, and leadership are the school's interwoven strategies for success.

MacArthur High gives each student and teacher a laptop to use at home and at school. A wireless network has turned the entire campus, indoors and out, into an online community. Extensive professional development efforts help teachers get comfortable with new ways of teaching, using distance-learning labs, projection systems, video streaming, multimedia tools, classroom management software, and dozens of other technologies to engage students in more active learning. The school has earned the state's highest academic rating for the past four years and was designated a National Blue Ribbon School by the U.S. Department of Education in 2002.

By eliminating the digital divide, making technology pervasive and equitable, and helping all students acquire Twenty-First Century skills, MacArthur High has set its sights on nothing short of excellence.

Learn how these key strategies for systemic school improvement have led to MacArthur's success:

- **Effective Leadership**»
- **Sustained Professional Development**»
- **Twenty-First Century Instruction**»
- **Engaged Community of Learners**»

Finally, some **Questions to Consider** are included to spark discussions in your school about exemplary practices and Twenty-First Century learning.

Case Study

**Intel and Scholastic Schools of Distinction
MacArthur High School**
Irving, Texas

Showcasing Excellence

Intel and Scholastic have teamed up to develop the Schools of Distinction Award program, administered by the Blue Ribbon Schools of Excellence Foundation. This program highlights successes of the best schools in the United States, celebrates their effective use of technology, demonstrates the benefits of strong teamwork, and showcases the classroom practices of excellent teachers.

The Intel and Scholastic Schools of Distinction Award recognizes two schools for overall excellence by naming them the Best of Best. For 2004, the two overall winners were selected from more than 1,200 applicants. Judges looked for excellence in the use of technology, involvement of parents and community, professional development, teamwork, and high academic standards. The two Best of Best schools each received a grant of \$25,000 from the Intel Foundation.

This case study provides an in-depth look at the comprehensive approach to excellence taken by one of the 2004 Best of Best winners, MacArthur High School in Irving, Texas. At the end of the case study, you will find some questions to consider, designed to spark discussions about what your school can learn from these exemplary practices.



“This was a good school when I arrived, but it had every bit of potential to become great.”

Effective Leadership

A New Principal Arrives

Contrasts abound in the neighborhoods of Irving, Texas, a Dallas suburb of about 170,000. On one end of the city, affluent families live in gated communities of multi-million dollar mansions, and luxury cars line the parking lots of well-manicured business parks. A few miles to the north, rolling suburbs shift to a more urban scene. City streets are lined with aging apartments converted to government-subsidized housing. Brand-new immigrants come here from all corners of the world—Africa, the Middle East, South America, India, Southeast Asia. After arriving at Dallas-Fort Worth International Airport just a few miles away, they follow the bus line to Irving in search of a fresh start in a new country. Migrant workers make their home here for part of the year, too, moving back to Mexico when seasonal work ends.

MacArthur High School, a two-story building of beige and red brick, has become the place where these diverse lives intersect. During the past decade, the school population has shifted to reflect demographic trends in the larger community. Once enrolling a predominately white, upper-middle-class population, MacArthur today serves a student body of 2,400 that includes an almost equal mix of black, white, and Hispanic students. Nearly 40 percent are growing up in poverty, including about 50 students whose families are homeless. More than 17 percent are learning English as a second language, with more than 60 different languages spoken in students' homes.

From 1963, when the school opened, until Tracie Fraley arrived as principal four years ago, MacArthur High had only three other principals. “That tells you something about the value of tradition here,” says Fraley.

The new principal, a 22-year veteran of education, knew it was time for change. “If we kept doing business the way we’d always done it, we were not going to get the results we needed with our students,” she says. Specifically, Irving Superintendent Jack Singly gave her a charge to “boost things academically, tighten up the discipline, and get some innovation going. This was a good school when I arrived,” Fraley adds, “but it had every bit of potential to become great.”

Rather than mandating top-down reforms or using an off-the-shelf school improvement model, Fraley has succeeded by taking a collaborative approach to school leadership. One of her first steps was to engage every member of the school faculty in an intensive self-study process. The principal sat with the faculty as a whole and with small groups of teachers, asking: “What’s working? What are our challenges? Of these challenges, what factors can we control? What can’t we change?” They dug into research to find answers. The results gave the school a solid assessment of its strengths and weaknesses.

Several factors indicated the need for new approaches to teaching and learning, including:

- **Accountability:** The state accountability system was changing to reflect more rigorous standards. The Texas Assessment of Academic Skills (TAAS) was being replaced by the Texas Assessment of Knowledge and Skills (TAKS). “The old system was a one-time test that measured minimum kinds of skills. The new one includes 10 tests across three grades,” Fraley explains. “The content is much more rigorous, not only in terms of what students need to know but also the thinking processes and problem-solving skills they are expected to be able to use.”
- **Career skills:** Business leaders wanted more from the school system. When Fraley and district leaders met with business leaders, she says, “They kept telling us that kids are not ready when they leave high school. They may know how to read, write, and do math, but they lack the skills that will prepare them for the workplace. Knowing how to use technology is just one part of it. Our students also need to be able to work as a team, to collaborate, to communicate—all of those Twenty-First Century skills.”
- **Risk factors:** Demographic shifts in the community have brought new challenges into the classroom. Research shows that students from low-income families face a variety of risk factors that can interfere with academic success. Fraley admits that some factors—high mobility rates, family poverty, parents with little formal education themselves—are beyond the school’s control to change. Other factors, however, offered a place to focus. As Fraley explains, “The students who are most successful tend to have certain resources at home. They have computers, access to the Internet, access to research. We decided to level the playing field and give everyone equal access to resources which would enhance their education.”

