DESIGNING EDUCATION RESEARCH: A MENTORING OPPORTUNITY

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Abstract - The goal of this session is to provide FIE participants with an opportunity to work on the design of an education research project of their choice, with guidance from experienced mentors. This session creates a formal space (both in time and location) for new mentoring relationships to form and research planning work to be done.

Index Terms - education research, mentoring, special session

JUSTIFICATION

Our experience is that many FIE participants come to the conference intending to get a certain type of work done on their research – usually through conversations and meetings with particular people who can help guide them, give good feedback, and ask the hard questions. For new researchers, this work is crucial, but hard to accomplish without mentors. This session provides a defined time and space for such interactions so that researchers can productively connect with peers and mentors.

SESSION DESCRIPTION

Over the past several years, many engineering educators have initiated education research on their own or as part of interdisciplinary teams. Several introductory workshops on designing and conducting education research have been offered at recent conferences, with standing room only participation. This session will provide new researchers the opportunity to take the next steps in designing and conducting their education research, with the guidance of experienced mentors.

The session will begin with a quick overview (15 minutes) of one design model for planning education research, based on the National Research Council report Scientific Research in Education [1]. Each participant will share a one-minute synopsis of the research project they are planning. The presenters will distribute a packet of handouts to help guide the participants through decision making for various phases in their research. The handouts are worksheets developed for Waller and Gowen’s “Introduction to Education Research Workshop” presented at ASEE’s 2002 Annual Conference and they cover topics such as refining your research questions, choosing a theoretical framework, designing data collection and analysis, and reporting the research.

During the next hour, participants will divide into pairs and triads according to research interest and/or phase of design. The small groups will work on their research designs with the help of one another and designated mentors. The mentors will be FIE attendees who have previous experience in designing, conducting, and evaluating education research. Through asking questions and giving information, the mentors will help the participants to make the design decisions necessary for their research project.

The session will close with participants submitting index cards with questions they still have and reporting out what they have learned during the session. After the conference, DiBiasio and Waller will organize the questions, construct responses, and email them to all participants.

ANTICIPATED AUDIENCE

We anticipate the audience will consist of FIE participants who are interested in beginning to conduct more rigorous education research, past participants in the “Introduction to Education Research” workshops, New Faculty Fellows who are establishing their research careers, and participants who need some protected time and space to think about their research without phones ringing and email dinging.

EXPECTED OUTCOMES

We expect that the participants of this session will continue designing and conducting their projects, ultimately resulting in papers for presentation/publication and new knowledge in engineering education. We also expect that some of the mentoring relationships that are forged during the session will continue during the conference and beyond. Our experience is that many new FIE participants are anxious to have mentors and many experienced people are very willing to mentor, but at previous conferences, there were no formal spaces to establish those relationships. In addition, the work that is done on the research projects brought to the session will result in those projects being more rigorous, more carefully thought-out, and ultimately, more useful for engineering education reform. It is possible that this session may develop into a virtual learning community of scholars who are supporting each other’s professional development through discussions of research questions, theoretical frameworks, methodologies, analysis frameworks, interpretations, and implications.

REFERENCES


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