Workshop – Developing Cross-Disciplinary Collaborations for Engineering Education Research

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Abstract - More and more engineering faculty are moving beyond developing effective classrooms practices to conducting educational research, but this move is not without significant challenges. One set of challenges has to do with forming cross-disciplinary research collaborations. This involves attending to differences in disciplinary cultures and language, building trust, learning how to translate across cultures, and committing to an exploration of synthesis across different perspectives. It also requires knowing where to find collaborators to build networks of expertise. This workshop is designed for engineering education researchers who wish to forge cross-disciplinary partnerships. At the end of the workshop, participants will be able to (1) identify complementary expertise needs and communities for finding collaborators, (2) craft messages about research interests in everyday language that can spark the research interests of potential collaborators, and (3) describe strategies for making the most of first “cultural” exchanges in cross-disciplinary research collaborations. Participants are encouraged to bring their research ideas and questions to the workshop as the basis for working in small groups. This workshop is sponsored by the National Science foundation through Expanding and sustaining research capacity in engineering and technology education: Building on successful programs for faculty and graduate students (DUE – 0817461).

Index Terms: Engineering education research, cross-disciplinary collaboration, disciplinary cultures

Workshop Goals
Participants will be able to (1) identify expertise needs and communities for finding potential collaborators, (2) translate research ideas and interests into everyday language that can engage and excite potential collaborators, and (3) describe strategies for making the most of first “cultural” exchanges in developing cross-disciplinary research collaborations. This knowledge can be applied by participants towards formulating significant and researchable questions in the context of engineering education, enhancing understanding of engineering education research articles and proposals, and discussing implications of engineering education research with engineering faculty.

Workshop Format
In the first cycle of workshop activities, participants will learn how to communicate their research interests or ideas to excite and enlist potential collaborators as well as support cross-disciplinary sense-making. In the second cycle, participants will engage in cycles of “speed dating” exercises to test and improve the ways they communicate their research interests to others. In the final cycle of activities, participants will use a set of handouts to identify qualities of potential collaborators and where to find them. To the extent that time and numbers permit, the facilitators will hold consultancies with individual participants directed towards their specific area or issue.

Anticipated Audience
This workshop is designed for those seeking to find research help/partnerships that will allow them to conduct studies and successfully publish the results. These individuals may be interested in applying for National Science Foundation grants associated with the RIGEE and FIRE programs.

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