

Why STEM education and minority achievement gaps are interlinked

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Education



Women make up almost half of the work force yet only represent approximately 11 percent of engineers (Shutterstock photo)

Economists agree – science, technology, engineering, and math (STEM) education is critical to the future success of the United States.

Yet even at the K-12 level, these subjects are not being given the emphasis they deserve. According to a [Huffington Post blog](#) by Stephen M. Coan, president of the Sea Research Foundation, early education has focused primarily on reading and basic math, ignoring the importance of advanced [STEM education](#).

“For those who stay in school, most flock to non-STEM tracks because these subjects turned them off at an early age. To prepare students for the workforce or higher education, schools must better advance STEM interest and mastery,” writes Coan.

Children with early evidence of skills in math or science courses are often ushered into advanced classes; however, students who may have talent but are not outwardly skilled in STEM areas are allowed to take lower-level courses.

“All American children deserve this opportunity [to take STEM education courses], not just those who demonstrate an early aptitude or who are fortunate to attend such forward-looking schools. Solutions are at hand, now we must act,” continues Coan. “For our nation to flourish in the world economy we must foster STEM interest and mastery in every school, every year, beginning today.”

According of experts, the lack of attention to early STEM education is not the only hurdle adding to growing lack of STEM college graduates.

Educational gaps, such as those observed with minority groups around the country do nothing to burden of some 3 million unfilled STEM jobs.

According to [George Washington University's Face the Facts initiative](#), professionals with STEM degrees earned an average of \$77,880 a year in 2009, but only 10.7 percent of diplomas handed out during that year were for STEM courses. That translates to approximately only one in every 10 diplomas issued in the higher paying occupations of math, science, technology or engineering.

Demographics such as African-Americans, Latinos and American Indians currently make up approximately 34 percent of the population in the United States, but only account for 12 percent of undergraduate degrees in engineering.

Women are also severely lacking in the [STEM workforce](#), making up approximately 10.8 percent of U.S. engineers yet representing 46 percent of the nation's labor force.

Irving Pressley McPhail, president and chief executive officer of the National Action Council for Minorities in Engineering Inc., wrote in a [U.S. News blog](#), the education system needs to evolve along with the United States' demographic.



Children who would be good in advanced STEM classes are often overlooked if they do not show immediate aptitude (Shutterstock photo)

“For the United States to continue to prosper and compete in the flattening world, we must do more to recruit Latinos, the fastest growing demographic in the country, as well as other underrepresented minorities into the science, technology, engineering and math fields,” he wrote. “Diversity drives innovation, and its absence imperils our designs, our products, and our creativity. Therefore, the United States must recognize this hidden talent pool in our country and begin utilizing private-sector funds to dissolve America’s new dilemma.”

Despite the need to involve minority groups in STEM education and recruit them into the workforce, obstacles still exist preventing Latinos from accessing resources and STEM classes. Those barriers include language skills, cultural stigmas and socioeconomic status.

[Western Michigan University](#) indicates study data suggest the parents of Latino students often have low levels of formal education, and therefore have little understanding of the value of a college education. The lack of parental understanding translates into Latino students having an overall perception that teachers expect less of them as well as a difficulty understanding the specific steps needed to obtain a higher education.

Funding is also an issue for many Hispanic students, however, especially in the last few years, an effort to increase the number of [scholarships in STEM education, for Latinos](#), has been made and is expected to increase the number of Hispanics enrolling in STEM classes.

Before the issue of STEM education and jobs can be addressed, experts agree the issue of minority education must be remedied. Aiding Latinos achieve more STEM degrees and secure STEM jobs, will translate into a stronger U.S. economy.