

Embedding peer mentors as a strategy to scale high-impact practices,
support guided pathways, and promote equity

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Agenda

1. Scenario discussion
2. Sources and types of peer mentors
 - Goal
 - Infrastructure
3. Contribution to and location within HIPS, guided pathways
4. Equity and inclusion considerations
 - Selection, recruitment, preparation
5. Pitfalls to avoid and strategies to improve effectiveness
 - Feasibility: scope, sourcing; placement of investment
 - Legitimacy, preparation, on-going support
 - Relative investment in learners, mentors, faculty
 - Assessment plan
6. Reflection and time to gain feedback

Concern/Barrier	Strategies to Overcome

Process to Aid in Mentoring Design



Resources

Cohen, G. L., Steele, C. M., & Ross, L. D. (1999). The mentor's dilemma: Providing critical feedback across the racial divide. *Personality and Social Psychology Bulletin*, 25, 1302-1318.

This article recommends that professors combine high standards with an explicit communication of belief in the student to achieve a higher standard when giving critical feedback. This reduces ambiguity regarding the intent of critical feedback particularly within a cross-race interaction.

Dasgupta, N. (2011). Ingroup experts and peers as social vaccines who inoculate the self-concept: The stereotype inoculation model. *Psychological Inquiry*, 22(4), 231-246.

Peers can provide positive buffering to identity and belongingness even in situations where the field itself (and professionals within them) are less diverse.

Packard, B. W. (2016). *Successful STEM Mentoring Initiatives for Underrepresented Students: A Research-Based Guide for Faculty and Administrators*. Sterling, VA: Stylus Publishing.

This book synthesizes research to include formal program design, peer mentoring strategies, and inclusive climate in departments. Includes conversation starters for difficult mentoring conversations with students and among colleagues.

Packard, B. W., Marciano, V., Payne, J. M., Bledzki, L. A., & Woodard, C. T. (2014). Negotiating peer mentoring roles in undergraduate research lab settings. *Mentoring & Tutoring: Partnerships in Learning*, 22(5), 433-445.

If peer mentors are not validated by their faculty and trained for their role, they may be perceived as less credible and have a negative experience in that role.

Pfund, C., Byars-Winston, a., Branchaw, J., Hurtado, S., & Eagan, K. Defining attributes and metrics of effective research mentoring relationships. *AIDS Behavior*, 20, S238-S248.

Proposes attributes, objectives, and metrics for improving and assessing mentoring, to include research, interpersonal, and career attributes.

Pon-Barry, H., Packard, B. W., & St. John, A. (2017). Expanding capacity and promoting inclusion in introductory computer science: A focus on near-peer mentor preparation and code review. *Computer Science Education*, 27(1), 54-77.

Explains inclusive pedagogy training of peer mentors and initial data on outcomes. Curriculum at: <https://sites.google.com/mtholyoke.edu/mage-training-curriculum>

Rath, K. A., Peterfreund, A. R., Xenos, S. P., Bayliss, F., & Carnal, N. (2007). Supplemental instruction in introductory biology I: Enhancing the performance and retention of underrepresented minority students. *CBE—Life Sciences Education*, 6(3), 203–216.

Supplemental instruction by peers is more effective than tutoring in many contexts because the approach normalizes and integrates academic support in a pro-active, targeted manner.

Rattan, A., Good, C., & Dweck, C. S. (2012). “It’s ok—not everyone can be good at math”: Instructors with an entity theory comfort (and demotivate) students. *Journal of Experimental Social Psychology*, 48(3), 731–737.

Documents what researchers call “comfort feedback” or the false reassurance that certain students (such as women in math) do not need to worry about poor skill development or performance. Well-intentioned mentors and instructors may undermine student persistence with this type of feedback.

Schwartz, J. (2012). Faculty as undergraduate research mentors for students of color: Taking into account the costs. *Science Education*, 96, 527–542.

A good piece to raise policy questions at the institutional level for supporting mentoring of students in equitable and effective ways.

Stephens, N. M., Hamedani, M. G., & Destin, M. (2014). Closing the social-class achievement gap: A difference-education intervention improves first-generation students’ academic performance and all students’ college transition. *Psychological Science*, 25, 943-953.

Highlights the importance of how an influential peer mentoring message is crafted. Help-seeking is improved when first-generation (and continuing-generation) panelists connect the advice provided to their own experience.

Streitwieser, B., & Light, G. (2010). When undergraduates teach undergraduates: Conceptions of and approaches to teaching in a peer led team learning intervention in the STEM disciplines: Results of a two year study. *International Journal of Teaching and Learning in Higher Education*, 22, 346–356.

Many peer mentoring initiatives include a training course to prepare peer mentors effectively, and the peer mentors also grow and thrive from their participation.

Wilson, Z., Holmes, L., deGravelles, K., Sylvain, M., Batiste, L., Johnson, M., . . . Warner, I. (2012). Hierarchical mentoring: A transformative strategy for improving diversity and retention in undergraduate STEM disciplines. *Journal of Science Education & Technology*, 21(1), 148–156.

Explains the LA-STEM program and how the peer mentoring operates effectively. In the LA-STEM program, they have a pathway to recruit underperforming students after their first year of courses, and they enlist multiple forms and sources of mentoring.