ABOUT THE ORIGINAL STUDY

The supply and quality of STEM teachers

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Why It Matters

A strong STEM pipeline depends partly on the supply of qualified STEM teachers. This study documents national production trends and examines institutional and economic correlates alongside changes in the existing workforce.

Data and Sample

The study combines national teacher-preparation and postsecondary data with teacher survey data to examine STEM teacher production and workforce characteristics. These data describe different populations; preparation completions should not be equated with actual entry into teaching.

Key Findings

- STEM teacher production declined from nearly 32,000 in 2011 to fewer than 20,000 in 2022, with particularly pronounced reductions at smaller institutions.
- Higher average teacher salaries and several state economic indicators were associated with greater institutional STEM teacher production.
- The existing STEM teacher workforce became more female and showed improvements in qualifications, while ethnoracial diversification remained limited.

Policy Implications

- Consider targeted scholarships, grants, and other financial supports for prospective STEM teachers, as the author recommends.
- Examine STEM compensation and competing career opportunities when designing recruitment policy; the reported salary-production association is not a causal policy estimate.
- Combine supply initiatives with efforts to diversify STEM teaching and assess whether candidates complete preparation and actually enter classrooms.

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