STEM TEACHER RETENTION AND FEDERAL POLICY

WHAT IS WASHINGTON DOING TO "HELP"?

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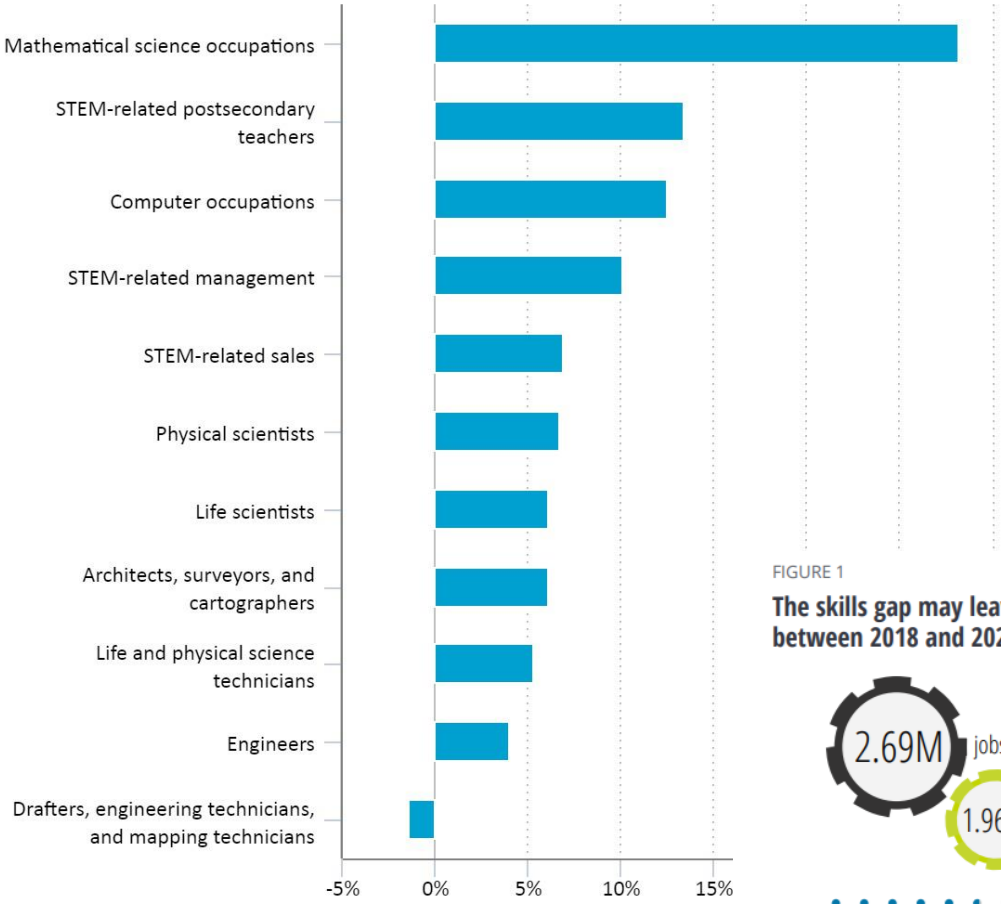
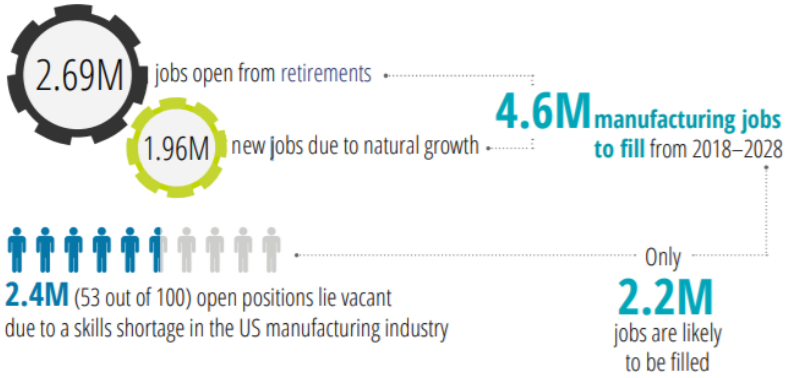
Projected growth rates for types of STEM occupations, 2014 to 2024



