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More Students' Drawn to STEM—But Fewer Girls

But the gender gap is seen widening

By **Erik W. Robelen**

High school students are increasingly interested in pursuing STEM majors and careers, a **new report** finds, with about one in four now stating such an inclination. But a long-standing gender gap is widening, the data show, with fewer girls than boys signaling interest in science, technology, engineering, and mathematics.

Overall, interest in the STEM subjects has climbed by 21 percent among high school students from the class of 2004 to the class of 2013, according to the report.

Mechanical engineering was by far the top major or career choice for current high school students interested in STEM, and was selected by 20 percent of respondents. Second place went to biology, at 12 percent.

Meanwhile, girls' interest in STEM began to decline with the class of 2010, the data show, while it is climbing for boys. In all, 38.4 percent of male students in the class of 2013 report interest in a STEM major or career, compared with just 14.7 percent of their female peers. For the class of 2010, the figure for females was 16.1 percent.

The report was produced by **My College Options** and **STEMconnector**. My College Options is a college-planning program run by the National Research Center for College and University Admissions. STEMconnector is a joint project of Diversified Search, in Philadelphia, and the nonprofit Alliance for Science & Technology Research in America, in Washington.

The findings come amid strong national interest in encouraging more young people to pursue advanced study and careers in the STEM fields. President Barack Obama has repeatedly used his bully pulpit to talk up STEM education, and he hosts an annual White House Science Fair to generate awareness.

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Leaving aside the gender divide, the overall gains in STEM interest among U.S. students may not be as encouraging as they sound to those worried about ensuring a strong STEM workforce. That's because those gains only bring the United States back to where it was at an earlier point, said Ryan Munce, a vice president at My College Options, which surveys more than 6 million high school students a year.

"The biggest part of that is the dramatic dip in the early 2000s, and what we've seen over the course of the last decade is it is really coming back to historical averages," he said.

The new report also highlights national and state-by-state data on job forecasts in the STEM fields. It cites a federal estimate that there will be at least 8.7 million U.S. STEM jobs in 2018, up from 7.4 million such positions in 2012.

The issue has the attention of many business and political leaders, including Gov. Bill Haslam of Tennessee, who spoke last week at a virtual town-hall meeting to discuss the report.

The governor, a Republican, called STEM education a top priority for addressing his state's economic-development needs.

"We look at it as 'K through J,' kindergarten to jobs, and our job is to help prepare our [citizens] for the jobs out there," he said, noting that his state recently opened three STEM-focused high schools, and has plans for more.

Differences in STEM interest by race and ethnicity, however, are less pronounced.

For instance, 27.1 percent of white students indicated a STEM interest, compared with 25.1 percent of Hispanics and 22.5 percent of African-Americans. For Asian students, the figure was 32.8 percent.

Differences in interest across income levels were slight, less than 2 percent. And STEM interest varied among states, from a low of 22.4 percent among Nevada high schoolers to a high of 29.5 percent in Montana. The national average for all current high school students is 25.5 percent. Beyond mechanical engineering and biology, the most popular fields among young people interested in STEM include:

- General engineering, 11 percent;
- Science, 10.6 percent;
- Game design and development, 9.4 percent;
- Electrical engineering, 8.4 percent; and
- Computer/information sciences, 8.1 percent.

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Some clear gender preferences were revealed, as well. For example, mechanical engineering was more popular with boys, while more girls preferred biology. The study also found that many freshmen lose their STEM interest in high school. Nearly 28 percent of freshmen declare an interest in STEM each year, but more than half of them, 57 percent, lose it by graduation, the report says.

The authors say that phenomenon is worth attention because it's easier "to maintain interest than to create new interest where it is not present." At the same time, 53 percent of seniors said their interest in STEM came after freshman year.



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