The self-study process culminated in the school’s successful application as a National Blue Ribbon School in 2002. Another lasting outcome has been the establishment of several stakeholder groups to foster ongoing collaboration and keep the entire learning community focused on improvement. Study teams have explored research, looking for model solutions and research-based strategies. For example, MacArthur opened its ninth-grade academy two years ago to help freshmen make a successful transition into high school. MacArthur teachers have visited other schools to see examples of classroom technologies in use.

Through its collaborative approach, MacArthur High has crafted a blueprint for school improvement that has buy-in from teachers, administrators, and the broader community. Fraley continues to meet regularly with the Principal’s Council, Campus Instructional Leadership Team (CILT), Campus Improvement Committee, Student Leadership Forum, and other groups of cohorts. “Each one has a different focus and mission,” she explains. Every constituent group on campus is represented, and the larger community also has a voice.

The school district, local business leaders, and the broader community have shown their support for the improvement efforts at MacArthur High and also across the district. In 2001, voters approved a generous bond issue to pay for new technologies and remodeling to help educators in the Irving School District realize their vision. Fraley was elated, but she knew that equipment alone was not going to be the answer. “I had to convince the faculty that they were better than they even realized,” she says. Bottom line, according to the principal: “We never think we have arrived. We are constantly looking for ways to do things better.”

Next step: Professional development to help teachers develop new classroom practices»

What Others Say

What do others in this learning community have to say about Principal Tracie Fraley’s leadership style?

Connie Riley, associate principal: “She has provided so much opportunity for teacher engagement. When she came in, teachers looked around and asked themselves: ‘You mean, you want to hear my opinion? You trust me to make recommendations?’ That openness has helped get everybody on board with change.”

Brandy Avant, teacher: “I’m excited because I’m learning. The changes she has helped us make and the opportunities she has created have rejuvenated me as a teacher.”

Brenda Williams, truant officer and dropout prevention specialist: “She has a knack—she is so positive. By complimenting you, she makes you want to do a better job.”

Sherry Boone, parent volunteer: “The principal’s door is always open. She’s always available and interested in what you have to say. It’s a very nurturing environment.”

Paula Barnhouse, counselor: “This principal has done a good job of educating the faculty about the needs of our student population. She has helped teachers and staff understand how to work with diversity. The more we know about our students, the better job we can do to help them all achieve.”



“We got the sense there was no turning back, so we’d better get ready.”

Sustained Professional Development

Helping Teachers Embrace New Tools and Strategies for Learning

In 2001, the year MacArthur High began expanding its technology infrastructure, Principal Tracie Fraley posted a picture of herself on the school Web site. “There I was, holding a laptop, PDA, cell phone, two-way radio—all of it,” she recalls with the easy laugh that her colleagues have come to know well. The photo was a joke, but only in part. “We have tried hard to model the effective use of technology for our teachers,” says the principal.

At faculty meetings, Fraley and other administrators began making electronic presentations and showing videos to introduce new resources. Electronic management tools for tracking grades and attendance began to replace paper-and-pencil tasks. A new electronic tardy system was introduced, leading to a drop in daily tardies from 500 to 42. Even the staff handbook, traditionally distributed as a notebook, was handed out on a CD.

In the first phase of technology integration, teachers also received their own laptops and projection systems for their classrooms. An advocate of using data to guide decisions,

Fraley conducted a survey and learned that most of her teachers were uncomfortable, at best, with using these new tools. The majority of the more than 150 teachers rated themselves as beginning users “who didn’t even want to turn on the computer,” Fraley says. “About 40 percent said they’d try, but weren’t sure it was a good idea.” Only a handful—fewer than 10 teachers—were enthusiastic. “These were the few who already embraced technology and saw a million ways to start using it in their classrooms,” Fraley says. That information, coupled with research about teachers as learners, reinforced the decision to make professional development widely available, ongoing, and tied directly to classroom instruction.

Teachers felt a sense of urgency to acquire technology skills. In 2002, freshmen and sophomores would get their own laptops; in the fall of 2003, juniors and seniors would receive theirs, making technology pervasive on campus. “We got the sense there was no turning back,” says one teacher, “so we’d better get ready.” A few veterans chose to retire rather than adapt. “A handful saw the door,” says one teacher, “but most of us saw the light.”

Overall, Fraley says, the wide range of professional development offerings is helping innovative ideas take root and become part of the school culture. “I’m seeing teachers change their instructional style. They are moving away from being the sage on the stage to facilitated learning. Students have ownership of their learning and their products, as opposed to just regurgitating what the teacher says. The level of understanding and higher-order thinking we’re seeing our students produce is astounding.”

Professional development offerings at MacArthur have steadily expanded to include:

Summer institutes: Summer institutes have helped to build a shared foundation and raise teachers' comfort level with classroom technologies. A comprehensive five-day technology institute took place in the summer of 2002, just before laptops were distributed to ninth- and tenth-graders. Another institute was offered the following summer, before laptops were given to eleventh- and twelfth-graders. Additional summer offerings have focused on using tools such as Blackboard Learning System*, a classroom management system that allows teachers and students to keep assignments, interactive lessons, research materials, and other resources online. Since the system was introduced, teacher participation in Blackboard has increased from four to 108. As more resources become available through the district, such as Thinking Maps* to create visual representations of student thinking, new professional development sessions are offered. For example, when an academy for ninth-graders was established two years ago, faculty and administrators received special training to help them meet the needs of incoming students.

