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Building a New Student in Michigan

By Sonja Steptoe

Throughout most of the 20th century, the stream of cars rolling off Michigan assembly lines created jobs with high wages and schools with low expectations. When even a kid who dropped out of school early could look forward to a cozy middle-class living, mastering chemistry, geometry or geography didn't seem so important. But now, at the start of the 21st century, both the state's leading industry and its school system are at a crossroads.

While the once innovative industry is struggling to find a new direction, the state's schools have moved into the fast lane of educational reform. "The collapse of the auto industry, which also exploded the notion embedded in the DNA here that you can make a good living despite being a high school dropout, created a perfect storm for convincing everyone we needed to make changes," says Michael Flanagan, Michigan's superintendent of public instruction. For three months last fall a task force of state education officials, school superintendents, college deans and a Ford Motor Company executive pored over scholarly research on curriculum reform, borrowed ideas from private schools with strong college preparatory curricula and International Baccalaureate programs that infuse instruction with a global perspective. The panel also studied the education policies in countries such as Singapore, whose students routinely ace international proficiency exams. And the group consulted education chiefs from states that were early adopters of tougher standards, including Indiana, Oregon and Arkansas—all of which require four years of English and at least three years of math and science

The goal was to craft rigorous learning standards that would give students the knowledge and skills they need to succeed in college and in the 21st century workplace. The group recommended that every Michigan student, whether college-bound or not, be required to complete four years of English and math; three years of science and social studies; two years of foreign language; one year of phys

ed; one in a course covering visual, performing or applied arts, as well as an online course—not necessarily for credit—offered by Michigan's web-based Virtual High School or another Internet instruction provider that meets state guidelines. As juniors, they should also take the state merit exam that, like the ACT, measures college readiness.

Meanwhile, the state board of education wanted to see elective classes that expose them to diverse cultures and international issues; explore the rights and obligations of citizenship; teach finance and business principles in depth; and challenge them to access, analyze and use information from multimedia sources. The coursework, state officials recommended, should also improve critical-thinking, problem-solving and communication abilities through team projects. Last spring the legislature overwhelmingly approved the new graduation rules—all of which take effect with next fall's freshman class. "They are among the most rigorous requirements in the country," says Michael Cohen, president of the nonprofit education think tank Achieve Inc. Some forward-thinking schools have already begun to incorporate the new approach. Here's a look at how three Michigan schools are preparing their students for the challenges of the 21st century:

Henry Ford Academy

Showing kids how book-learning relates to the real world is a central tenet of the new thinking. That's the chief reason the Henry Ford Academy, a nine-year-old charter school with a racially and academically mixed student body selected by lottery, was located on the grounds of the 12-acre Henry Ford Museum and its 100-acre companion site, the Greenfield Village. The museum and village's exhibits of antique vehicles, restored historic homesteads and artifacts bring academic concepts to life and serve as the bases for class projects. When eleventh graders study early-American economic systems, the village becomes their classroom for nine weeks. Exhibit curators often lead class discussions at the sawmills, weaving stations and tin-making shops inside the craftworks district, and on the lawns of Thomas Edison's laboratory, the working soybean farm and antebellum tobacco plantation that dot the property.

In team projects, students get a hands-on feel for the low-tech production practices of the era by making cheese graters in the tin shop and using looms to weave belts, under the supervision of museum staff. "It's one thing to sit at your desk and read about economic development and have a teacher give you notes," says Michael Trail, a senior who took the class last year. "It's a totally different thing to go into the village and see it firsthand."

Having a museum next door may make the process more fun, but it's only one of the ways in which the Academy lowers the firewall between the classroom and the world beyond it. Students in an economics class put principles into practice with projects in which pairs of students pretend to be married couples living on a budget. "What good is it to teach them about math and economics at school if they still go home and spend \$200 on sneakers or \$2,000 on a stereo they can't afford with interest payments of 28%?" asks Charles Dersheimer, a faculty member. "It's crucial for 21st century education that kids are able to see how classwork relates to what's going on around them." In another example of life-skills training, the school is heeding calls from corporate leaders for employees who can work well with others. "Working in teams teaches you how to interact with others, and how to be more sociable," says Lori Ismail, a junior who often collaborates with classmates to perform science experiments and solve trigonometry problems. "It's important because if you're going to work at a company you're going to have to acknowledge and work with everyone around you."

The heaviest dose of instruction with real-world relevance is the Academy's innovative senior master process. The two-year seminar beginning in eleventh grade is both a tutorial on searching for a job and an exercise in self-exploration. Each student fills fat white binders with biographies, personal mission statements, lists of life and career goals, and assorted essays in which they articulate and assess their own strengths, interests and ambitions. A boy who wants to be a mechanical engineer composed an essay titled "How To Be A Better Me," outlining the steps he intends to take to "become successful in everything in life." Through interviews with working professionals, consultations with career advisors, and Internet research on the qualifications, salary and duties for a range of jobs, students weed through options and select a career. During a PowerPoint presentation to classmates reporting on her career research, a girl explains that she's attracted to counseling, despite the high burnout rate and meager starting salary, because "people need someone to talk to about their problems and I think I'm good at listening and helping."

