



The Computerworld Honors Program

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Final Copy of Case Study

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STATUS:
Laureate

Organization name:
Mooresville Graded School District

Organization URL:
<http://www.mgsd.k12.nc.us/>

Project Name:
The Mooresville Digital Conversion Program

What social/humanitarian issue was the project designed to address? What specific metrics did you use to measure the project's success?

Mooresville Graded School District (MGSD) in North Carolina encompasses eight schools and over 5,500 students in grades K-12. Of the 115 school districts in North Carolina, MGSD ranks 99th on the state's per-pupil-expenditure (first place spending the most). Additionally, the district faces a high poverty rate: 44 percent of students in MGSD qualify for free or reduced-price lunches, and the poverty ratio in the district rose significantly from 2007 to 2011. In 2007, newly appointed MGSD superintendent Dr. Edwards noticed deficiencies in student achievement within MGSD. Determined to turn this around, Dr. Edwards developed and launched a revolutionary strategic program, the Digital Conversion Program, that, through strategic partnerships with private companies, costs a mere dollar a day. The goal of the Digital Conversion Program is to employ technology to improve teaching and learning with a focus on academic achievement, engagement, opportunity and equity. Under the program, each student received a laptop for in-class and daily/overnight study work. Dr. Edwards based the Digital Conversion Program on MGSD's key beliefs and values: All students should learn for the future, not the past. All students deserve equal access to tools that will prepare them for the future. Decisions should be data-driven and student-centered. Students should be provided expanded curricular and co-curricular opportunities. And technology-enriched curriculums are the foundation for addressing diverse 21st-century learners. Since the Digital Conversion Program's 2008 implementation, student achievement at MGSD as measured by test scores has skyrocketed. Mooresville closely watches all metrics and scores to chart the multi-year progress for the children: graduation rates,

composite test score rates, remediation data, assessment data, and national test score comparisons. Relevant teacher metrics are also closely watched, as is comparative progress for the district.

Please describe the technologies used and how those technologies were deployed in an innovative way. Also, please include any technical or other challenges that were overcome for the successful implementation of the project.

The core of the Digital Conversion Program is a one-to-one laptop program with the goal of integrating mobile technology into researching, multimedia projects and 3-D learning. Since the start of Digital Conversion, Mooresville has undergone a technological revolution which has changed the way teachers teach and students learn. MGSD began the Digital Conversion by implementing full wireless capabilities in its schools, a foundation off of which MGSD was able to expand the program. The network was critical, since the district had the vision to understand full student-based computing would soon lead to an explosion in video files, collaborative learning, and peer-to-peer switching. Since 2007, over 4,500 MacBook laptop computers have been deployed to every third- through twelfth-grade student and all licensed educational staff across the district. Students "own" these district-provided laptops during the school year, taking the devices home after class and bringing them back in the morning for in-school use. Digital and interactive Smart Boards, Smart Slates and Smart Response Devices (Senteos) are used in every classroom. These multimedia tools act as replacements for textbooks and print materials and enable teachers to personalize learning environments. Maureen Tunnell, a sixth-grade teacher at MGSD, comments on the benefits of integrating mobile devices into learning: "With laptops, every student is engaged, and those who finish early spend more time researching or adding further detail to an assignment. Those kids are able to take it an extra step, whereas those who struggle can have one-on-one time with me." The technology facilitates personalized learning. MGSD also uses technology to develop student engagement in extracurricular activities. Football coaches use classroom technologies to videotape plays, edit content and comment on strategic points. The edited materials are then posted online, where students can review the feedback individually.

Please list the specific humanitarian benefits the project has yielded so far.

In just three years, MGSD students' test score composites increased in every one of its eight schools, growing from 68 to 88 percent. Likewise, MGSD's four-year graduation rate at the high school has improved from 64 to 91 percent over five years, positioning it as the second highest in all 155 N.C. school districts. Students, across all income and demographic levels, are more engaged, communicative, fulfilled, challenged. Discipline issues have all but disappeared. The spirit felt in the classroom and in the school hallways is palpable: mutual respect, teamwork, and shared responsibility all have increased dramatically. Student's eyes are opened to new possibilities, creating new life aspirations. There is a new breed of teacher as well. The computing tools integrated through the Digital Conversion Program have carved the path for an open, shared learning environment in all eight of MGSD's schools, fostering collaborative, two-way learning. By making technology a key tool for education, teachers have become collaborators with their students. Instead of educators dictating what they want their students to know, teachers have become facilitators, allowing students more freedom to discover and explore. It is a simple but poignant change, shifting the focus away from the teacher and toward the student. Dr. Randy Bolton, assistant principal at Mooresville Intermediate School, comments on the increasingly collaborative atmosphere: "When I go into classes, it amazes me that instead of the teachers being the focal point, they're now facilitators, guiding their students to where they need to go. It's a beautiful thing to see." Connie Austin, a fifth-grade classroom teacher at Mooresville Intermediate School for 32 years, agrees: "I discovered that I didn't always have to be the teacher in the classroom. I saw teachers become collaborators, willing to share and learn."

Please provide the best example of how the project has benefited a specific individual, enterprise or organization. Feel free to include personal quotes from individuals who have directly benefited from the work.

MGSD's Digital Conversion mentality provides the tools for students and teachers to collaborate in new ways and extend learning beyond the classroom. One example of real end-user benefits is the continuation of teaching despite natural disasters. In early 2011, a snowstorm kept MGSD students home from school; however, a large exam still loomed for one particular science class. Using digital resources available from the program, this particular science teacher was able to log in online and host a virtual review session with the students from home. As seen from this example, MGSD's Digital Conversion initiative and integration of technology into teaching has facilitated learning beyond classroom walls, even in the most difficult situations. On a wider scale, the Digital Conversion Program has drawn national recognition, including an invitation for Dr. Edwards to speak at the White House for the "Digital Promise" launch and a recent visit from Karen Cator, director of the U.S. Department of Education's Office of Educational Technology. Following her visit, Cator commented: " Mooresville has a tremendous amount to offer in terms of leadership and what they've learned along the way." Likewise, Bill Goodwyn, president of Global Distribution and CEO of Discovery Education for Discovery Communications, recently stated in the Wall Street Journal: " Mooresville is a school system at the forefront of a trend that will gain momentum in the years ahead as broadband access increases in the U.S. and more communities realize the value of digital education tools."