

How Lowell can win the competition for new teachers

By Stephen Adams

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The Lowell economy, like that of many Massachusetts cities, has ridden the ebbs and flows of technological change. At present it is at ebb. As computer and information technology jobs have evaporated, communities like Lowell have suffered and their economies have fallen behind. According to the 2000 U.S. Census, Lowell's median income was more than \$10,000 below the state median. But a technology-driven turnaround may be on Lowell's horizon.

UMass Lowell recently announced plans to build a multimillion-dollar nanotechnology center at the former Lawrence Mills site, and is angling for part of a \$17 million federal research grant. Many view nanotechnology, the science of altering objects by shifting the location of particular atoms and molecules, as the next big thing in science and technology. It has potentially wide-ranging implications in almost every scientific field.

There are high hopes for Lowell, and the commonwealth is investing a lot in the success of the Nanotechnology Center. In the face of a state budget deficit of historic proportions, state taxpayers are spending \$23 million for the renovations, and are expected to spend another \$B million from a 2003 economic stimulus bill.

The state is betting that success at UMass Lowell's center will translate into economic benefits for citizens in the form of new businesses and jobs. Estimates put the global market for nano-engineered materials at \$1 trillion by 2015 with worldwide jobs at more than 2 million people.

But while the Nanotechnology Center may be a good bet for Massachusetts, it is not clear that Lowell residents will benefit from the hoped-for gains. The coming nanotechnology economy will demand on a math- and science-savvy workforce. A look at the performance of Lowell public schools casts doubt on whether Lowell residents will be in a position to participate.

MCAS mathematics and science/technology scores offer an important indication of how well prepared Lowell students are to pursue math, science and engineering beyond high school. An alarming 88 percent of Lowell's public school eighth-graders are failing or need improvement on the science and technology section of the MCAS. Nearly two-thirds of 10th-grade students are failing or need improvement in mathematics. These numbers do not suggest a future Lowell workforce ready to compete in a high-tech economy.

If Lowell residents are to compete for the emerging technology jobs in their own city, their schools must first win a different competition—the competition for high quality science and math teachers. A rising wave of teacher retirements is facing Lowell and most other Massachusetts schools. Already the Lowell school district has 33 openings for math and science teachers, and more vacancies are ahead. But how to compete with more affluent school districts for the best teachers? By leading the state in reforming teacher compensation and recruitment.

Virtually every traditional school district in Massachusetts operates under the burden of an archaic teacher pay system—a single salary schedule for all teachers with pay increases based on years in service and number of certificates earned. While the rest of the economy has adopted supply and demand pay scales and performance-based raises, public schools remain mired in a 1920's compensation system.

By adopting a modern pay structure for teachers, Lowell can get a jump on competing school districts. This should include restructuring teacher pay scales to

allow premium pay for qualified math and science teachers. In addition, compensation for all teachers should be based on actual performance and cost-of-living changes, not just time in the job.

Widely employed across industry sectors, premium pay and performance-based increases are considered quite radical in the public education realm. These two steps will send a loud and clear message to high-achieving teachers that they will be appreciated and rewarded for excellence. Even if Lowell cannot compete with the salaries of more affluent districts, an environment that rewards performance will be very attractive to many teachers.

Admittedly, adopting pay for performance would turn traditional practice on its head in Lowell public schools. But just as Lowell is banking on a radical new technology to help rebuild its economy, radical improvement in its public schools will ensure Lowell residents play a role in the turnaround.

"Putting ideas into action" is a bi-monthly column written by Stephen J. Adams, president and CEO of Pioneer Institute for Public Policy Research, a Massachusetts non-partisan think tank.