Building Trust in Computer Science Research-Practice Partnerships: A Theme Study

Motivation for Research

Computer science (CS) education research has gone through a period of rigorous transformation in the last 10 years. Partially prompted by the National Science Foundation (NSF) requiring the inclusion of education researchers in CS education grants, and renewed interest from faculty in schools of education or psychology, an increase in projects with large research teams has joined the SIGCSE landscape.

Additionally, CS education researchers are often concerned with problems of practice. Much of the research in this area has recently become a focus of support by the National Science Foundation. We then focus on one dimension as well as examples from interviews with funded RPPforCS projects. We use these examples to motivate recommendations for the SIGCSE community and describe future research in this area.

Process

A qualitative cross-case interpretive analysis of semi-structured participant interviews and was used for this study. This process included the use of a structured coding scheme which was created based on the first domain of the framework created by the WT Grant Foundation.

Participants were recruited from six RPP-grant awardees (2017) teams from across the United States. The timing of the award, combined with the timing of the interviews means that all teams had been operating for at least 8 months. Participating teams varied in many respects, including the size of the RPP (40% 2-4, 33% 5-9, 27% 10 or more), the scope of their work (50% district level, 50% state-level work), the approach course used (50% Exploring Computer Science, 33.3% integrated computational thinking, 66.7% multiple curricular approaches) and whether the teams were newly formed specifically for the project or were building off of previous work (33.3% newly formed, 66.7% based on existing work).

Variations were often the result of the size of the RPP’s focus, the number of team members involved or whether the teams were newly formed or were building off of previous work. More than half of the teams described important relationships with outside partners or organizations. Multiple interviewees spoke of the importance of their local Computer Science Teachers Association (CSTA) chapter in building trust and helping team members make decisions, and in overcoming barriers.

Citations