Goals, Resources, and Orientations for Equity in Collegiate Mathematics Education Research

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Though the terms equity, diversity, inclusion, and social justice have entered the research lexicon, we face significant challenges in gaining a nuanced understanding of the various ideas associated with these words and how those ideas are consequential for collegiate mathematics education research. This interactive poster presents a theoretical framework for making sense of (and making sense with) "equity" as an essential component of research. The poster offers tools for thinking and talking about equity and research design, implementation, and reporting. Poster visitors will have an opportunity to contribute questions and observations about the definitions of equity and proposed connections among approaches to courageous conversations about equity in research, self- and other-awareness, and aspects of equity in the mathematics content, curricula, and instruction at the heart of the research.

Keywords: Equity, Social justice, RUME

As people trained in research in undergraduate mathematics education (RUME), we know that our work starts with diagnosing challenges in teaching and learning. As citizens of a first-world country in the 21st century, we are keenly aware of social, political, and economic inequity. And, as a community, we have an opportunity to guide how equity is defined, explored, and addressed in collegiate mathematics education research. Attention to equity has existed for a while (e.g., Aguirre & Civil, 2016; Adiredja, Alexander, & Andrews-Larson, 2015; D'Ambrosio et al., 2013; Davis, Hauk, & Latiolais, 2010; Gutiérrez, 2013; Nasir, 2016).

According to the TODOS-NCSM position paper (2016), three conditions are necessary to establish just and equitable mathematical education for all learners: (1) acknowledging that an unjust social system exists, (2) taking actions to eliminate inequities and establish effective policies, procedures, and practices that ensure just and equitable learning opportunities for all, and (3) being eager for accountability so changes are made and sustained. How do we increase researcher capacity to do these three things? We must address our needs – as researchers – for language, definitions, and awareness-building about equity. This will support us in the inevitable struggle to gain and use pertinent understandings in the design, conduct, and reporting of research. The poster offers key ideas and examples from communication for restorative justice (e.g., Singleton & Hays, 2008) and intercultural orientation development (Bennett, 1993; 2004).

Questions driving poster conversation: What questions and observations do RUME researchers have regarding definition(s) of equity and the role of equity in research in collegiate mathematics education? How does equity play into our decisions about who research participants are? How might research be designed to provide evidence that supports action to eliminate an inequity? How might engaging the population we wish to study in the research design and analysis provide new insights into phenomena? How might the research design and analysis be different if the results of the work are to be held accountable by research peers *and* judged in a court of stakeholder opinion that values equity as much as excellence in mathematics education? In what ways is the mathematics implicit in a given research project contributing to inequity and/or equity for participants? How do we pay attention to that in the research goals, resources, and orientations we bring to our work? What are some of the concepts and language from intercultural development that can help us address these questions?

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