Instructional technology specialists: Two former classroom teachers provide the staff with ongoing, collegial support in designing effective lessons that are supported by technology. Rhonda Jones and Richard Rodgers work one-on-one with teachers as instructional technology specialists (ITS). "We start by asking about their learning goals. What do they want to accomplish with students?" Jones explains. "Then, we help them bring technology into that." Their focus is squarely on teaching first, with technology as a supporting tool. For example, a statistics teacher wanted to develop a project where students would conduct surveys, test hypotheses, make inferences and predictions, and analyze results. Rodgers found the appropriate software package and helped design the challenging project. "The software makes the learning process more enjoyable and more visual, but there's no way you can use it without understanding the fundamentals behind it," Rodgers says. "This is the kind of project that gets students to use higher-order thinking to solve a problem."

Technology mentors: Mentors work with their colleagues in each content area, answering questions, modeling effective lesson plans, and making sure good ideas get shared.

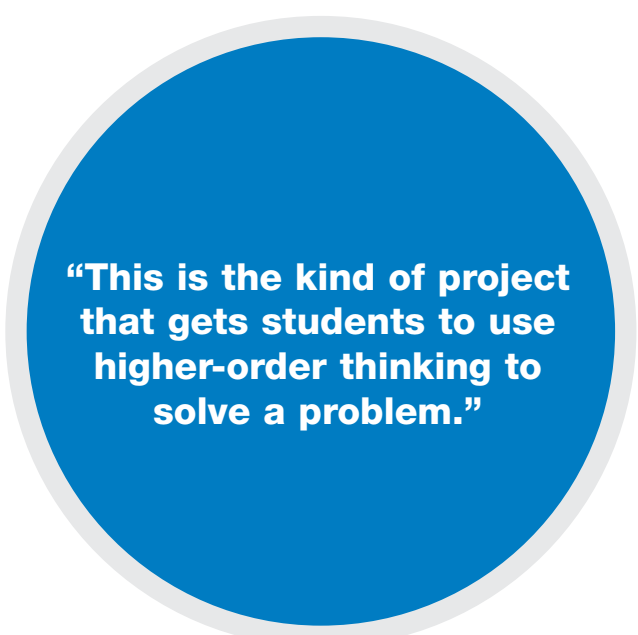
Tech Tuesdays: A weekly forum with instructional technology specialists and tech support staff gives teachers ongoing opportunities to exchange ideas and ask questions about technology. A key, says Jones, is making sure "teachers are comfortable asking any question. We're here to help them find the resources they need. We're fixers."

Teachers as leaders: As teachers get more comfortable integrating technology in new ways, they are taking on the role of instructional leader. Brandy Avant, a world geography teacher who is widely known on campus as a technology innovator, appreciates the change. "This year's summer technology conference will be taught by our own teachers. Instead of someone coming in to give a workshop who knows about technology but maybe has not been in the classroom, we now have our own teachers sharing ideas with their colleagues. Our teachers are at the point where maybe they have tried, failed, and succeeded with technology, and now are at the next stage of sharing what they have learned."

Individual plans: Each teacher maintains an Individual Development Plan, outlining goals for his or her future learning. That means teachers are empowered to chart their own course and choose professional development that meets their needs. Says one teacher, "We used to sit through professional development where someone would lecture at you. You'd sit there thinking, why am I here? Now, we get to decide what we need to learn. It's useful."

What does Twenty-First Century instruction look like?

[Read more](#)



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Twenty-First Century Instruction

In Every Classroom, Technology Opens New Doors

What does Twenty-First Century instruction look like? Here's a sampling from MacArthur High classrooms:

Anatomy: In the Distance Learning Center, anatomy students watch on the wide screen as an orthopedic surgeon performs a total-knee replacement—in real time. Students from three other cities are also observing via videoconference. At one point, a MacArthur student asks a technical question that causes the surgeon to stop what he's doing, peer into the camera, and ask: "Where do you go to school? Do you plan to go into medicine?" The heightened student engagement and mastery of content are among the signs of success for the distance learning resource.

Music: Choir Director Michael D'Spain, one of MacArthur's newest faculty members, pauses to tell a group of students about the music theory class he is planning for the coming school year. A new music technology lab will enable students to make their own recordings, and students know that D'Spain will let them choose the genre. "Rap, hip-hop, traditional—whatever grabs their interest," he says. "You have to meet students where they are." His approach is working. During the 2003-04 school year, choir participation grew from 90 to 140 students. Next year, he predicts the number will grow to 260. D'Spain is ready and eager for the challenge of using new technologies in a growing program. He says, "This school is willing to trust me to select the resources that will benefit my students. I can't wait."

Senior English: Dr. Pat Munro, a 40-year teaching veteran, is respected as a master teacher by students and colleagues alike. She admits that she was initially "more than skeptical" when it came to using laptops in her classroom. Now, she regularly watches students make multimedia presentations that hold their classmates' attention. She sees technology supporting students throughout the writing process. Students save multiple drafts of works in progress. The teacher or peer editors can offer feedback at various stages, not just at the end of an assignment. "It's been surprisingly easy to adapt to technology," she says. "The students are already comfortable and knowledgeable. They're so ready and willing to show you what they know. As a teacher, nothing motivates you more than your students' desire, interest, and curiosity. We're better teachers when we have the means to inspire our students."

