TRESTLE

TRANSFORMING EDUCATION, STIMULATING TEACHING AND LEARNING EXCELLENCE

February 2017

Center for STEM Learning
UNIVERSITY OF COLORADO **BOULDER**

CU-TRESTLE Annual Meeting

The first CU-Boulder annual TRESTLE gathering was held on January 23, generously co-sponsored by the Center for STEM Learning. Lightening talks and table discussions focused on course design and student-centered learning. Lively conversations centered around supporting course transformations, writing great group activities, supporting student metacognitive strategies, authentic research experiences, developing learning goals, and sustainability of course transformations. We heard from new course transformation projects in TRESTLE (renovation of physics laboratories by Daniel Bolton, and quantitative analysis in environmental studies by Eve Hinckley), and projects that were previously funded (case studies in IPHY by Heisler, Casagrand and Foley, and transition to statistics in MATH by Rob Tubbs).

TRESTLE Scholars groups shared their work and approaches in developing learning goals for the ATOC major, developing group worthy activities, and the current Scholars group, "Helping students take charge of their own learning", facilitated by Becca Ciancanelli (SASC) and Jenny Knight (MCDB). Thanks to all attendees!

News & Notes

There are several summer opportunities aimed at enhancing *your* ability to lead STEM educational change:

- **ASCN Leadership Institute** (August 2-4, Portland; Applications by Feb 28).
- **Making Academic Change Happen** (MACH) (May 31-June 2, Rose Hulman)
- **PKAL STEM Leadership Institute** (various dates in July, in Maryland).

See also the **Accelerating Systemic Change Network (ASCN)**: Grassroots organization to connect educators and researchers, with blog and listserv. http://ascnhighered.org/

TRESTLE Mini grants ($1000) to support STEM education reforms are available; see website.

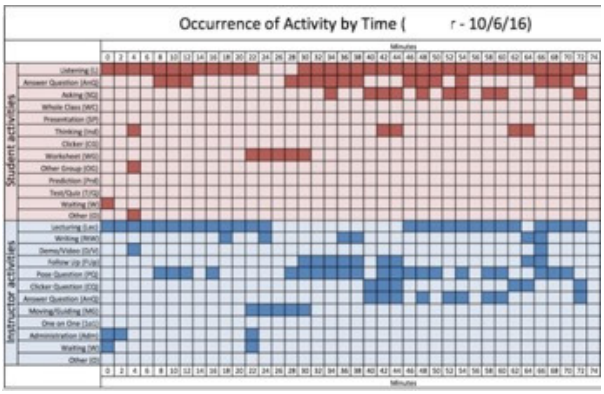
TRESTLE Spring Webinars:
Save the date; details for joining via email
- March 1, 11 am MT: Developing learning goals with a faculty working group.
-April 3rd, 1pm MT: Running productive faculty meetings about course transformation

TRESTLE is a multi-institution, NSF-funded project focused on improving STEM education methods at research universities through embedding educational expertise directly into departments, and building intellectual communities around educational improvements.

Get a new view on your teaching

.... with ASSETT's VIP Service.

TRESTLE has collaborated with ASSETT to provide course observation services to TRESTLE participants. Now this service is available to all A&S instructors!



Good teachers use feedback to adjust their classroom experience. But how can they get that feedback in a way that is helpful and not time-consuming? Arts and Sciences Support for Education Through Technology (ASSETT) has recently launched a service to provide this feedback.

The Visualizing Instructional Practices (VIP) service lets Arts and Sciences faculty choose a protocol (a set of phenomena to be observed like clicker use, lecturing, and asking high-level questions) that fit their situation. Currently we are using two protocols. One is STEM specific and is called the Classroom Observation Protocol for Undergraduate STEM (COPUS). The other is a home-grown technology-rich protocol called the Observation Protocol for Learning Environments (OPLE). Students trained in the protocol use it to record when those phenomena occur throughout your class period. Those observations are synthesized into a timeline of your class data (see image above) and a histogram showing how frequently those phenomena are observed. ASSETT professional staff are available to help you reflect on those visualizations, and support you in implementing any plans you make for changing your class. For more information contact us at assett@colorado.edu or see our web site: http://www.colorado.edu/assett/programs/vips.

Come join our ShInDiG!

The Shared Innovations Discussion Group (ShInDiG) is an informal monthly drop-in meeting of STEM educators interested in getting ideas, sharing their work, and getting feedback. The focus of the group is on research-based methods in STEM learning. Meetings in 2017 are on Thursdays, 2-3 pm in Duane Physics G1B31. ShInDiG is a *discussion-based* group; after a short presentation, time will be spent sharing and brainstorming.

- February 23 (Engaging the best without losing the rest: Designing your class for all students; Rebecca Machen)
- March 23 (Helping students become self-directed learners; Becca Ciancanelli)
- April 27 (Show and tell: In the flipped classroom; David Budd)

https://www.colorado.edu/csl/trestle/shindig-discussion-group

Exam Wrappers

THE LOW-DOWN

Just given a midterm? Consider using an "exam wrapper" to help students to reflect on their work. Too often students focus on the score, but not on the feedback for their learning. An exam wrapper is a short set of questions which asks students to reflect on their exam: How did they study? Where did they lose points? What might they do differently next time? What can the instructor do to support their learning? Exam wrappers can be given as homework, or as a handout "wrapper" with the returned exam. Bring attention to their responses the week before Exam 2!