Critical Resources for Change Agents

ASCN Working Group 3 Leaders

Many thanks to Working Group 3 member Gurlovleen Rathore for compiling this list.

This document contains the most critical resources for change agents, or those who support change agents, to help them be effective in leading change. Change agents may include faculty, postdocs, administrators, or others leading educational change on campuses.

List of Resources

Bensimon, E.M. & Dowd, A.C. (2012). **Developing the Capacity of Faculty to Become Institutional Agents for Latinos in STEM**. Los Angeles, CA: University of Southern California. (Plus supplement: Becoming Agents of Change in STEM: The Center for Urban Education's STEM Toolkit.) More: http://cue.usc.edu/tools/stem/

This report introduces faculty to an innovative model of organizational development and student advocacy, to ensure Latino(a) student success on campuses. The report also offers concrete recommendations on how to create, support, and retain institutional agents within colleges and universities. The supplement provides a toolkit to develop competencies of individuals and cross-functional teams to facilitate Latina and Latino student success in STEM.

Bush, S.D., Rudd II J.A., Stevens, M.T., Tanner, K.D., & Williams, K.S. (2016). **Fostering Change from Within: Influencing Teaching Practices of Departmental Colleagues by Science Faculty with Education Specialties.** *PLoS ONE, 20*: 1-20.

Science faculty with education specialties (SFES) is a broad category of faculty with a focus on education. SFES often have a role in influencing the teaching practices of their colleagues. The potential of these individuals for fostering change is discussed. See also the SFES Research Site at: http://www.sfsusepal.org/research/current-projects/science-faculty-with-education-specialties-sfes/

Chasteen, S.V., & Code, W.J. (2018). **The Science Education Initiative Handbook**. https://pressbooks.bccampus.ca/seihandbook/

This book offers advice on implementing a department-level changes to curricula and instructional practices by the use of people with expertise in both the content of the discipline, and in effective educational techniques. A webinar by the Handbook authors is available to view here: bit.ly/ASCNwebSEI

Elrod, S.L., & Kezar, A.J. (2016). **Increasing student success in STEM: A guide to systematic institutional change**. Washington, DC: Association of American Colleges and Universities.

Based on the experiences of eleven colleges and universities in the Keck/PKAL STEM Education Effectiveness Framework project, this guide contains (start-finish) advice for successfully leading comprehensive student success initiatives in STEM.

Fry, C.L. (ed). (2014). **Achieving Systemic Change: A Sourcebook for Advancing and Funding Undergraduate STEM Education**. Washington, D.C.: The Association of American Colleges and Universities. https://www.aacu.org/sites/default/files/files/publications/E-PKALSourcebook.pdf

The sourcebook from the AACU 2014 workshop discusses how best to effect systemic change in undergraduate STEM, including the rationale for change, areas of investment, and key reports.

Goldstein, B.E., Chase, C.S., Frankel-Goldwater, L., Osborne-Gowey, J., Risien, J., & Schweizer, S. (2017). **Transformative Learning Networks: Guidelines and Insights for Netweavers**. https://www.aplu.org/projects-and-initiatives/stem-education/stem-education-centers-network/Goldstein_paper.pdf

This report explores how networks can foster relationships, share learning about practice, and increase collective capacity to make change happen. The authors focus on "netweavers", or those who initiate activities, build community, circulate ideas and practice, and promote a shared identity across a network.

Heifetz, R.A. & Linsky, M. (2002). **Leadership on the Line. Staying Alive through the Dangers of Leading**. Boston: Harvard Business School Press.

This book describes leadership skills needed to thrive in positions that require disrupting the status quo to achieve the higher goals/purposes of organizational/worldly changes.

Ingram, E.L, House, R.A., Chenoweth, S., Dee, K.C., Ahmed, J., Williams, J.M., Downing, C.G., & Richards, D.E. (2014). **From Faculty to Change Agent: Lessons Learned in the Development and Implementation of a Change**. Workshop, ASEE Annual Conference and Exposition, p. 24.630.1–24.630.12.

This paper describes strategies for and shares resources about how faculty can successfully become change agents and lead emergent systemic changes in their institutional context.

Jackson, B.W. (2006). **Theory and practice of multicultural organization development**. In Jones, B. B. & Brazzel, M. (Eds.), *The NTL Handbook of Organization Development and Change* (p. 139-154). San Francisco, CA, Pfeiffer.

This article presents a framework to identify the level of inclusivity in an organization. Change makers can use the information to create pathways to truly inclusive/multicultural organizations.

Kezar, A., & Gehrke, S. (2015). **Communities of Transformation and their Work Scaling STEM Reform**. https://pullias.usc.edu/wp-content/uploads/2016/01/communities-of-trans.pdf

This report describes how communities of transformation (e.g., PKAL, POGIL) advance goals of scaling STEM education reforms.

