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Five Reasons Why We Need to Attract More Minorities, Women to STEM Fields

Mitch Teich

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LAKE EFFECT | DEC 20, 2012



(Photo by Argonne National Laboratory)

The U.S. Department of Energy's Argonne National Laboratory hosts events like "Science Careers in Search of Women," to attract women and minorities to STEM fields.

A lot has been written about the effort to attract more women and people of color to what's known as the "STEM" fields - science, technology, engineering, and math. Leaders in all of those fields have spoken of the need to have a future workforce that better reflects the demographics of this country. But where do we actually stand in attracting students to STEM education?

A Wisconsin researcher has begun to get the discussion beyond the anecdotal and into the realm of quantifying the current state of things.

"The most recent data from the National Research Council in 2011 suggests that 9 percent of the college-educated STEM workforce are African Americans, Latinos and Native Americans, so again you can see (they're) significantly underrepresented from their larger population," says Dr. [Angela Byars-Winston](#), an Associate Professor in the University of Wisconsin Department of Medicine in Madison.

She adds that only about 25 percent of STEM jobs among those who are college educated are women, even though they hold 50 percent of the total college degrees and constitute about 51 percent of the workforce.

Byars-Winston has done extensive work in examining how cultural influences impact career choices - work that has attracted the attention of the White House, which [honored her](#) last year as a "Champion of Change."

She says researchers are finding that the current efforts haven't quite yielded the desired results.

"The general consensus is that the return on the federal government's investment in broadening participation of underrepresented groups is not quite where they'd like it to be after 20-30 years of concerted investment," she says.

And that's not a good thing. She offers five reasons why it's important for racial and ethnic minorities and women to enter STEM fields.

1. Diversity drives innovation.

Research from private organizations, nonprofits, Harvard Ed reviews and other studies have shown empirical evidence that when people from more diverse backgrounds work together in teams, they tend to outperform homogenous groups producing more ideas, information and perspectives.

"They generate more creative solutions and tend to arrive at solutions faster," Byars-Winston says. "We need all hands on deck to maintain the national global standing in science and technology."

2. Racial and ethnic minorities and women are two of the largest segments of the workforce.

"They are growing in tremendous numbers and they're a logical target to develop in terms of domestic STEM talent," she says.

3. The job growth for STEM occupations is extremely high.

Byars-Winston says STEM jobs are expected to grow by 17 percents by 2018, compared with 10 percent for the rest of the labor market, so there are many opportunities.

"We have more jobs than people to fill them," she says.

4. There are great job opportunities in STEM fields across educational levels.

We tend to think of STEM jobs being exclusively for those holding bachelor degrees or higher, she says. But 27 percent require more than high school degree, but less than a bachelors degree.

5. STEM jobs yield "incredibly" high salaries.

Byars-Winston says STEM workers earn about 26 percent more than non-STEM workers, and calls

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these fields the "best equal opportunity employer."

Of course, she offers one more, rather significant, reason: "If we don't change these trends, then we're losing a lot human capital that can contribute to STEM innovation."



Dr. Angela Byars-Winston

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<<		DECEMBER 2012					>>	
Su	Mo	Tu	We	Th	Fr	Sa		
						1		
2	3	4	5	6	7	8		
9	10	11	12	13	14	15		
16	17	18	19	20	21	22		
23	24	25	26	27	28	29		
30	31							

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