

Division of Behavioral and Social Sciences and Education
Board on Science Education

**Graduate Students as Part of the Instructional Workforce for
Undergraduate STEM**

Hosted by the Roundtable on Systemic Change in Undergraduate STEM Education

Related Resources

From Sean Yee:

Yee, S. P., Papalia, N., Deshler, J., Rogers, K. C., Lamarche, A., & Petrulis, R. (2023). Graduate Student Instructor Peer-Mentoring: Design and Impact. *PRIMUS*, 34(7), 693–713.
<https://doi.org/10.1080/10511970.2023.2241459>

[Peer Mentor Program - Department of Mathematics | University of South Carolina \(sc.edu\)](#)

[Past Mentors - Department of Mathematics | University of South Carolina \(sc.edu\)](#)

[National Picture of Providers of Collegiate Professional Development for Teaching Mathematics: Formats, Topics, and Activities - Presentation RUME 2024 Omaha \(Slides 21 and 22\)](#)

[Peer Mentoring Mathematics Graduate Student Instructors: Discussion Topics and Concerns - Presentation RUME 2018 \(Slides 3 and 18\)](#)

[Proceedings from Past SIGMAA on RUME Conferences](#)

[CoMInDS Hub](#)

From Paula Lemons:

[BioTap - Biology Teaching Assistant Project](#)

Cassuto, L. and Weisbuch, R. (2021) *The New PhD: How to Build a Better Graduate Education*. Baltimore: John Hopkins University Press

Liu, C., Bolger, M.S., Cooper, AC, Hester, SD. (2024) A professional development program designed to support TAs in mentoring classroom-based authentic inquiry. A poster presented at SABER: Midwest, St. Louis, MO.

Cooper, AC, Osness, JB, Hester, SD, and Bolger, MS. (2024) How Do Laboratory Teaching Assistants Learn to Support Science Practices? Exploring the Intersection Between

Instructor Reasoning and Actions. *CBE-Life Sciences Education* 23: arx 1-124. DOI: 10.1187/cbe 24-03-0118.

Goodwin, E. C., Cary, J. R., & Shortlidge, E. E. (2021). Enthusiastic but inconsistent: Graduate teaching assistants' perceptions of their role in the CURE classroom. *CBE—Life Sciences Education*, 20(4), ar66.

Lane, A. K., Hardison, C., Simon, A., & Andrews, T. C. (2019). A model of the factors influencing teaching identity among life sciences doctoral students. *Journal of Research in Science Teaching*, 56(2), 141-162.

Shortlidge, E. E., Kern, A. M., Goodwin, E. C., & Olimpo, J. T. (2023). Preparing Teaching Assistants to Facilitate Course-based Undergraduate Research Experiences (CUREs) in the Biological Sciences: A Call to Action. *CBE—Life Sciences Education*, 22(4), es4.

From Rique Campa:

[Center for the Integration of Research, Teaching, and Learning](#)

Mathieu et al. 2020. The Center for the Integration of Research, Teaching, and Learning: A national network to prepare STEM Future faculty. *New Directions in Teaching and Learning*. ([Article Link](#))

Goldberg et al. 2023. Preparing STEM doctoral students for future faculty careers. *PLOS ONE*. ([Article Link](#))

[FAST \(Future Academic Scholars in Teaching\) Fellowship Program](#) (since 2006)

Vergara et al. 2013. FAST-Future Academic Scholars in Teaching: A High-Engagement Development Program for Future STEM Faculty. *Innovative Higher Education*. ([Article Link](#))

Prevost et al. 2017. Evaluation of a High-Engagement Teaching Program for STEM Graduate Students: Outcomes of the Future Academic Scholars in Teaching (FAST) Fellowship Program. *Innovative Higher Education*. ([Article Link](#))

From Bennett Goldberg:

[Inclusive STEM Teaching Project](#)

[Scaling Inclusive Teaching: A National STEM Teaching Initiative Centering Identity, Power, and Privilege](#)

[Nationwide Inclusive Facilitator Training: Mindsets, Practices and Growth | bioRxiv](#)

[Postdoc Academy](#)

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[Exposing postdocs to multiple institutional types: a PROMISE-ing intervention to prepare biomedical faculty](#)