World Geography: Brandy Avant's world geography class includes a wide range of learners, including gifted, special education inclusion, and English as a second language students. In an culminating project, each student is creating a Web page to showcase what he or she has learned about a specific country, including a variety of maps to represent population, physical features, and other information. Some students have decided to expand their pages and add video

clips and recordings of national anthems. In this self-paced learning environment, Avant observes, "No one's getting bored." When students have questions, they are just as apt to consult one another as to ask the teacher. This is a different kind of classroom than Avant remembers from even a few years ago. "I used to be more teacher-focused. I would lecture and then have the students do activities that I planned. I don't do that anymore. I ask them questions and have them go find the answers. I give hints and facilitate, but it's more student-centered learning." Integrating technology in deeper ways has meant letting go of some old teacher habits, she admits. Desks are no longer lined up in neat rows. And there's plenty of chatter. "Letting go of the silence was the hardest thing, but I realized we have to let students work together and help each other. Now, I get uncomfortable if my class gets too quiet."

Home Economics: Longtime teacher Patsy Parrish listens to two students discussing a clothing design: "One describes a piece of clothing she wants to make. The other says, 'I know just what you have in mind.'" He goes to the Internet, downloads a pattern, and begins adapting it and customizing it on the computer screen." In home economics, as in every other content area, technology is creating new opportunities for collaboration and problem solving, she says. Her favorite teaching moment? Pulling up a chair next to a student who has asked an interesting question and saying, "I don't know. Let's find out together."

Football: The school day is winding down, but Coach David Beaty is just warming up. In a technology-enriched athletics meeting room, he downloads video clips for his football players to study before the next game. He uses a projection screen to go over plays and does statistical analysis to predict which plays their opponents are most likely to call. His winning football program is strongly linked to academic success. Students who fall below 75 percent in any class are required to attend academic tutoring sessions after school. Other teachers email him if they have any concerns about a player's academic progress. In the past two years, he has lost only two players to academic ineligibility, and his goal is nothing short of 100 percent success in the classroom. When it comes to technology, the coach says, "We've just begun to scratch the surface with these tools. It's almost ridiculous how deep this goes. There's no turning back."

When Principal Fraley observes these classroom scenes, she knows the school is moving toward more effective teaching and learning. The biggest eye-opener, she says, came at the end of the 2003-04 school year, when all students had to turn in their laptops. There were still several school days remaining. The same teachers who began the year voicing reluctance about laptops were now outspoken advocates of the technology. "It was a dramatic shift. They went from saying, 'We don't want it,' to asking me, 'How dare you take this away? How am I supposed to teach?'" Fraley adds with a smile, "I never expected we'd be there."

Engaged Community of Learners

Giving Students 'What They Need for Life'

What do students say about their Twenty-First Century learning experience at MacArthur? "Teachers are broadening what they teach, accessing resources we've never had before," says one student. Another says she likes the way teachers use an electronic assessment tool, called Class Performance System*, for content review and immediate assessment. "We find out what we know, what we need to review, where we need help. And it's fun," he says, comparing the "clicker" that students use to a game show remote control. Yet another student says she understands math better this year, thanks to an online visualization tool. In a U.S. History class, students use an online textbook. "In the past, our textbooks have been out of date or even missing pages," says a student. "This gives us current information."

Across campus, at all hours of the school day, technology is opening new doors to learning. Ulyses Childs, an ROTC teacher and also a MacArthur parent, arrives on campus at 6:30 a.m. daily, and says he sees students sitting outside on the gym steps, using the wireless network to do research or submit homework electronically. It's the same story late in the afternoon, when students linger outside the school entrance to log on for email or to complete assignments. For students without access to the Internet at home, the school's wireless network provides connection to resources at all hours. Childs adds, "Students get everything they need here—for life."

Students have adapted quickly to the technology at MacArthur, not only in academics but also in the wide range of activities that draw active participation here. The student council uses digital video gear to make public service announcements. A daily television news show is produced by students. Even the school Web site is student-run.

Parents have also become more connected to their students' learning. Students who are learning English as a second language, for example, have begun sharing online resources

with their parents, helping these new members of the Irving community build their English skills. Parents use email to stay in touch with teachers. Counselors also make use of the school Web site to share important information with parents. Parent volunteer Sherry Boone says parents feel more connected to the school and, thus, more likely to get involved. "This is a place where, when they see something that needs to be done, parents put their boots on and go to work," she says.

What else makes MacArthur special? "We stand out—in a good way," says a senior who has been an active participant in student leadership. "When we go to conferences, we are always the most diverse group." Adds Childs, whose son is a star on the football team and an aspiring visual artist, "This is a school where every student can find a place to fit in." Counselor Paula Barnhouse says, "It's easy on this campus to feel part of the group. We work hard to make sure all kids have a place."

What will students remember most about their time here? "Definitely the teachers," says one senior boy. "We can tell they care about us." A girl who had to deliver a speech before a state student leadership conference of 5,000 delegates says that experience "makes me feel like I can do anything. This school gives you so many opportunities to grow."

What inspires this diverse community of learners to keep working harder, aiming for excellence? "We have gone through years when we weren't the best," says one boy. "That just makes us push harder, whether it's sports or ROTC or academics." Another student chimes in, "You look back on the past and say, I think I can do better. When we leave here, we can tell people: 'This is how determined we are. We're from MacArthur. We don't give up.'"



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Questions to Consider

Once you have read about MacArthur High, you may want to explore the strategies your own school is using to address similar challenges. Here are some questions to help spark discussions about effective practices within your school community. Recognizing your own strengths will help you get ready to apply for the Intel and Scholastic Schools of Distinction Award.

