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Many High Schoolers Giving Up on STEM

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High school students aren't sticking with STEM. Even though the number of jobs in science and engineering is expected to surge in the years to come, close to 60 percent of the nation's students who begin high school interested in science, technology, engineering, and math, or STEM, change their minds by graduation, according to a [report](#) released Wednesday from STEMconnector and college planning service My College Options.

Overall student interest has been gradually climbing for about a decade, with about 1 in 4 of all high schoolers excited about pursuing a STEM major or career. But keeping many of those students attracted to such subjects is proving a challenge. "Tying education to the workforce needs is critical to the future of the nation," said STEMconnector CEO Edie Fraser at a town hall event Wednesday announcing the release of the report. Science and engineering careers are expected to grow more than 20 percent by 2018, twice the rate of the overall U.S. labor force.

In addition, the demographics of students attracted to STEM fields demonstrate a significant gender and race gap. Male students are more than three times as likely to be interested in STEM than female ones, and that gap is widening. And across the country, Hispanic and African-American high schoolers continue to lag their Caucasian and Asian peers in STEM engagement. Retaining and recruiting such underrepresented populations in STEM is vital, experts say.

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Nationally, science and engineering jobs are expected to grow from some 7.4 million in 2012 to more than 8.6 million by 2018, according to the report. (Adding in self-employed workers brings the 2012 total to about 15 million.) "We have to put enough people in the pipeline," said Tennessee Gov. Bill Haslam at the town hall. "If the market is demanding more graduates in the STEM disciplines, we need to make certain that we're opening up enough spots for them."

That means doing things like improving student achievement by implementing new K-12 education standards in science and math, creating specialized STEM high schools (Tennessee now has three), and partnering with educators and businesses to address skills gaps, Haslam noted. Volunteer State officials are seeking to expand by half the number of engineering grads at the University of Tennessee and working on job training efforts with regional employers like Volkswagen, which has a Chattanooga plant.

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Across the country, more than half a million manufacturing jobs, for instance, are going unfilled because of a shortage of skilled employees. And more than 70 percent of STEM jobs in the future will be in computing, including software engineers, computer networkers, and system analysts, among other careers, which will require appropriately trained workers.

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