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Nov. 10

New Push on Producing Science and Math Teachers

Vastly increasing the number of math and science teachers in public schools has long been a goal of education reformers who see it as a long-term solution for ensuring the country's economic competitiveness and closing the gap in student achievement.

Without a national mandate or a cohesive movement to do so, however, the responsibility for transforming college students into K-12 teachers has seen plenty of experiments but little national coordination.

In particular, state and regional colleges have typically been at the forefront of teacher education, producing the bulk of the nation's teaching corps. Hoping to address what some have seen as a tendency among top public universities to shortchange teacher education in favor of lucrative research and grants, a group of almost 80 such institutions announced on Sunday a national initiative to boost the number of teachers in the critical fields of math and science.

Among the institutions signing are the University of Illinois at Urbana-Champaign, the University of North Carolina system, the University of Maryland at College Park, Purdue University, the University of Massachusetts at Amherst and the University of California system.

"Higher education institutions have the potential to bring about tremendous improvements in U.S. mathematics and science achievement by educating a larger number of highly qualified teachers," said Richard Herman, chancellor at Urbana-Champaign, in the announcement. "Yet for too long institutions like mine have stood aside on this important issue. We cannot continue on the sidelines. One of the best paths for meeting the need for more science and mathematics teachers is to commit ourselves to this important initiative and inspire more of the nation's top mathematics, science and engineering students to become our top teachers."

Over 75 public colleges and universities have already signed on to the [Science and Mathematics Teacher Imperative](#), an organized effort by members of the National Association of State Universities and Land-

Grant Colleges. The institutions — from over 30 states — will commit faculty and staff, supply data to the association and work with state agencies to formulate specific targets for the number and kinds of teachers needed.

“My sense is that if we’re successful, this provides considerably more energy to existing initiatives,” said Howard J. Gobstein, NASULGC’s vice president for research and science policy. “It provides an overarching communications and collaborative structure across existing initiatives on campuses, and perhaps most importantly, it brings the guidance and the commitment of the top level of the institutions to set this as an institutional priority.”

One of the primary challenges of encouraging students to become teachers is the incentive structure — the availability of higher-paying jobs in industry for well-qualified graduates in science and engineering fields.

“I think that’s going to be a constant challenge, that well-prepared science, math and engineering students will have many career options, and to become a teacher with ... mostly lesser pay, it’s definitely a challenge to entice these students into that career,” Gobstein added. “However, with national initiatives such as Teach for America, and perhaps the national economic situation, we are finding and we can see that going into teaching as a profession ... it’s tapping into a vein for a desire for service by many students.”

The initiative aims to “substantially” boost the number (and quality) of science and math teachers in middle and high schools, in part by building on partnerships with other school systems and state governments. The approach could vary by institution, and the intent is for the association to serve as a clearinghouse for all the efforts, sharing data and experiences from various states.

An example of the kind of program the national initiative is looking to support is [UTeach](#), which began at the University of Texas at Austin in 1997 and has [served as a model](#) for similar programs through the [National Math and Science Initiative](#), which works to scale up and replicate successful efforts.

Gobstein said NASULGC was planning a meeting of representatives from each participating campus in the spring, likely to be hosted by the University of North Carolina.

— [Andy Guess](#)

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