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

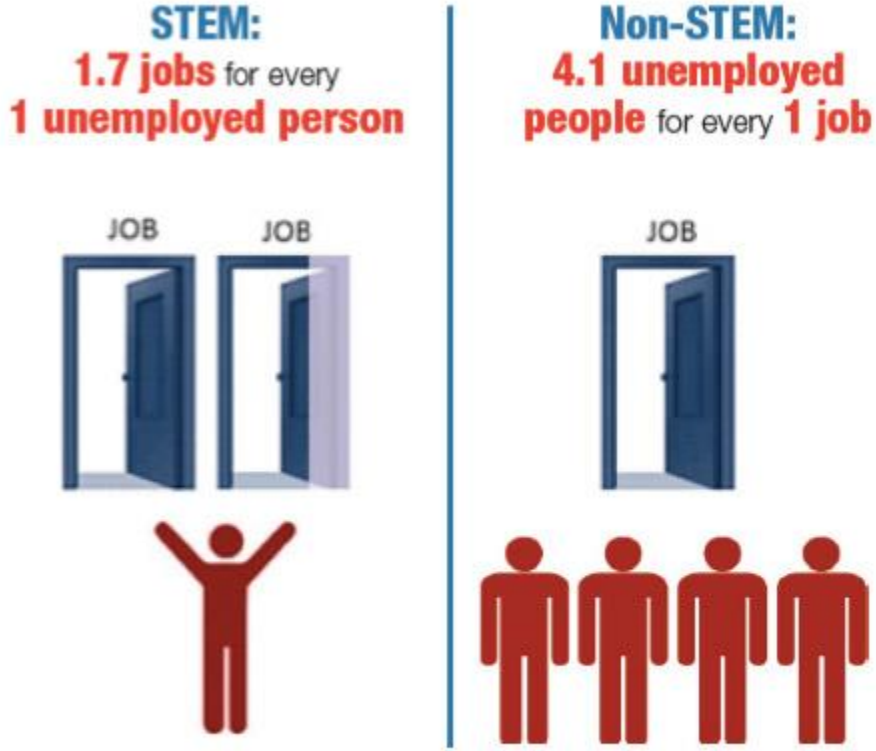
FIGURE 1

The skills gap may leave an estimated 2.4 million positions unfilled between 2018 and 2028



*Calculated on the basis of 52.7% of the skilled manufacturing positions that are unfilled (per the 2018 survey)
**Retirement age of 66

Source: BLS Data, OEM (Oxford Economics Model), Deloitte and Manufacturing Institute skills research initiative.