Kotter, J.P. (2012). **Leading Change**. Boston: Harvard Business School Press.

This book describes the process of and common hurdles in leading change in any type of organization.

Laursen, S.L., & Austin, A.E. (2014). **StratEGIC Toolkit: Strategies for Effecting Gender Equity and Institutional Change**. http://www.strategictoolkit.org

The Toolkit includes 13 Strategic Intervention Briefs that each explain a specific intervention to foster change for greater campus inclusiveness and diversity, including addressing purposes, models, affordances, limitations, and relevant evaluation and research.

Macdonald, R. H., Beane, R. J., Baer, E. M., Eddy, P. L., Emerson, N. R., Hodder, J., Iverson, E. R., McDaris, J. R., O'Connell, K., & Ormand, C. J. (2019). **Accelerating change: The power of faculty change agents to promote diversity and inclusive teaching practices**. *Journal of Geoscience Education*, 1-10.

This article about preparing faculty to act as change agents to support diversity and inclusion is applicable to both two-year colleges and a larger audience.

Ramaley, J.A. (2000). **Change as a Scholarly Act: Higher Education Research Transfer to Practice**. In Kezar, A., & Eckel, P. (Eds.), *Moving Beyond the Gap Between Research and Practice in Higher Education* (p. 75-88). Jossey-Bass Publishers, San Francisco.

This article offers a university president's perspective on directions that researchers in higher education ought to pursue in order to support institutional decision-making processes. He also describes the types of problems he encounters in his position as president.

Reinholz, D.L., & Apkarian, N. (2018). **Four frames for systemic change in STEM departments**. *International Journal of STEM Education, 5*.

Aimed specifically at change agents operating at the department level, this short article outlines four areas that change agents should focus on (structures, symbols, power relationships, and people) in attempting to create culture change. Practical examples are given.

Risien, J. (2019). **Curators and sojourners in learning networks: Practices for transformation**. *Evaluation and program planning, 73*: 71-79. https://doi.org/10.1016/j.evalprogplan.2018.12.001

In this article Risien provides a framework for examining structures, roles and practices of networks, and particularly of roles termed 'curators' and 'sojourners'. Briefly, curators build networks and oversee alignment; sojourners develop local capacity and serve as a go-between for the network and local institutions.

Weaver, G.C., Burgess, W.D., Childress, A.L., & Slakey, L. (2015). **Transforming Institutions: Undergraduate STEM Education for the 21st Century**. Purdue University Press.

> *This book provides an overview of the challenges in higher education, current research and institutional change programs, and offers a summary of lessons learnt from the 2011 and 2014 Transforming institutions conference.*

Resources aimed at higher administrators

American Association of Community Colleges. (2017). **AACC Competencies for Community College Leaders**. http://aacc.nche.edu

> *This resource offers information on competencies leadership programs/colleges should consider when designing programs to develop tomorrow's community college leaders.*

Bush, S.D., Pelaez, N.J., Rudd, J.A., Stevens, M.T., Tanner, K.D., & Williams, K.S. (2015). **Misalignments: Challenges in Cultivating Science Faculty with Education Specialties in Your Department**. *BioScience, 65*(1): 81-89.

> *This paper describes the role and potential contributions of science faculty with education specialties within a department, such as curricular reform. Advice for those hiring such faculty is given.*

Peacock, S. M. (2015). **The Carl Wieman Science Education Initiative at the University of British Columbia: A Dean's Perspective**. https://d32ogoqmya1dw8.cloudfront.net/files/ASCN/resources/carl_wieman_science_education.pdf

> *This white paper offers a seasoned dean's perspective on leading college-wide change efforts such as The Carl Wieman Science Education Initiative focused on instructor use of research-based teaching approaches in science education.*

Resources aimed at professional societies

Brown, P., Henderson, C., & Bressoud, D. (2018, January 2). **How Does Your Professional Organization Lead Positive Change?** https://ascnhighered.org/ASCN/posts/194274.html

> *This blog post offers information about reports that several professional organizations in physics and math education have generated to assist faculty with curricular changes (curriculum, instruction, and assessment).*

National Science Foundation. (2012, May 3). **The Role of Scientific Societies in STEM Faculty Workshops**. http://www.aapt.org/Conferences/newfaculty/upload/STEM_REPORT-2.pdf

> *This publication describes how professional societies can and do support faculty teaching development to make way for changes at institutions.*

Presley, J. B., & Redd, K. (2012, November 30). **Institutional change to strengthen teacher prep**. http://www.aplu.org/projects-and-initiatives/stem-education/SMTI_Library/TLC-final-report/file

> *This APLU report outlines a theory of action that national organizations, in collaboration with professional societies, can use to effect campus wide changes. The report illustrates the theory of action using the theme of teacher preparation.*