

Scientific Teaching: “Diversity affects learning”
Teaching Mentoring Program Sponsored by the CVM Teaching Academy

Readings and Resources:

Alber, R. (2014) <http://www.edutopia.org/blog/scaffolding-lessons-six-strategies-rebecca-alber>

Provides very simple examples of the similarities between scaffolding and differentiating. A K-12 setting.

Cameron, C., Zhao, H, & McHugh, M. K. (2012). Publication Ethics and the emerging scientific workforce: Understanding “Plagiarism” in a global context.

<http://www.ncbi.nlm.nih.gov/pubmed/22104051>

Discusses plagiarism and patch writing. Another perspective on how diversity affects learning. Discussion toward solutions.

Cooper, J. L. & Robinson, P. (2014). Using classroom assessment and cognitive scaffolding to enhance the power of small-group learning. *Journal of Excellence in Education*.

<http://celt.miamioh.edu/ject/fetch.php?id=597>

Provides 13 practical, small-group, examples supported by scaffolding to support ‘active learning’ and improved student learning outcomes. Very applied.

Johnson, A. C. (2007). Unintended consequences: How science professors discourage women of color. *Science Education*. DOI 10.1002/sce.20208

Undergraduate specific. Discussions the role of gender mediated motivation to retention in STEM by some topics addressed in ‘active learning’. Includes a match between “whiteness, maleness, and the characteristics needed for success in sciences.”

Tanner, K. T. (2009). Learning to see inequity in science. *Cell Biology Education*.

<http://www.lifescied.org/content/8/4/265.full>

Provides example to help hone an ‘eye toward inequity’ and provides suggestions to improve at the course and department level.

Westcoast Women in Engineering Science and Technology. <http://wwest.mech.ubc.ca/>

Timely resource which includes topics such as unconscious bias, equity, stereotype threat, mentoring, gender diversity 101, etc. This is a great resource for info graphics and scholarly articles and additional readings.

Wieman C. & Gilbert S. (2015). Taking a scientific approach to science education, Part II – Changing Teaching. in *Microbe* V.10:5. p. 203 – 207.

Examines principles of scientific teaching related to scale at the department, identifies some factors that contribute and/or hinder change. Introduces the Teaching Practices Inventory and the Classroom Observation Protocol for Undergraduate STEM.