Source: Change the Equation, Vital Signs

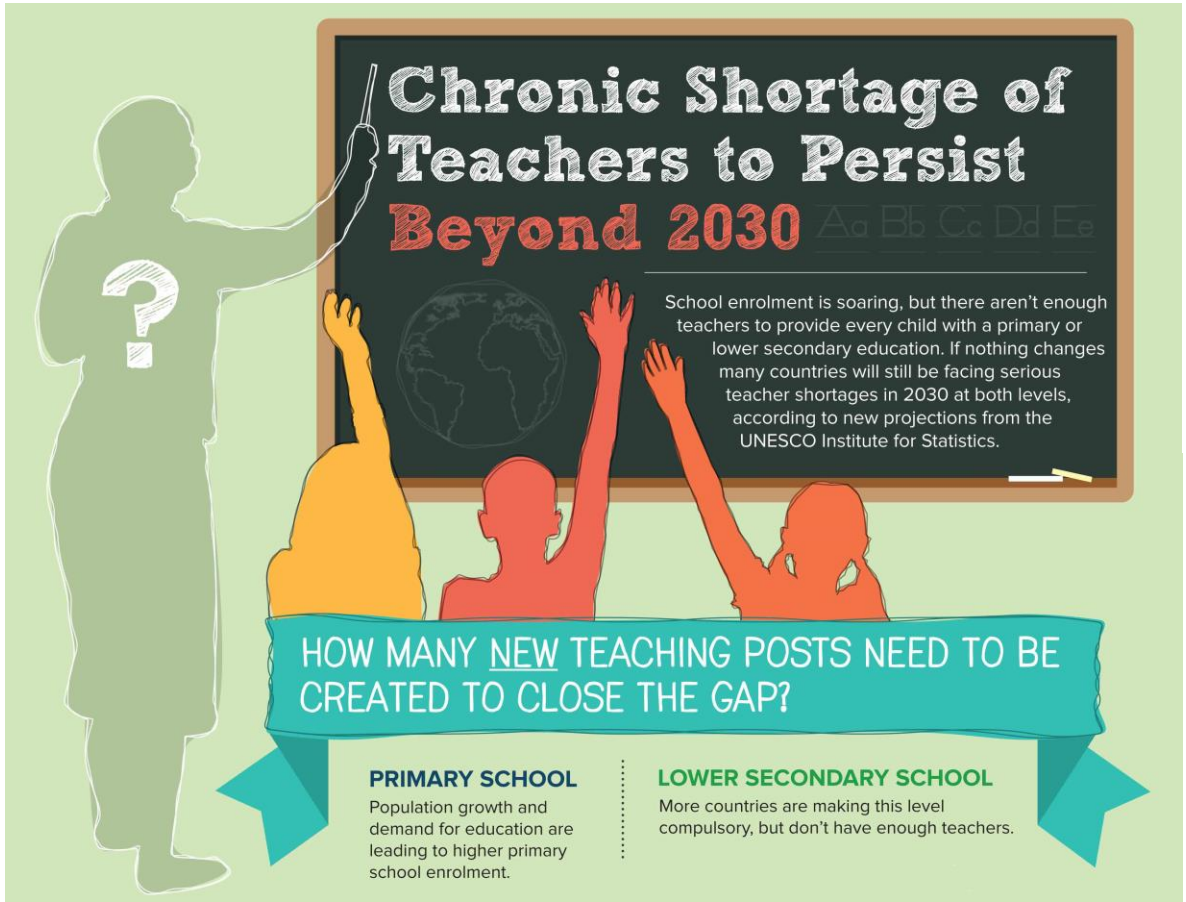
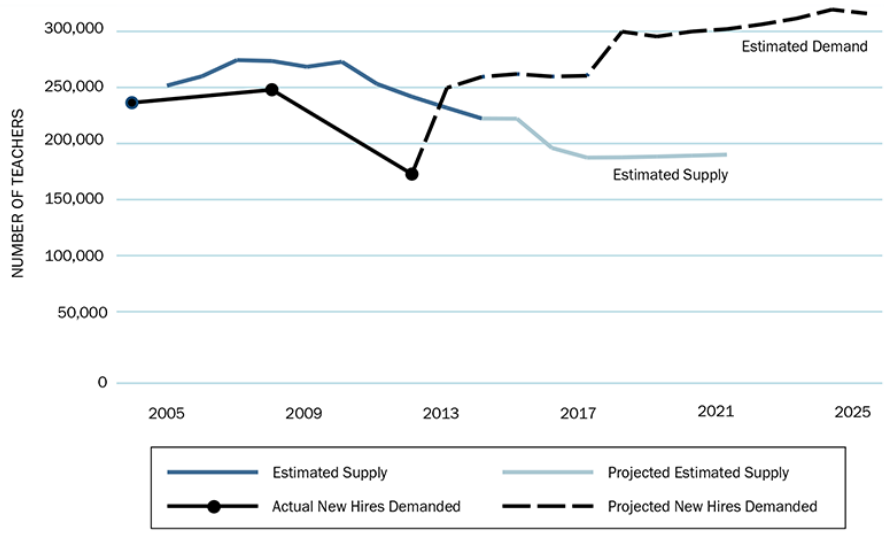


Figure 1. Projected Teacher Supply and Demand



Note: The supply line represents the midpoints of our upper– and lower–bound teacher supply estimates (see Figure 10 in the report for full analysis).
Source: U.S. Department of Education, multiple databases (see Appendix A in full report).