Effective Leadership

- What are the benefits of MacArthur High's collaborative approach to school leadership?
- Would a similar strategy work in your school?
- What is your school doing to build buy-in for school improvement efforts from teachers, students, parents, and the larger community?

Professional Development

- How has MacArthur High met teachers' needs for sustained professional development, focusing on technology integration?
- What are the benefits of encouraging teachers to become instructional leaders?
- How does your school provide ongoing professional development to improve classroom practice?

Twenty-First Century Instruction

- How do the classroom examples featured in this case study meet students' learning needs?
- Are teachers at your school developing similar, technology-rich projects?
- Do you and your colleagues create opportunities to share effective project ideas with each other?

Engaged Community of Learners

- What has MacArthur High gained from reaching out to the broader community?
- What is your school doing to build connections with students, parents, businesses, and other community members?



innovation in
education

Houston County High School Transforms Learning Through Technology

Students attending Houston County High School don't even blink anymore when visitors step into their classrooms. Being the center of attention has become a fact of life here in Warner Robins, Georgia, where a traditional U.S. high school has undergone a rapid transformation into one of the most technologically advanced learning communities in North America.

Every innovation at Houston County High School—from the wireless campus to the interactive classrooms to the state-of-the-art music technology program to the embryology lab in the school farm—has been incorporated with the goal of improving teaching and learning.

How has this School of Distinction's vision for learning been realized? And how did it happen here, 120 miles south of Atlanta in a semi-rural community that grew up around an Air Force base?

Learn more about the strategies behind Houston County High School's success, including:

- **Effective Leadership**»
- **Strategic Technology Integration**»
- **Sustained Professional Development**»
- **Collaboration and Partnerships**»

Case Study

Intel and Scholastic Schools of Distinction
Houston County High School
Warner Robins, Georgia

Showcasing Excellence

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This case study provides an in-depth look at the comprehensive approach to excellence taken by one of the 2004 Best of Best winners, Houston County High School in Warner Robins, Georgia. At the end of the case study, you will find some questions to consider, designed to spark discussions about what your school can learn from these exemplary practices.

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Effective Leadership

Starting With a Vision

When Mike Hall arrived as principal of Houston County High School in 1997, he liked what he saw. The school was then only six years old but already had a strong culture of academic excellence. Discipline problems were minimal. Parental and community support was strong. Teaching experience was deep. In fact, Hall knew some of the faculty members personally. They had taught him 30 years earlier when he attended an older high school on the other side of town. Growing up in a military family, Hall spent his childhood in communities around the world before settling in Warner Robins, home of Robins Air Force Base, for junior high and high school.

By 1997, Hall had gained enough practical experiences as an educator to hone his own vision of what a high school for the Twenty-First Century might look like. During his 16 years in the classroom, teaching science and computer literacy, he had seen how hands-on learning experiences and access to powerful tools can ignite students' curiosity about the world. As a former coach and athletic director, he appreciated the benefits of healthy competition, teamwork, and the pursuit of goals. As a technology coordinator, he had become familiar with both hardware and software applications to improve education. And as an assistant principal, he had seen firsthand how discipline issues can erode valuable instructional time.

Hall's vision also was informed by research. His doctorate focused on the complex challenges—academic, emotional, and social—facing ninth-graders at their transition to high school. Freshmen account for a disproportionate number of high school disciplinary referrals, retentions, and dropouts. Yet, the research literature also provides convincing evidence

that ninth-grade academies can ease the transition and put students on a stronger foundation for the rest of high school. “I wrote my dissertation on ninth-grade academies,” Hall says, “and I have spent a tremendous amount of time looking at the research and data on that transition.”

At Houston County High School, Hall saw the opportunity to put his research and experience into practice, and create an enhanced learning environment to engage a new kind of learner. Today's students will need to be lifelong learners to adapt and succeed in a rapidly changing workplace. “They may change jobs 12 times in their adult lives,” Hall points out. The ones who will succeed “will be able to think critically and adapt to change.” To prepare them for the future, the traditional high school model also has to evolve, Hall believes.

“This was a perfect location for trying new things,” says Hall. “A lot of positive factors were already in place, and we didn't face some of the challenges you might find in other school settings.” The school's rapid growth is one sign of community support. Since the high school opened in 1991 with 600 students, it has grown to include more than 2,200 diverse learners. About 28 percent are racial minorities; more than 13 percent are from low-income families; more than 16 percent receive special education. Academic excellence earned the school recognition as a National Blue Ribbon School.

The new principal began leading the school toward change by focusing on three specific goals. “All of them move in a common direction: improving the type of education we are able to provide our students.” His first steps toward school improvement included:

Establishing a ninth-grade academy: By creating a school-within-a-school program just for ninth-graders, Hall sought to give incoming students more focused attention and help them build a foundation of strong academic skills. “We looked at doing a lot of things in ninth grade to help these students be successful as they moved on,” he explains. Specifically, Hall was looking to improve student performance, decrease the dropout rate, and reduce disciplinary issues. Among the strategies: creating a ninth-grade class called High School 101 to teach time management, decision making, study and research skills, and help students understand their own learning styles. The principal hand-selected the teaching staff when the new academy opened in 1998. Not accidentally, many of these teachers are also coaches or club sponsors—adults with the interpersonal skills to build positive relationships and motivate students. Since the academy opened, discipline referrals have dropped by 55 percent and student retentions in ninth grade have dropped by 42 percent.

