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[My View: Help young Latinos succeed in STEM fields](#)



By Lorelle Espinosa, Special to CNN

Editor's Notes: Lorelle L. Espinosa, Ph.D., is a senior analyst with [Abt Associates](#), a global research and program implementation firm, where she contributes to the evaluation of higher education and training programs in science, technology, engineering and mathematics (STEM).

(CNN) - The recent Mars landing of NASA's rover Curiosity — and the stunning images it is sending back from the Red Planet — will hopefully inspire a generation of students entering college this fall to pursue an education in science, technology, engineering, and mathematics (STEM). Yet for many students — particularly Latinos — those very valuable STEM degrees remain out of reach, practically ensuring that America's growth in these important fields is stifled.

Despite being our fastest growing demographic group, Latinos remain practically invisible within the STEM workforce. According to the Department of Commerce, Latinos represented just 6% of STEM workers in 2009, in large part due to the fact that only 14% of Latinos hold bachelor's degrees — the credential most in demand by STEM employers. Given [recent Census Bureau estimates](#) that show Latinos making up nearly one-third of America's population by 2050, it becomes immediately apparent that Latinos are quite literally our largest untapped pool of talent.

It's not for lack of interest that Latinos are not becoming scientists and engineers. On the contrary, [research out of the University of California, Los Angeles](#), shows that about one in three Latino college freshmen at four-year institutions have intentions to major in science or engineering. Yet, something happens along the way in their pursuit of a science, technology, math or engineering degree. As a group, Latinos are less likely than their peers to finish that STEM major. Of those Latino freshmen who began a four-year STEM degree in 2004, just 22% completed within five years (compared to 33% and 42% of white and Asian-American STEM majors, respectively).

This does not bode well for Latinos who are hoping to pursue a career in these fields. According to [a widely cited report out of the Georgetown Center on Education and the Workforce](#), in just six years' time, a full 90% of STEM occupations will require some postsecondary training, with 78% of these jobs demanding an associate's degree or higher.

A first barrier to STEM degree completion comes when young Latinos step onto their respective college campuses and find that they are not adequately prepared for the academic demands of rigorous STEM disciplines. According to Patricia Gandara and Frances Contreras, authors of "[The Latino Education Crisis](#)," this problem is in part due to the fact that Latinos are more likely than other groups to attend elementary and secondary schools with few resources, inadequate facilities and less-qualified teachers. Latino children start their elementary years already behind their mainstream peers.

In 2011, [just 22% of Latino fourth-graders were proficient in math](#); a crippling scenario given the paramount role that a solid foundation in math plays in STEM fields at college entry and beyond.

We've known for some time that America's public K-12 system is in need of major reform when it comes to preparing students of all backgrounds for college entry, yet the barriers faced by young Latinos aspiring to a college degree don't exist only within the walls of our nation's classrooms.

Higher education must also do more to retain and graduate the increasing number of Latinos seeking college degrees. A first step is to keep college affordable. The median income of Latino families is \$37,759, with 27% of families below the federal poverty line. Contrast this with the average cost of a four-year public university degree — now \$17,131 a year. Even more troubling is a need-based financial aid system that has not kept pace, making it that much more critical that policymakers and institutional leaders keep higher education accessible by keeping cost stable and strengthening financial aid programs for low-income students.

A second priority is to strengthen those institutions where Latinos make up a critical mass of the student body, including community colleges. Two-year institutions enroll 53% of the nation's Latino college students. In California alone — where Latinos represent nearly half of the state's young college-age population — 70% of entering freshmen enroll in one of the state's 112 public two-year colleges. Yet according to [Los Angeles-based Campaign for College Opportunity](#), only 20% of the state's Latino community college students complete a two-year credential or transfer to a four-year institution, compared with 37% of white students. Such trends are unfortunately similar in other states with fast-growing Latino populations — making investment in two-year schools and a strengthened two- to four-year pipeline critical for young Latinos in pursuit of STEM careers.

These are just a few of the challenges facing a fast-growing Latino demographic. As this population seeks to invest in college, so too must the policy community focus their sight on helping young Latinos prepare for and succeed in STEM fields. If we can land a rover on Mars, it is within our reach to chart the necessary ground that will equip young Latino students with the skills to be among those arriving on college campuses — and more importantly — succeeding once there.

