GETTING STARTED IN CS EDUCATION RESEARCH

TUTORIAL PRESENTATION

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This session will provide practical tips for producing well-designed research in Computer Science Education. The overall goal will be to provide inspiration, ideas, and encouragement for participants to formulate and execute feasible research. It will address issues such as bias, setting appropriate expectations, avoiding classic pitfalls, trade-offs in costs and benefits, aspiring to rigor, generalization, and good reporting.

The presentation will endorse a pragmatic approach to empirical research which recognizes that most Computer Science Education research is constrained by the realities of teaching, and so must be adaptable in its methods. So many educators fail to recognize opportunities to address their own questions because they haven't had a chance to consider what sort of empirical evidence is of value to them, and often their understanding of research methods is based on an idealized view conveyed during undergraduate education. There is a vast middle ground of respectable, feasible empirical study between anecdote and the theory-driven, controlled laboratory study. 'Qualitative' is not a dirty word - neither is it incompatible with 'quantitative'.

A pragmatic approach hinges on three key notions: getting the question right; understanding the nature and value of evidence; and honesty in reporting. The session will be in the form of a workshop and shall draw on experiences in the Centre for Informatics Education Research, which is trying to integrate research and teaching objectives through techniques like building automatic data collection into electronic teaching materials, making use of normal student and teacher output by examining it within 'objective' analysis protocols, using in-depth investigations involving small groups of students to shed light on large-group trends, and adding research elements to evaluation plans.