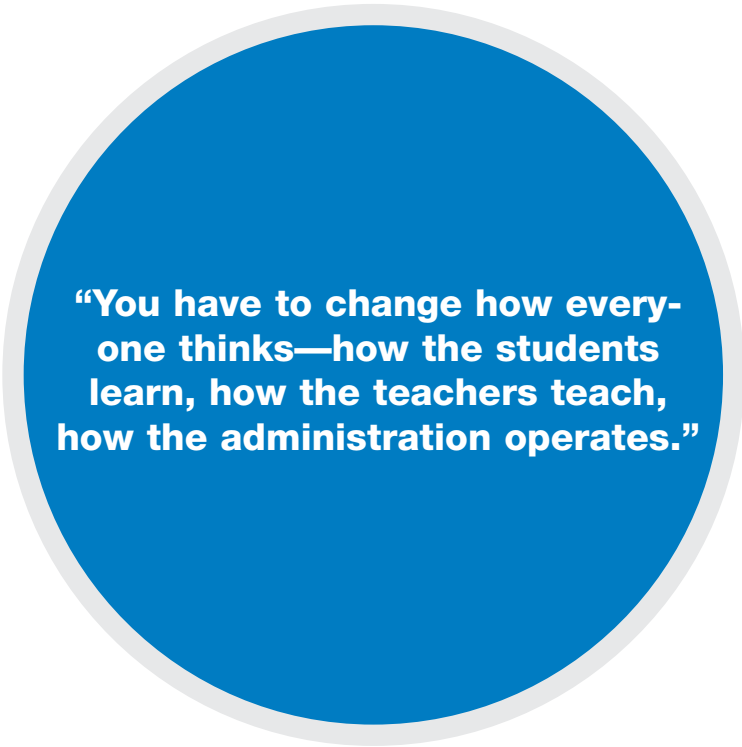
Expanding academic support: Providing students with expanded instructional support, beyond the traditional school day, was another first step toward Hall’s vision. He started by creating evening tutorial sessions, offered two nights each week and staffed by teacher volunteers. The support system has steadily expanded as access to technology has grown, to include online academic forums and instant messaging for homework help. A Web-based system lets parents, teachers, and students check on grades, attendance, and test scores, in real time. If students are struggling, many teachers offer personalized tutoring before and after school.

Improving access to technology: When Hall arrived, Houston County High School was low-tech in every respect. There was no network. One green-screen computer in the office could be used to access student information, but the principal wasn’t an authorized user. About 100 older computers were sitting in vocational classrooms, used for teaching keyboarding and other simple business applications. Most teachers—a whopping 65 percent—considered themselves to be less than beginning users of technology. Says Hall, “That meant the majority of our teachers didn’t even know how to turn on a computer.”

The principal quickly learned that integrating technology into the school would mean more than bringing in new equipment. “You have to change the whole culture of the school,” he says, in hindsight. “You have to change how everyone thinks—how the students learn, how the teachers teach, how the administration operates.”

How did Houston County High School make that giant step into the future?

Read more about the school’s strategic integration of technology. [.....»](#)



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“It would have been easier not to rock the boat, but there are also advantages to pushing for change.”

Strategic Technology Integration

Marketing New Tools on Campus

Knowing that most of his teachers were absolute beginners when it came to using computers, Principal Mike Hall didn't try to rush technology into the classroom. “The first couple years, our focus was not on the students,” he admits. He had no doubts that students would quickly warm up to using technology, but adds, “Until you get the hardware in place and the teachers to a certain comfort level, you can't involve the students. Otherwise, you're just going to create frustration.”

Hall faced plenty of other battles to keep him busy at first, including going head-to-head with the central office about creating online access to student records. “At every phase of technology integration, I had to fight. As a leader, you have to decide which battles are worth fighting. It would have been easier not to rock the boat,” he admits, “but there are also advantages to pushing for change.”

He quickly found an ally in Wally Reeves, a newly hired instructional technology (IT) director for Houston County School District. Reeves took care of getting the network built, creating the infrastructure for a connected campus. Meanwhile, Hall got busy rounding up enough donated equipment so that every teacher would have a computer workstation. Although the school would eventually receive generous corporate grants and donations for acquiring technology, the first years were lean.

Working together, Hall and Reeves also began to create applications customized to meet the needs of Houston County High School. “IT directors and principals don't always speak the same language,” Hall points out. “By working together, we could come up with solutions that would make sense for our teachers.”

They focused first on administrative tasks, such as an electronic gradebook system designed to eliminate much of the paperwork of the school day. By requiring teachers to use the new electronic system for routine administrative tasks, Hall was forcing even reluctant teachers to get used to computers. Not all were pleased.

“One of the 30-year veterans—who had been my teacher in high school—told me she didn't need my new ideas. Other people called me names. That's all part of the challenge of integrating technology,” Hall says. “You have to be patient. You are changing a paradigm that's been in place for 150 years. You can't make a change tomorrow. It comes down to leadership. The leader has to make technology a part of the culture of the school. It has to be part of the overall school improvement process. That's the only way the culture will change.”

Once the hardware was in place and all teachers were at least familiar with computer basics, Hall led his staff toward the next phase: bringing technology into the classroom. Rather than distributing equipment all over campus, Hall was selective. The ninth-grade academy was the school's first test bed for classroom innovations, such as interactive white boards and use of classroom video. The ninth-grade academy continues to be the site of much innovation, such as introducing PC Tablets for students to use at school and at home. When these tech-savvy ninth-graders move into tenth grade and beyond, Hall says, “they are used to learning in a certain way. They know they are more engaged, have more fun, and learn more when their teachers integrate technology. They put pressure on their new teachers to teach in the same way.”

