



Rochester's zebras are changing their stripes as they lead the way on implementing New Tech technology into their curriculum.

New Tech High

Education Reform Comes to Indiana Classrooms

By Matt L. Ottinger

Rochester Community School Corporation Superintendent Debra Howe is looking toward the future, hoping the California-based New Tech High model will help transform her high school into an archetype for educational success in Indiana.

When the powers-that-be in the Rochester Community School Corporation (RCSC) decided to adopt the revolutionary, project-based New Tech High model, they were undoubtedly taking a risk. After all, implementing a new educational paradigm, retraining teachers and adopting new technology are initiatives that could cost several million dollars, according to RCSC Superintendent Debra Howe, Ph.D.

"Transforming our high school is an economic development issue," Howe says. "We're trying to retrofit a 1960s building for a 2007 world, so it's going to cost. ... Change in general is difficult, but everyone needs to be looking out for what's best for our kids."

The building Howe described is Rochester High School, which now hosts over 600 students. The New Tech model was implemented this year in just the freshman class, with its 166 students, and will be progressively used in each freshman class for the next four years, at which point the entire building will be a New Tech High School.

The program, now in 30 schools in eight different states, is also being adopted in varying degrees this year at Arsenal Tech and Decatur Central high schools in Indianapolis. Implementation in additional school corporations is scheduled for the 2008-2009 academic year.

What's so new about New Tech?

New Tech High originated in Napa, California in 1996. The idea was initiated by businesspeople in the community who had visions of a workforce trained in the ways of the New Economy – employees properly prepared for a world of advanced technology and the practicality of functioning in a business environment. New Tech utilizes project-based, group learning to generate discussion and problem-solving skills in the classroom, and the technology allows students to put their creations to the test.

According to the New Tech Foundation's web site, "instead of plugging their knowledge into fill-in bubbles on Scantron sheets at finals time, students present tech-based projects about



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the subject at hand. You won't find simple book reports at New Tech High – you're likely to see a detailed web site with original graphics and links to related sites, or a beautifully designed PowerPoint presentation combining digital photography and original text.”

New Tech also consists of more college level courses, which Howe describes as giving students an important, early connection to higher education that they haven't had in the past.

Teachers become students

With New Tech, there is little room for fear of change or a reactionary attitude from teachers. Rochester High School teacher Dan McCarthy, a 28-year classroom veteran, is welcoming the new program with open arms – although he's not naïve to the challenges it presents.

“Teachers have to come out of their comfort zones,” notes McCarthy, an English teacher who has had to expand his knowledge of geography in order to teach his new Global Perspectives class. “In a traditional class, there’s a lot of quiet and it’s mostly the teacher talking. But it’s not really productive in terms of engagement.”

To become acquainted with the new model, all affected educators in Indiana had to job shadow teachers in California, so it was a learning experience for more than just students. However, McCarthy concedes that students have also had to modify their thinking to a large degree.

“I think it’s been a challenge, especially for our most talented students, to adopt a new way of thinking,” he says. “But I think it also benefits them the most. I’d always felt guilty about holding back above average students. Teaching to tests like the ISTEP always put a cap on those kids, but now there are no limits.”

McCarthy explains the practicality of New Tech as being a critical component.

“Students should never be asking why we’re doing something in this program, because it’s all real world scenarios,” he offers. “There’s a lot more rigor here, but it’s more useful.”

Group approach

According to McCarthy, some parents have been concerned that there is too much focus on group work. However, he noted that about 75% of the evaluations are on an individual basis, and students can even be fired from particular groups for not living up to their responsibilities. The challenge then becomes how to reintegrate those students into the system.

One project in McCarthy’s class includes students drafting a real estate proposal and presentation to people who might consider relocating to the Rochester area, highlighting its demographic makeup, history and even relevant issues currently facing its county government. Meanwhile, just down the hall, biology teacher Amy Blackburn has her students developing a movie presentation on biodiversity and the water cycle. One movie from each class will be shown on the local cable channel.

Before each project, students draft personal contracts outlining their goals and contributions, and are evaluated according to how they live up to those agreements. Projects are also outlined on rubrics, which provide detail of every objective of every assignment.

Nate Basham, a 15-year-old freshman at Rochester High, welcomes the challenge of the New Tech model and sees a definite benefit.

“I like the business concepts,” he says. “We have to find a lot of information, develop our computer skills and learn to present in front of people. We have to give presentations all the time.”

Basham also describes how the longer-term projects could present a time management crisis if a student lacks in preparation.

“We have to keep up with rubrics in every class, which can be hard,” he contends. “But I know this will help me a lot more than just reading right out of a book. The multiple projects make it harder to prepare, but it will help me learn time management skills. It’s all very doable if you just try.”

It’s that ongoing effort that educators hope will keep students engaged over the long haul. McCarthy has already seen a benefit in this regard.

“One problem I had before was kids sleeping in class,” McCarthy quips. “I’ve always taken that as an insult and a sign of complete withdrawal. Now, nobody has their head down.”

