STEM Grads Are at a Loss

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Those who claim there's a STEM skills shortage are ignoring the evidence.

All credible research finds the same evidence about the STEM workforce: ample supply, stagnant wages and, by industry accounts, thousands of applicants for any advertised job. The real concern should be about the dim employment prospects for our best STEM graduates: The National Institutes of Health, for example, has developed a program to help new biomedical Ph.D.s find alternative careers in the face of "unattractive" job prospects in the field. Opportunities for engineers vary by the field and economic cycle – as oil exploration has increased, so has demand (and salaries) for petroleum engineers, resulting in a near tripling of petroleum engineering graduates. In contrast, average wages in the IT industry are the same as those that prevailed when Bill Clinton was president despite industry cries of a "shortage."

Overall, U.S. colleges produce twice the number of STEM graduates annually as find jobs in those fields.

In the face of these stark facts, we now see several studies that seem to be desperate Hail Mary passes, using rather unconventional means to find "shortages." Some analysts do this by expanding the definition of STEM jobs – traditionally those involved in innovation, discovery and development – to include air conditioning technicians and even some retail jobs to make the case that this workforce is large and growing. Without any coherent meaning, such analyses now serve only rhetorical purposes to advance particular legislation.

[LEARN MORE: STEM Solutions]

Cries that "the STEM sky is falling" are just the latest in a cyclical pattern of shortage predictions over the past half-century, none of which were even remotely accurate. In a desert of evidence, the growth of
STEM shortage claims is driven by heavy industry funding for lobbyists and think tanks. Their goal is government intervention in the market under the guise of solving national economic problems. The highly profitable IT industry, for example, is devoting millions to convince Congress and the White House to provide its employers with more low-cost, foreign guestworkers instead of trying to attract and retain employees from an ample domestic labor pool of native and immigrant citizens and permanent residents. Guestworkers currently make up two-thirds of all new IT hires, but employers are demanding further increases. If such lobbying efforts succeed, firms will have enough guestworkers for at least 100 percent of their new hiring and can continue to legally substitute these younger workers for current employees, holding down wages for both them and new hires.

Claiming there is a skills shortage by denying the strength of the U.S. STEM workforce and student supply is possible only by ignoring the most obvious and direct evidence and obscuring the issue with statistical smokescreens – especially when the Census Bureau reports that only about one in four STEM bachelor’s degree holders has a STEM job, and Microsoft plans to downsize by 18,000 workers over the next year.

[SPECIAL REPORT: U.S. News/Raytheon STEM Index]

Educational and skills improvement is needed for low-income and low-skilled workers, but these problems are masked by cries of shortages or “mismatches” based on unsubstantiated claims about employees or students with the “wrong skills.” Such polemics divert attention away from the true clear-and-present danger to our STEM system – namely, debased STEM jobs that discourage domestic students and workers from pursuing STEM careers. In doing so, the ultimate outcome will be a nation weakened by the outsourcing of its core competencies.

TAGS: STEM jobs, economy, STEM education, STEM