

# TRESTLE Faculty Scholars Groups: Spreading Knowledge and Generating Community

Transforming Education, Stimulating Teaching and Learning Excellence

Becca Ciancanelli, Pamela Harvey, Lisa Corwin, Jenny Knight, Stephanie Chasteen

## The Journey to a New ATOC Major: What Do We Want Our Students to Learn?

Facilitators: Stephanie Chasteen (TRESTLE PI) and Sarah Wise (ASSETT) Spring 2016

Group Members: Derek Brown (ATOC), Alex Jahn (ATOC), Nicole Lovenduski (ATOC), Julie Lundquist (ATOC), Melissa Nigro (ATOC)

#### **Examples of Discussion Topics:**

- 1. Creating program values statements,
- 2. Development of program learning goals,
- 3. Alignment of program-level goals with outcomes assessments,
- Course materials assessments

Product: Values statements and learning outcomes for the major, and new gateway course.

"We each individually sought experience with writing learning goals, developing assessments and expanding our instructional techniques toolkit."

"Our original proposal was extremely ambitious and setting more realistic goals for the semester during our first meeting allowed us to be focused and thorough in our work."

"Both Stephanie and Sarah's knowledge base, insight and attention to detail were extremely valuable to the success of our project."

# Designing and Facilitating Group-worthy Activities

Facilitator: Jenny Knight (MCDB) Fall 2016

Group Members: Derek Brown (ATOC), Becca Ciancanelli (SASC), Alex Jahn (ATOC), Abbie Liel (CEAE), Nicole Lovenduski (ATOC), Julie Lundquist (ATOC), Melissa Nigro (ATOC), Cheryl Pinzone (EBIO).

### **Examples of Discussion Topics:**

- Activities for classroom group work (small versus large classes),
- Assessments for group work,
- Techniques for increasing student engagement,
- 4. Implementation and facilitation.

Product: Manual of participant-developed in-class learning activities

"...the two topics that resonated were the discussions on how groups should be formed, and the barriers and potential solutions to group work. Hearing from others about the strategies they employed when faced with these barriers was very useful."

"We debated how to encourage disengaged students and strategies to avoid having only one member of the group do most of the work."

"Hearing feedback from others about strategies that have been successful seemed to inspire many of us to try new techniques."



### What are TRESTLE Scholars?

TRESTLE Scholars are interdisciplinary faculty learning communities (FLCs) that meet biweekly for a semester. The purpose of these groups is to leverage existing expertise on campus around evidence-based teaching in STEM, both spreading knowledge and generating community around teaching excellence. An aim of each group is to produce a tangible product to be shared in home departments.

# Designing Metacognitive Activities to Develop Students' Study and Learning Skills

Facilitators: Becca Ciancanelli (SASC) and Jenny Knight (MCDB) Spring 2017

Group Members: Atreyee Bhattacharya (ENVS), Marie Boyko (IPHY), Robert Buchwald (EBIO), Ioana Fleming (CSCI), Jean Hertzberg (MCEN), David Knox (CSCI), John Nardini (APPM), Melinda Piket-May (ECEE), Cheryl Pinzone (EBIO), Kathryn Plath (CHEM), Kate Stange (MATH)

#### **Examples of Discussion Topics:**

- 1. Research-based principles of classroom learning,
- 2. Modes of thinking in various disciplines,
- 3. Overview of short in-class reflective activities that encourage metacognition,
- 4. Assessing and improving students' attitudes toward learning.

<u>Product:</u> Manual of participant-developed in-class activities - muddiest point, exam wrappers, instructor metacognition

"The best applications of what we learned are ahead. This group allowed us to start thinking about this potentially powerful self-learning tool and how to create exercises that fit with our disciplines and specific courses.

"The strongest outcome from this group was useful pieces of knowledge and the desire to put it to practice and implement campus wide."

# Development of Course-based Undergraduate Research Experiences

<u>Facilitators</u>: Lisa Corwin (EBIO) and Pamela Harvey (MCDB) Fall 2017

Group Members: Atreyee Bhattacharya (ENVS), Bilge Birsoy (MCDB), Janet Casagrand (IPHY), Erica Ellingson (APS), Nancy Emery (EBIO), Christy Fillman (MCDB), Teresa Foley (IPHY), Julie Graf (BSI), Nancy Guild (MCDB), Alexandra Jahn (ATOC), Minhyea Lee (PHYS), Lucy Pao (ECEE), Joy Power (MCDB), Katharine Suding (EBIO)

#### Examples of Discussion Topics:

- 1. Overview of CURE Models,
- 2. Development of faculty workload balance & identifying resources for support,
- 3. Assessment of CURE outcomes,
- 4. Development of a sustainable semester-to-semester research plan.

Proposed Products: Manual for identification of CURE support, Group funding application to support CURE development, Composition of guidelines for crossdisciplinary development of CUREs

Note: this FLC is currently in progress.

# **Guiding Principles:**

TRESTLE Scholars use scholarly teaching practices.

TRESTLE Scholars are grounded in the reality and expertise of real teachers.

TRESTLE Scholars respect the expertise in the room.

TRESTLE Scholars focus on building community.

This material is based upon work supported by the National Science Foundation under Grant No. 1525331