In with the new

The New Tech model was first introduced in Indiana in November 2005 at a conference titled “Indiana’s Future: Economic Development and the High School Connection.” At the Indianapolis conference, governors from around the nation, as well as leaders from the United Kingdom and China, convened to discuss 26 new change models for American high schools.

After New Tech was chosen for selected Indiana schools, plans were put in place to implement the system. Aiding in this transition has been Nancy Sutton, senior fellow for state leadership development for the University of Indianapolis’ Center for Excellence in Leadership of Learning (CELL) program. Sutton is former director of the Small High Schools network in Colorado and had worked on projects with the Bill & Melinda Gates Foundation, which has donated millions of dollars to New Tech High School.

“Rochester had a support system in the community to put this in place and there’s a lot of national support, so it’s a great fit,” Sutton reports. “Implementing this is all about change management. That’s something businesses understand, but schools don’t always.”

Sutton explains the transition has been a byproduct of public universities, schools and businesses working together. One such business organization that has had a hand in the New Tech revolution is TechPoint. Not only has the association offered its time and resources toward the New Tech conversion, the TechPoint Foundation invested \$150,000 in July toward the new curriculum at Arsenal Tech.

At a “New Economy, New Rules” presentation in Indianapolis in September, TechPoint Foundation board chairman Mike Simmons discussed why the move is imperative to local schools.

“Our mission here is to bridge the digital divide,” he told the assembled audience. “In this form of project-based learning, the class looks more like a lab than a traditional classroom.”

Simmons also described the impression the students in Napa and Sacramento, California made on him when he traveled there for a New Tech site visit. “I was shocked at the professional maturity of the kids. I could see the pride they took in their classroom.”

Simmons believes the true measure of success will not be



Mike Simmons, president and CEO of T2 Systems, Inc. and TechPoint Foundation board chairman, speaks as part of a panel discussion on the implementation of New Tech and other technology-based learning initiatives.

as quantifiable as in the past, but will be gauged, at least in part, by enthusiasm.

“Instead of worrying about ISTEP scores going up a few points, a key indicator will be getting kids to want to go to school,” he surmises. “In California, attendance and graduation rates have significantly increased.”

Business at hand

At the heart of the matter lies New Tech’s perceived ability to enhance the business community by producing a more skilled and dynamic workforce. According to the Rochester school board, that was paramount in the decision to choose New Tech.

“We listened to what the Rochester area business community needed as characteristics in employees,” says Donald Meyer, president of the Rochester Community School Corporation board. “Those needs turned out to be qualities and life skills that would assist students in school and in the decades following.”

Perhaps it’s those qualities that have motivated many Rochester businesses to partner with the school system and become actively involved in the paradigm shift.

“It is true that a whole lot of kids are already familiar with technology, but New Tech will expose more kids, to better technology, who otherwise wouldn’t have access to it,” details Alan Terrell, president of Rochester Telephone Company, Inc. “However, I think there’s a good chance that collaborative problem solving will be more valuable than the technology involved. The abilities to communicate effectively, problem solve and deal with conflict resolution are most important in business because that’s exactly what takes place every day.”

Terrell explains that while his company has not had difficulty finding qualified staff since he has few vacant positions and the jobs are usually higher paying than the average, an uneducated workforce has been a concern in Rochester in the past.



Students remain focused on their computers while biology teacher Amy Blackburn, right, guides a New Tech project. Her students made movies on biodiversity, some of which were to be shown on a local cable channel.

The Rochester school corporation has partnered with state colleges and local businesses in efforts to develop connections through student internships, job shadowing and by raising money in the community. Howe describes her hope to raise \$30,000 within the local community as a means to demonstrate local support when applying for grants.

These partnerships and exposure to businesses will likely prove critical, since the workforce in the Rochester area has shown a need for improved preparation. According to the 2000 census, 32% of 19 to 24-year-olds in Fulton County did not have a high school diploma, and only 4% had bachelor's degrees or higher.

At the September presentation, David Shane, president and CEO of LDI Ltd. in Indianapolis and a former senior advisor to Gov. Mitch Daniels on education issues, offered that New Tech will act as a preventative measure against perpetuating antiquated educational strategies as the business world evolves.

"The world still seeks capital, and technology is a changing world," he said. "There's a saying that if your job can be subjected to an algorithm, it probably will be in the near future."

Shane stated that nine out of 10 jobs disappear because of technology.

"What do we do with all the people who lose their jobs to machines?" he asked. "We have to teach people to run those machines."

Perhaps it will ultimately be the collective educational machine in Indiana that benefits most from this new model. Or maybe it won't live up to the billing, eventually prompting educators to revert back to a more traditional, rigid style of teaching in the future.

But if New Tech works as Howe, the Rochester school board and the entire community hope, and it eventually permeates Indiana's instructional landscape, one wonders if tie-dye shirts, fine wine and Reggie Miller may have to settle on becoming the next-best gifts California has ever introduced to the Hoosier state.

INFORMATION LINK

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