

# Education Week

## STEM Talent Increases, Jobs Decrease

By Stephen Sawchuk

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Across the nation, alternative-route program officials say they are seeing increasing enrollments from career-changers with strong backgrounds in the highly sought-after fields of math, science, and technology.

But the extent to which school district administrators are primed to take advantage of larger—and in some cases stronger—talent pools in those fields depends on the officials' ability to negotiate the factors affecting the teacher labor market, say experts familiar with hiring practices.

Despite state efforts to create pathways to teaching tailored to math and science professionals, the downturn has shrunk the overall availability of teaching jobs. That means not all people with strong credentials in those fields who turn to teaching will have positions waiting for them.

“The phenomenon of the economy is working on both sides of the equation,” said C. Emily Feistritzer, the director of the National Center for Alternative Certification, a Washington-based group that tracks and disseminates information on nontraditional paths to the teaching profession “It’s a Catch-22 situation.”

## Influx of Candidates

Kimberly Estep exemplifies the type of professional who is increasingly making up part of the talent pool for math and science educators.

The Groton, Conn., chemist holds a Ph.D. and taught science as a volunteer in her sons' middle school and at Boy Scouts meetings. She has led Sunday school classes for high-school-age children at her local church. But come this fall, when she plans to enter her own high school classroom, teaching will take on an even greater significance in her life: the beginning of a new career.

“When the economic downturn hit, I found myself with the opportunity to enter teaching full time. I jumped at the chance,” said Ms. Estep, who was laid off from Pfizer Inc. earlier this year and soon after entered the Alternate Route to Certification, a long-standing state program in Connecticut.

Theoretically, an influx of professionals like Ms. Estep with science, technology, engineering, or math—STEM—backgrounds is a boon for districts, which have historically struggled to attract enough math and science teachers.

Connecticut's ARC program has seen increases in applications to all its math and science offerings, said Maria Davoodi, the interim director. Its intensive summer 2009 program in those fields had 40 more students than last year's, she said.

Preliminary data collected by the New Teacher Project, a nonprofit organization that trains and places prospective teachers, shows an increase of 25 percent to 30 percent on average in math and science applicants, said David Keeling, the communications director for the New York City-based group.

And in Baltimore County, Md., officials have increased the size of classes in its approved alternative-route programs and added three additional sections to accommodate the newcomers, according to Donald A. Peccia, the assistant superintendent of human resources for the 104,000-student district.

A handful of states have gone a step beyond expanding their current offerings and are now weighing pathways specifically meant to appeal to populations that have been hit hard by the recession.

New Jersey lawmakers, in March, passed a law to authorize a series of pilot teacher-certification programs. One will help financial-services professionals earn their teaching credentials in math within three months. Known as “Traders to Teachers,” the program is the brainchild of state education Commissioner Lucille E. Davy and officials at Montclair State University, and appeals specifically to people who lost their jobs on nearby Wall Street.

In an interview, Ms. Davy said the program will not be a less rigorous form of certification. Candidates must still pass a difficult math exam before they begin to teach, and the coursework will focus specifically on math pedagogy.

In Michigan, members of the state board of education are preparing to give their approval to a proposal to allow teacher education institutions to offer expedited credentialing programs that would take no longer than 15 months for career-changers to complete.

The state has “a ton of talent—engineers, scientists, technically trained people spilling out of autos and related sectors—some of whom can and want to be great teachers,” state board President John C. Austin said in an e-mail.

### Challenges Ahead

Yet schools are struggling under the economic crisis and are being conservative in their hiring plans. In short, they do not have as many vacancies as they typically do, even in traditional critical-shortage areas, like math and science.

St. Louis public schools normally hire about 200 teachers annually. This year, the district has only 70 spots open, along with a great increase in applications, said Sharonica L. Hardin, the chief human-resources officer for the 27,000-student school system.

She attributes the decrease in part to a drop-off in the number of teachers who are retiring early. “Their investments are just not as lucrative,” Ms. Hardin said.

In Chesterfield County, Va., officials expect to hire only 170 teachers, down from the usual 500. “We have a very talented pool of applicants for a relatively small number of teaching positions available,” spokesman Shawn Smith said.

And the Connecticut Association of Public School Superintendents estimated that the state would have 1,200 fewer teaching positions in the upcoming school year than it did last year.

Complicating matters, collective bargaining agreements often require districts to consider teachers who have been given layoff or “reduction in force” notices ahead of newcomers from other fields, even if the recalled teachers have weaker math or science credentials.

A database of the 100 largest districts’ contracts reveals almost all school systems that lay off by seniority also extend “recall rights” to teachers, which can range from the right to interview to a mandatory placement. Teachers can retain such recall rights for years, according to the database, which is maintained by the Washington-based National Council on Teacher Quality, a research and advocacy group.

In Chesterfield County, an influx of \$20 million in federal economic-stimulus funding helped the district recall all but 40 teachers, Mr. Smith said.

But Ms. Feistritzer of the alternative-certification group pointed to teacher-recall policies as potentially hampering state and district movement to consider other hiring approaches.

“Districts are sort of retreading teachers rather than utilizing vehicles to bring new blood into the profession,” said Ms. Feistritzer. “I think in this situation they’re just as likely to put an English teacher who maybe minored in math into the classroom as they were 10 or 15 years ago.”

Still, others said the long-term impact will depend on the future of the economy.

“This is all very, very fluid,” said Robert Pianta, the dean of the Curry School of Education at the University of Virginia, in Charlottesville. “Schools are hedging their bets right now. ... But we know that even when the economy is in better shape, an awful lot of districts still end up having to do hiring at the last minute once things get reconfigured and the kids show up.”

### Gaining a Foothold

In the meantime, Ms. Davoodi, the Connecticut program administrator, has been encouraging candidates to get a foot in the door by substitute teaching and working as paraprofessionals. “There are a lot of good people waiting to teach,” she said. “I do believe once things stabilize, we’ll see a huge increase in teacher retirements again.”

Once that happens, Mr. Peccia, in Maryland, hopes his district’s program, which includes a sustained induction component, will keep its new talent in math and science classrooms rather than scrambling back to industry.

For her part, Ms. Estep remains committed to the profession and confident that she’ll prevail in her job hunt, even though chemistry openings are few and far between.

“It’s been a long time since I’ve jumped into the pond and tried something totally new,” she said. “I’m excited about it, but it’s also a little scary.”

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