The opinions expressed in this commentary are solely those of Lorelle Espinosa.

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1. **Grant**
This is America. According to the Declaration of Independence, all people are created equal. Race should NOT affect your chance to get into college. Intelligence, Knowledge, and Integrity are what to look for in students, not color. The more deserving of the people being decided over should be the one to get accepted, not a person of a minority group.

October 9, 2012 at 10:26 am |

2. **WhiteLatino**
According to the Pew Hispanic survey, 36% of Latinos identify their race as white. Remember, Hispanic/Latino is an ethnicity, not a race.

October 8, 2012 at 9:10 am |

3. **sean**
claire -
maybe the parents should wait to have kids, do not have what you can not afford. have no more than one or two. chinese kids are achievers for the most part, parents push education, they demand it.

October 6, 2012 at 7:45 pm |

o **Claire G**
Sean, perhaps part of the problem is that our government isn't adequately caring for the lower SES populations. Regardless of race/ethnicity, you'll notice that one major problem in this country is that low SES families are not given access to proper healthcare, contraceptives, etc. therefore being more likely to have an unplanned pregnancy. It's a vicious cycle that's nearly impossible to break until more people recognize the actual problem rather than perpetuate the cultural stereotypes that currently exist.

October 8, 2012 at 11:39 pm |

4. **sean**
need to graduate high school first.

October 6, 2012 at 7:40 pm |

5. **We are not less.**
I find an insult to blacks and latinos when "special" programs, points are created/invented like they are less intelligent or bright. The problem is based on economics not race, a child from poor homes, uneducated parents has less a chance to do well in school, not because of ethnic, language ,or whatever.
I came to college to the USA at 15 like everybody else in my family I graduated early, everybody in my family has a college degree, when I came I was appaled how behind in learning US students were, I finish my Bachelor in 3 years, and went to advance studies, all paid by my parents.
The problem is that the mayority of central americans and mexicans are from a rural population, that can not even read and writte Spanish and speak it poorly.
So please do not lump us together, it is insulting.

October 5, 2012 at 1:11 pm |

o **Anonymous**
Go back to college and learn how to spell. You graduated too early and missed some important lessons.

October 6, 2012 at 8:47 am |

6. **Claire G**
@Brenda S : seriously? Aside from the horrifying grammar of your post, what is most alarming is the insane over-generalization of the Latino community. Put some thought into this – WHY might the Latino community be unable to spend more time with helping their children with schooling? Could it be that they lack the privileges our society affords the Caucasian population? It has nothing to do with Latino families not caring enough to help their children succeed and everything to do with the perpetual cycle of our society that causes many Latino families to

have to work long hours to provide for their families. They don't have access to the resources many White families do to tutors for their children, or even a few extra hours at night to work on homework with their kids. Rather than see the current difference as an indication that it's something the Latino population is choosing not to do, we should see it as they are not given the same opportunities as the White/Caucasian population – only then can we make positive changes in this, and many other elements of our society,

October 5, 2012 at 12:05 am |

7. **Brenda S**

Most blue collar Latino parents tend to just send their kids off to school and that's it. They don't get involve in their kids education too much. Most Asians and whites parents make education their top priority.

October 4, 2012 at 9:47 pm |

o **Anonymous**

Actually the Chinese parents are worse than latino parents. Teachers are just homework giving babysitters for them. They also don't even attempt to assimilate their children to this country at all.

October 6, 2012 at 8:45 am |

8. **Pablo Moreno**

Interesante analisis. Seguro que la posición de los padres también tiene influencia en la elección, éxito de los latinos en programas STEM. Saludos.

October 4, 2012 at 1:29 pm |

o **WhiteLatino**

According to the Pew Hispanic survey, thirty-six percent of Latinos identify their race as white. Remember, Hispanic/Latino is an ethnicity, not a race.

October 5, 2012 at 10:05 am |

o **WhiteLatino**

Until we master the English language, our community (Hispanic/Latino) will not be successful in the USA.

October 5, 2012 at 10:09 am |

9. **Tom, Ton, the Other One**

Why not help Blacks? Are you racist? No.. they why are you discriminating?

October 3, 2012 at 3:21 pm |

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