An astute marketer, Hall waited for his teachers to ask for new equipment. And ask again. He wanted demand to build so that teachers would clamor for technology and commit to using it for instruction. At the same time, he also expanded professional development offerings so that teachers would be successful when they decided to start using technology to meet their instructional goals.

Read more about the school's approach to **professional development**»



“The technology has to be integrated into the curriculum, not be an add-on.”

Sustained Professional Development One Size Does Not Fit All

When it comes to effective technology integration, “one size does not fit all,” says Principal Mike Hall. “Every classroom is a different environment. You have to show the teacher in that environment how technology can change the way he or she teaches.” At Houston County High School, that has meant customizing professional development to fit individual teachers’ learning needs and teaching styles.

For example, in an approach called In-Time Professional Development, Houston County High School has tied technology integration to school improvement efforts in specific content areas. If English teachers are focusing on literacy goals, they learn about software designed to help students with critical reading skills. When science teachers are focusing on inquiry methods, they learn to use video microscopes during lab demonstrations. Foreign language teachers who want to develop authentic assessments learn to use software to create simulations of social situations. Students use their language skills to virtually maneuver through an international airport, order dinner in a restaurant, or participate in a simulated job interview. In each case, Hall says, “the technology has to be integrated into the curriculum, not be an add-on.”

Technology integration efforts have also reinforced the role of teachers as lifelong learners. Hall explains how this works: “Let’s say you are the first teacher who asks for an interactive board for your classroom. You’ve probably asked for it a number of times, and I’ve asked you to explain what it does and how it changes student learning. We agree to buy you the device, but only if you will become the local expert on using it. You find out how it works, what problems it might present, and how to develop lessons with it. As others want to learn how to use this piece of equipment, you are the expert who teaches them. When we go into the community to explain how we use technology, you give presentations on using this device in your classroom.”

For example, Jacqui Dravis-Wilson, a social studies teacher, became the school’s resident expert on using an interactive presentation board called Promethean ACTIVboard*. She took part in special training sessions, developed interactive lessons, and has trained her colleagues in effective use of the device.

It took about three years, Hall estimates, for technology use to take root at Houston County High School and significantly change the culture of teaching and learning. “After four or five years, it really took off. That’s when you could see a difference in instruction.”

A former science teacher, Hall describes what this cultural shift means in a biology classroom: “When you introduce a lab with a video microscope, you can start by showing the whole class what they are supposed to be looking for. Now, you are ready to expand the lesson. You have the students take pond water samples and create their own slides. They catch live specimens and create their own digital videos. They stop the action to create digital pictures. You print these out and test students on live specimens that they have collected.”

The difference for the learner is huge, Hall says. “You’ve turned it around. The teacher is no longer the source of information. The students are doing more exploratory learning, which is what you’re trying to do as a teacher: facilitate the development of the students’ critical-thinking skills.”

All across the quarter-mile-long campus, similar scenes of active, engaged, project-based learning now unfold every school day. Science and math students develop independent research projects that earn them awards at events like the Intel International Science and Engineering Fair. Even vocational classes have been transformed. For example, in the school farm, students who are raising pigs and dairy cows also perform artificial insemination and conduct embryo transfers. “This used to be a traditional ag program,” Hall says. A new teacher envisioned ways to incorporate technology, “and all of a sudden you have jumped levels in terms of learning,” the principal says. Similarly, in what was once a typical woodshop program, students now use AutoCAD* to design custom furniture and program lathes to do wood-turning. However, they use traditional woodworking methods—tongue-and-groove construction and no screws or staples—when it’s time to assemble the finished products.

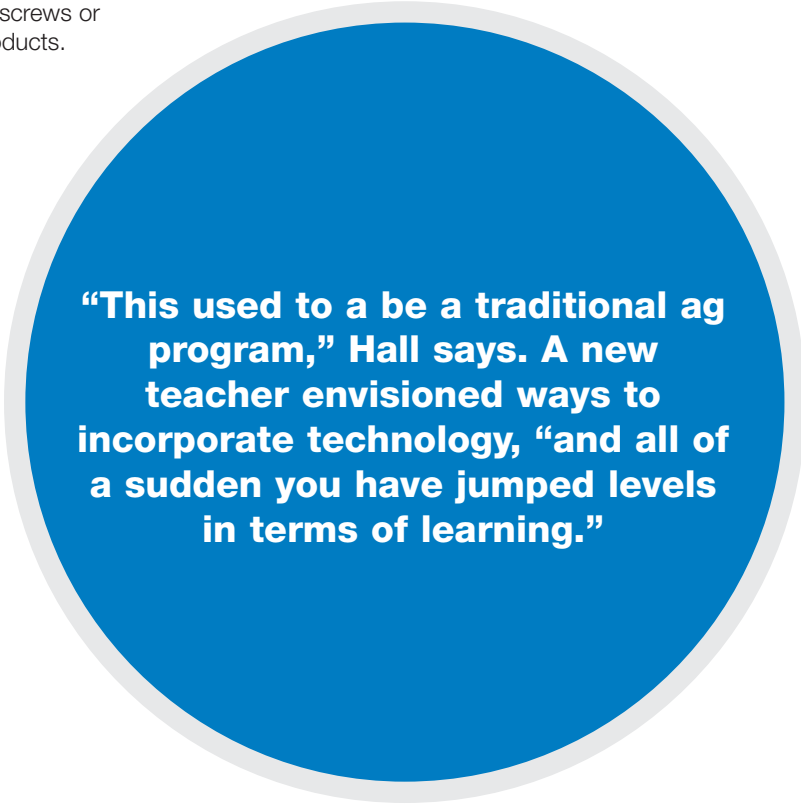
Increased teacher collaboration has been another factor to help change the culture of teaching and learning. In addition to their 24 hours of annual professional development, many teachers also meet informally to exchange project ideas and share new ways of integrating technology. “I didn’t plan that, but it’s been a great sign,” says the principal.