STEM WORKFORCE ISSUES AND FEDERAL POLICY

- Federal policy conversations about the STEM workforce are often about
  - Retaining international competitiveness
  - Fostering excellence, innovation and discovery
  - Keeping the economy strong

- Federal policy conversations about the STEM workforce are NOT (often) about
  - Encouraging STEM talent to pursue teaching
  - Keeping STEM talent in the teaching workforce

STEM WORKFORCE ISSUES AND FEDERAL POLICY

- What STEM issues ARE lawmakers talking about?
  - Middle skills
  - Early childhood education and STEM
  - Encouraging diversity in STEM fields (females and underrepresented minorities)
  - Sexual harassment in science
  - H-1 B visas and immigration
  - Veterans and STEM careers
  - Various STEM iterations (STEAM, C-STEM, STREAM, adding statistics, adding accounting +++++)
  - Competency Based Education
  - Apprenticeships
  - Connectivity
  - Infrastructure

STEM WORKFORCE ISSUES AND FEDERAL POLICY

- Complex problems often require unique interventions
- The federal government can't design those, but it can support them


GOOD
NEWS

WHAT DEBATES AFFECT STEM?

- The 116th Congress is addressing
  - Investments in K-12 and higher education programs
  - Investments in R and D government wide
  - Changes to the Higher Education Act
  - Infrastructure investments
  - Programs that encourage and protect women and minorities
  - Implementation of a new Perkins Career and Technical Education Act
  - Ongoing implementation of the Every Student Succeeds Act

WHAT ABOUT STEM TEACHER RETENTION?

- Investments in K-12 and higher education programs
  - Teacher Quality Partnership grants
  - Title IV, Part A of the Every Student Succeeds Act
  - Investments in teacher professional development (Title II of ESSA)
  - Education Innovation and Research program
  - Afterschool programs, early childhood education, social and emotional learning

WHAT ABOUT STEM TEACHER RETENTION?

- Investments in K-12 and higher education programs
  - House has passed bills that would increase spending at the Department of Education as well as the National Science Foundation
  - Senate has not released a single bill
  - Waiting on broader deal on spending caps

WHAT ABOUT STEM TEACHER RETENTION?

- Changes to the Higher Education Act
  - Support for colleges of education (Title II) and the STEM teaching workforce
  - Support for MSIs (Title III)
    - 700 two- and four-year MSIs educate about a fifth of STEM bachelor's degree holders
  - Stronger partnerships between 2- and 4-year institutions
  - Strong federal student aid programs
    - Public student loan forgiveness
    - TEACH Grants
  - Supports for students while on campus

WHAT ABOUT STEM TEACHER RETENTION?

- Changes to the Higher Education Act
  - Last year, the House Republicans supported a bill that would gut TQP, PSLF, TEACH Grants and other programs
  - There has been no comprehensive bill introduced this year
    - House Education and Labor Committee has held a series of hearings
    - Senate Health, Education, Labor and Pensions Committee staff are meeting to negotiate a bipartisan bill

WHAT ABOUT STEM TEACHER RETENTION?

- Various STEM bills have been introduced
  - Building Blocks of STEM Act
  - STEM Opportunities Act
  - 21st Century STEM for Girls and Underrepresented Minorities Act
  - Computer Science For All Act
  - Combating Sexual Harassment in Science Act
  - MAKERS Act
  - Supporting Veterans in STEM Careers Act
  - JROTC Cyber Training Act

WHAT ABOUT STEM TEACHER RETENTION?

- Various STEM bills have been introduced
  - Some bills have made progress at the Committee level
  - Floor passage and enactment unclear

WHAT DEBATES AFFECT STEM?

- The US Department of Education is addressing STEM
  - Making STEM and CS a priority in competitive grant programs to invest at least $200M annually
  - Reviewing new state Perkins plans
  - Ongoing implementation of ESSA
  - Implementing the White House's 5-year Strategic STEM plan


WRAP
IT UP

WHAT DOES IT MEAN FOR STEM TEACHER RETENTION?

- Good things are happening for STEM, but there is no single proposal aimed at retaining STEM teachers
  - Congress has limited effect on education
  - Congress can send signals
  - A STEM workforce is important, thus a STEM teaching workforce is important
    - Encourage interest, foster excellence
    - Let states and districts do what works best for them
    - Give institutions of higher education the ability to innovate and support pre-service and novice STEM teachers
    - Think ahead about STEM workforce needs
    - Encourage colleges of education to stand up preparation programs in STEM fields