

PER Seminar: Problematizing inclusiveness in research apprenticeships in physics



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In the last several years my research group has been conducting a series of ethnographic case studies on 11th and 12th grade high school students engaged in an extended (12 - 18 month) authentic inquiry in physics, mentored by physics teachers who were trained at the Acheret Center to act in this context as teacher research mentors (TRMs).

The current talk draws from three case studies to illuminate and problematize different facets of the challenges and tensions to achieving equitable and inclusive physics education. Episodes from a case study that followed a TRM who guided a pair of students in an engineering maker-based project will be used to highlight legitimate forms of participation in such projects, how different forms of participation facilitated (or impaired) students' learning, and how unequitable participation in doing physics could be unintentionally enforced in discourse. Episodes from a case study that followed a pair of Arab students who worked on a

project guided by a Jewish TRM in a mixed regional class will be used to illustrate how students' moves between languages (Hebrew & Arabic) reflected complex challenges that cannot be attributed merely to language proficiency. Episodes from a case study that followed an Arab TRM who guided the research of a pair Arab students in an Arab school will be used to illustrate how a teacher's identity-narratives are reified in teacher-student discourse, how they shape students' learning, and how they emerge from social-historical contexts.

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