

Enter search terms:

 Search

 in this series

[Advanced Search](#)
 [Notify me via email or RSS](#)

Links

 [Catherwood Library](#)

Browse

- [Collections](#)
- [Disciplines](#)
- [Authors](#)


[Home](#) > [Library](#) > [CATHERWOOD](#) > [KEY WORKPLACE](#) > [FEDERAL](#) > 644

[< Previous](#)
[Next >](#)

FEDERAL PUBLICATIONS

The U.S. Science and Technology Workforce

[Deborah D. Stine](#), *Congressional Research Service*

[Christine M. Matthews](#), *Congressional Research Service*

Publication Date

6-30-2009

Abstract

[Excerpt] In the 21st century, global competition and rapid advances in science and technology will challenge the scientific and technical proficiency of the U.S. workforce. Policymakers often discuss policy actions that could enhance the nation's science and technology (S&T) workforce—deemed by some as essential to both meet U.S. workforce demands as well as to generate the new ideas that lead to improved and new industries that create jobs.

The America COMPETES Act (P.L. 110-69) addresses concerns regarding the S&T workforce and STEM education, and the 111th Congress is debating funding for the programs authorized within it. Policymaker discussions tend to focus on three issues: demographic trends and the future S&T talent pool, the current S&T workforce and changing workforce needs, and the influence of foreign S&T students and workers on the U.S. S&T workforce. Many perspectives exist, however, on the supply and demand of scientists and engineers. Some question the fundamental premise that any action is necessary at all regarding U.S. competitiveness. They question whether or not the S&T workforce and STEM education are problems at all.

The first issue of demographic trends and the future S&T talent pool revolves around whether the quality of science, technology, engineering and mathematics (STEM) education received by all Americans at the pre-college level is of sufficient quality that workers are available to satisfy current and future workforce needs. In response, some policymakers propose taking actions to increase the number of Americans interested in the S&T workforce. These policies are motivated by demographic trends that indicate the pool of future workers will be far more diverse than the current STEM workforce. Proposed policies would take actions to enhance the quality of STEM education these Americans receive so they are able to consider S&T careers, and to recruit them into the S&T workforce.

The second issue regarding the current S&T workforce and changing workforce needs tend to focus on whether or not the number of Americans pursuing post-secondary STEM degrees is sufficient to meet future workforce needs compared to students in countries considered to be U.S. competitors. The goal of proposed policies responding to this concern to reinvigorate and retrain Americans currently trained in science and engineering who voluntarily or involuntarily are no longer part of the current STEM workforce.

The third issue focuses on whether or not the presence of foreign S&T students and workers is necessary to meet the nation's workforce needs and attract the best and brightest to bring their ideas to the United States, or if the presence of such individuals adversely affects the U.S. S&T students and workers. Policy discussions focus on immigration policy, primarily increasing the ability of foreign STEM students currently in U.S. universities to more easily obtain permanent admission, and increasing the number of temporary worker visas available so more talent from abroad can be recruited to the United States.

The challenge facing policymakers when making decisions regarding the S&T workforce is that science, engineering, and economic conditions are constantly changing, both in terms of workforce needs as well as the skills the STEM workforce needs to be marketable relative to demand.



SHARE



Comments

Suggested Citation

Stine, D. D. & Matthews, C. M. (2009). *The U.S. science and technology workforce*.

Washington, DC: Congressional Research Service.

http://digitalcommons.ilr.cornell.edu/key_workplace/644



© 2008 [Cornell University](#) | [Notify Me](#) | [Search](#) | [ILR Home](#) | [Accessibility Statement](#)

[Privacy](#) | [Copyright](#)

"Is the United States developing the human capital to remain the world's most productive economy while at the same time meeting a formidable new national security threat?" This question is posed in a new report, "The Quiet Crisis: Falling Short in Producing American Scientific and Technical Talent." The report indicates that the U.S. is not doing what is needed to develop the. Home > Government Relations > FYI > Increasing Diversity in the Science, Engineering and Technology Workforce. FYI: Science Policy News from AIP. Bulletin. We would like to thank the committee that worked over several months to produce this report. Central to the committee's work was benchmarking and idea generation. A comprehensive list of those ideas can be found in the appendix of this report. Printed in the United States of America, 2010. [Leading a Competitive Edge in Innovation through a World-Class Federal Science and](#)

Cookies are used by this site. To decline or learn more, visit our [cookies page](#).

Close