NATIONAL ACADEMIES Sciences Engineering Medicine

BOARD ON HIGHER EDUCATION AND WORKFORCE

SHARED RESOURCES

Workshop #1

Mentorship, Well-being, and Professional Development in STEMM — Addressing the "Knowing-Doing Gap" (Washington, DC and Online)

PRIMARY RESOURCE

[1] Pfeffer, Jeffrey, and Robert I. Sutton. 2000. The knowing-doing gap: How smart companies turn knowledge into action. Harvard Business Press.

[2] Pfeffer, J., & Sutton, R. I. (1999). Knowing "what" to do is not enough: Turning knowledge into action. *California Management Review, 42*(1), 83-108. https://cmr.berkeley.edu/1999/11/42-1-knowing-what-to-do-is-not-enough-turning-knowledge-into-action/

"KNOWING" RESOURCES

[3] National Academies of Sciences, Engineering, and Medicine. 2019. *The Science of Effective Mentorship in STEMM*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25568

[4] Jolly, Brian. "Faculty development for organizational change." In *Faculty development in the health professions: a focus on research and practice*, pp. 119-137. Dordrecht: Springer Netherlands, 2013. https://link.springer.com/chapter/10.1007/978-94-007-7612-8_6

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[12] Susan Elrod & Adrianna Kezar (2017) Increasing Student Success in STEM: Summary of A Guide to Systemic Institutional Change, *Change: The Magazine of Higher Learning, 49*(4), 26-34, doi:10.1080/00091383.2017.1357097

[13] Gehrke, Sean, and Adrianna Kezar. "The roles of STEM faculty communities of practice in institutional and departmental reform in higher education." *American Educational Research Journal 54*, no. 5 (2017): 803-833. https://journals.sagepub.com/doi/10.3102/0002831217706736

[14] Reinholz, D.L., Apkarian, N. Four frames for systemic change in STEM departments. *IJ STEM Ed 5*, 3 (2018). doi.org/10.1186/s40594-018-0103-x

[15] Schein, Edgar H. *Organizational culture and leadership.* 4th Ed. Jossey-Bass, 2010. San Francisco

[16] National Center for Science and Engineering Statistics (NCSES). 2023. *Diversity and STEM: Women, Minorities, and Persons with Disabilities 2023*. Special Report NSF 23-315. Alexandria, VA: National Science Foundation. http://ncses.nsf.gov/pubs/nsf23315/assets/nsf23315-report.pdf

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[18] National Academies of Sciences, Engineering, and Medicine. 2018. *Graduate STEM Education for the 21st Century*. Washington, DC: The National Academies Press. doi.org/10.17226/25038

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[21] Recordings of the Undergraduate and Graduate STEM Students' Experiences During COVID-19 sessions and Information about the project can be found at https://www.nationalacademies.org/our-work/response-of-higher-education-to-covid-19-virtual-workshops-on-graduate-and-undergraduate-education

[22] National Academies of Sciences, Engineering, and Medicine. (2024). *Disrupting Ableism and Advancing STEMM Promoting the Success of People with Disabilities in the STEM Workforce: Proceedings of a Workshop Series*. Washington, DC: The National Academies Press. https://doi.org/10.17226/27245

[23] Recordings of the Disrupting Ableism and Advancing STEM Conference Series and Information about the project can be found at https://www.nationalacademies.org/event/06-05-2023/disrupting-ableism-and-advancing-stem-a-national-leadership-summit

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"DOING" RESOURCES

[25] Montgomery, Beronda L., Fátima Sancheznieto, and Maria Lund Dahlberg. "Academic Mentorship Needs a More Scientific Approach." *Issues in Science and Technology 38*, no. 4 (Summer 2022): 84–87. https://issues.org/academic-mentorship-scientific-approach-montgomery-sancheznieto-dahlberg/

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[28] Recordings of the Re-envisioning Promotion and Advancement for STEM Faculty: Aligning Incentives with Values sessions and Information about the project can be found at https://www.nationalacademies.org/our-work/promotion-and-tenure-policies-and-incentives-in-higher-education-a-workshop

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Workshop #2

Empowering Senior Higher Education Leaders in Developing an Equitable Research Ecosystem (Durham, NC and Online)

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[11] National Academies of Sciences, Engineering, and Medicine. 2018. *Graduate STEM Education for the 21st Century*. Washington, DC: The National Academies Press. doi.org/10.17226/25038.

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[13] Recordings of the Disrupting Ableism and Advancing STEM Conference Series and Information about the project can be found at https://www.nationalacademies.org/our-work/beyond-compliance-promoting-the-success-of-people-with-disabilities-in-the-stem-workforce.

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[20] Big Ten Academic Leadership Institute https://btaa.org/leadership/big-ten-academic-alliance-leadership-institute

[21] Professional Development Hub Collections https://www.pdhub.org/collections/

[22] Center for the Improvement of Mentored Experiences in Research (CIMER) Curricula Modules https://cimerproject.org/curricula-overview/

[23] Science Communication Lab Courses https://sciencecommunicationlab.org/science-films/?_media_project_tag_filter=career-planning-videos

[24] Postdoc Academy Mentoring https://www.postdocacademy.org/mentoring/

[25] National Postdoctoral Association's Recognition Program https://www.nationalpostdoc.org/page/RecProgram

Workshop #3

Mentorship, Well-being, and Professional Development in Times of Societal Change and Institutional Disruptions

(Madison, WI; College Park, MD; Atlanta, GA; Denton, TX; Los Angeles, CA; and Online)

[1] National Academies of Sciences, Engineering, and Medicine. 2021. *Mental Health, Substance Use, and Wellbeing in Higher Education: Supporting the Whole Student.* Washington, DC: The National Academies Press. https://doi.org/10.17226/26015

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[12] Synergies, Not Silos: Why Isolated Initiatives Won't Disrupt the Status Quo (2023) https://aaas-iuse.org/synergies-not-silos-why-isolated-initiatives-wont-disrupt-the-status-quo/

[13] How Disruption Allows Us to Reimagine Convergent STEM Ecosystems (2021) https://aaas-iuse.org/how-disruption-allows-us-to-reimagine-convergent-stem-ecosystems/

[14] McLewis, C. C., et al. (2024) Cross-Institutional Mentoring: A Catalyst for Advancing Diversity, Equity, and Inclusion in STEMM Interventions https://doi.org/10.1002/sce.21930

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