Houston County High School sends its teachers to other schools across the country to share ideas through a formal Teacher Exchange Program. Hall and his faculty members make presentations at dozens of regional and national conferences and host a steady stream of visitors who are eager to see what Twenty-First Century classrooms look like. Houston County High School hosted 20 visitor groups three years ago, 60 the next year, and more than 100 during the 2003-04 school year.

The school’s increased visibility has made it easy to recruit talented teachers who are advocates of project-based learning and technology-enriched instruction. While schools in many rural communities struggle with turnover, teacher recruitment and retention are not issues in Warner Robins.

The school’s success has also opened new doors for collaboration in the broader community. How has Houston County High School leveraged its success by building relationships with businesses?

[Read more](#)



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Collaboration and Partnerships

“Taking Us to Another Level”

Terry Smithson, education marketing manager for Intel, remembers hearing Mike Hall give a presentation at a national school reform conference in late 2002. “I decided I had to go see his school for myself. I planned to spend an hour. I stayed for six,” Smithson says. What impressed him was not just the pervasive technology, although—with more than 1,100 PCs for 2,200 students, video streaming, interactive presentation boards, and much more—the equipment was impressive. Even more important, says Smithson, “was the vision and leadership. Here’s a school that understands how to use technology to enhance instruction.”

In April 2003, Houston County High School was selected for the Intel Model School Program. As one of three showcase sites, the school receives grants for new equipment and technology resources, such as a wireless technology lab and a music lab where students can write and record their own musical compositions and arrangements. In return, the school opens its doors to visitors who want to see educational technology solutions and applications in an authentic setting. Other school-business collaborations have been established with Hitachi, Promethean, Star Software, and others. That has meant more donations of equipment, more visibility, and an ongoing cycle of improvement. Such relationships “allow us to ‘dream more than others think is practical,’” says Hall, quoting a line from Roland Barth.

Collaboration with the business community “has taken us to another level,” Hall adds. “It has brought us more technologies faster, and opened doors we couldn’t have opened otherwise. We have gained advocates. And the benefits are mutual. Collaboration is not about ‘What can you give me?’ It’s about mutual problem solving, mutual gain.” For example, Intel recently provided 28 Tablet PCs for a university research project, focusing on students in the ninth-grade academy. The research results about student achievement will be shared with the broader educational community.

Other positive outcomes are resulting from connecting the school with the larger community. “It helps to validate what

we’ve been doing all along,” says Hall. “The more people show an interest, the more they come and see what we are doing here, the more that tells our teachers: We really are pretty good. This is working.” Students, too, are rising to the challenge of being ambassadors for Twenty-First Century learning. Recently, students produced a 30-minute video to share their story about new ways of learning with technology. “There’s no doubt this experience has opened up their world,” Hall says.

New opportunities have opened up for Hall, as well. Now that he has realized his vision of creating a high school for the future, he has moved into a new statewide leadership role to take that vision to other communities. In April 2004, he was named deputy superintendent for instructional technology for the state of Georgia. “Our goal is to do what we did at Houston County, on the state level,” he says. The timing couldn’t be better. “The state is about to roll out a new standards-based curriculum. This is the perfect time for us to make technology a part of the curriculum, not an add-on.”

Hall admits it’s hard to leave the school he helped create, but he will be taking along the lessons he has learned about leadership, professional development, and collaboration. He will also foster a grass-roots approach to change. Across Georgia, Ed Tech centers will serve geographic districts, providing local schools with professional development resources, technical help, and support for seeking grants. Pilot programs across the state will showcase Twenty-First Century classrooms that fit the needs of local communities. Surveys show that the state’s teachers range from those who fear technology to those who embrace it. That’s an audience Hall already knows well. The challenges ahead are huge, but the opportunities are even greater. What continues to motivate him? He doesn’t hesitate before answering, “It’s all about making students successful.”



“There’s no doubt this experience has opened up their world.”

Questions to Consider

Once you have read about Houston County High School, you may want to explore the strategies your own school is using to address similar challenges. Here are some questions to help spark discussions about effective practices within your school community. Recognizing your own strengths will help you get ready to apply for the Intel and Scholastic Schools of Distinction Award.

Effective Leadership

- How important was the principal's vision for taking Houston County High School in a new direction?
- How has research helped to shape this vision?
- What is your school's vision for Twenty-First Century learning?

Professional Development

- How has Houston County High used professional development to change the school culture?
- What is the value of having teachers become the local experts when it comes to using specific technologies in the classroom?
- How does your school provide ongoing professional development to improve classroom practice?

Twenty-First Century Instruction

- How do the classroom examples featured in this case study meet students' learning needs?
- Are teachers at your school developing similar, technology-rich projects?
- Do you and your colleagues create opportunities to share effective project ideas with each other?

Engaged Community of Learners

- What has Houston High gained from reaching out to the broader community, including developing relationships with businesses?
- What is your school doing to build connections with students, parents, businesses, and other community members?