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Project Number: 08-16660
PI: Arlene Russell
Institution: UCLA
Title: Improving Engineering Communication with Enhanced Calibrated Peer Review
Type: Phase 2/Type 2 - Expansion
Target Discipline: Engineering
Focus: Creating Learning Materials & Teaching Strategies

Goals & Intended Outcomes: To enhance the widely adopted Calibrated Peer Review writing program to include visual components (graphics, pictures, posters, videos), that address ABET's broad communication criteria and that are critical for mastery by all STEM majors.

Methods & Strategies: The enhanced program is being developed at UCLA, field-tested in Chemistry there, and implemented in Engineering courses at LSU and Rose-Hulman Institute of Technology. This strategy ensures the applicability to all STEM fields.

Evaluation Methods & Results: In addition to the evaluation of the mechanics of anonymous student submission of many different file types, field-testing at UCLA is assessing the change in students' writing approaches, skills, and clarity when visuals are included with their written submissions. Engineering evaluation at LSU and RHIT will assess how CPR assists students in developing the broad oral communication skills specified in ABET outcomes criteria.

Dissemination: Dissemination is ongoing. The collaborative team members from UCLA, LSU, and RHIT have presented the work of this project at disciplinary conferences and given workshops to train other faculty how to use the enhanced CPR program in their classes.

Impact: The structure of the enhanced CPR assignments allows faculty a mechanism to easily articulate, demonstrate, and teach students the holistic qualities of effective communication, particularly in highly visual documents such as posters and oral presentations. The enhanced CPR program will also provide faculty and students with a quantifiable means to measure student performance and outcomes.

Challenges: Support for centralized IT server support specifically for CPR has encountered some initial opposition on campuses where administrators believe in only one pre-determined campus-management program and do not see CPR as an instructional tool. Educating administrators and IT staff has been necessary.

Breakout Session Topics: I would be happy to lead a breakout or workshop session that would
- introduce faculty to the new indexed, cited, and adaptable library of assignments in this enhanced version of CPR
- discuss the role that authored assignments can play in the Scholarship of Teaching;
- demonstrate the mechanism for introducing this program into a variety of classes and disciplines.

Breakout Session Category: Personnel (Faculty & Postdocs & Graduate student, etc.) Development