As a final step, they create electronic portfolios that include resumes and lists of colleges they would like to attend—along with the attendant admissions criteria—and interview with local employers to secure a senior-year internship in their chosen field. Michael Trail, the senior, is producing blueprint and 3-D models with set-design software as part of his job assisting the technical director of the Detroit Opera House this season.

Even students who aren't as computer savvy as Trail must successfully complete the course and fulfill all the other graduation requirements, in keeping with the policy of Academy principal Cora Christmas that no child will be left behind, held back, or put on a separate track. To that end, the

Academy embeds within its 20-week semesters 10-week remedial classes for students performing below grade level and offers previews of advanced classes for those who've surpassed their classmates. Christmas believes the strategy is a better way of keeping advanced students stimulated and helping struggling students retain what they learn than if they tried to absorb the lessons during disconnected summer sessions. "There's not this thing where you just have to go along with everybody else," says Ismail, who took geometry and calculus a semester early and, having exhausted the math curriculum, will study college calculus at a community college in spring. "Here, you can always find the pace that fits you."

Farmington High School

John Barrett, the principal of Farmington High School, is a fervent disciple of the theories espoused in Thomas Friedman's book, *The World Is Flat*, about vanishing U.S. economic supremacy on the now-level global playing field, and he worries that complacent Americans are perilously close to sliding off the edge. He distributed copies of the book to teachers last spring and made it the sole topic for discussion at the first faculty meeting this fall. To build a less xenophobic student body, students are served a steady diet of internationally focused programs and projects.

A group of students from Lisa Sievert's international affairs class organized a model U.N. where they debate the practical implications of such abstract concepts as sovereignty and self-determination in the Arab-Israeli conflict, and the Iraq War. Sievert says many of the insights they're gathering extracurricularly while researching mock resolutions inform the class discussions, adding intellectual spice to the sessions she flavors with student-produced Power Point presentations and documentary screenings, as well as reading assignments from foreign affairs journals and memoirs of genocide survivors. Barrett required students to attend an on-campus debate on the Arab-Israeli conflict he organized between a Muslim cleric and a Jewish rabbi. In another assembly, Pakistani and Indian students explained the sources of ethnic tensions in the Kashmir region, and plans are under way for Farmington's exchange students from Macedonia and Bulgaria to discuss the conflict in the Balkans.

Although the school's college placement record is impressive—77% of last year's senior class enrolled in four-year colleges—Barrett says the Friedman book's admonitions led to the decision this fall to "kick up the level of rigor" in the curriculum even more. "It becomes more apparent the deeper you get into the book that what we used to consider third world countries are now outdistancing us in terms of research and, more than anything, work ethic," he says. "I want our kids to realize they're not just competing with the kid next to them who didn't do his homework. They're up against a much

[bigger group] that's working very hard to take the job they want."

Roosevelt High

While train tracks still course through the streets of Wyandotte, Michigan, many of the factories that for much of the 20th century made the city a hub from which cargo containers filled with paper, steel tires and chemicals were dispatched to consumers around the country and across the ocean are now shuttered. "The opportunity to go to college is about all the students here have now, besides low-paying service jobs," says Mason Grahl, assistant principal at Roosevelt High, where traditionally far less than half the seniors go on to college. To change the mind-set, Grahl and his boss, head principal Mary McFarlane, are administering tough love by enforcing the new state graduation requirements now. This year's seniors are exempt, but for juniors, it has meant adding an extra math and science class to their schedules this year. Some of those who say they aren't planning to go to college consider the new rules an unfair burden. At a student assembly, McFarlane heard cries of "Why us?" when she announced the changes. Her response: "Because it's the right thing to do." Renee Bojanowski is a college-bound junior and honors student at Roosevelt. She says the grouching notwithstanding, the urgent need for a new attitude is beginning to sink in among members of the student body. When a university admissions director met with seniors recently and told them that they will need more than a diploma to qualify for the vast majority of desirable jobs, and showed them wage-rate charts, she reports, "it woke a lot of people up because it made them see that if they don't get more education, they will earn a lot less money."

For teachers whose lesson plans already are bloated with required content, it will be a challenge to cover the additional academic concepts the state is mandating along with the new graduation requirements. Chemistry teacher Tim Graham predicts the new content mandates in science and math will only exacerbate tensions between depth and breadth with which teachers must grapple. "Our [state proficiency test] scores show that we're bringing our kids along in terms of learning to think critically," he says. "We're wondering if we can continue to do that while covering the broader spectrum of skills required by the new rules." Schools could lobby the state to let them count the math and science concepts covered in such technical classes as architectural drawing (which is 90% geometry, Graham contends) and metals technology (which requires students to understand how varying levels of carbon content change the way steel reacts to being heated and cooled, for instance) to meet the new guidelines.

But that may be a long shot because currently many vo-tech teachers aren't state-certified as applied

math and science instructors, according to Graham. "The issue will have to be dealt with eventually," he says, "or we're going to have a hard time." Despite such challenges, Graham agrees with his principal that the stricter mandates are appropriate. "It's going to be a fight initially and we might see the dropout rate climb a bit," he predicts. "But this is about having our students ready for where they want to go in life, with the ability to work in teams, reach conclusions, make connections, think logically and problem-solve, because those are the essential skills for the workplace now."



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