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Michael H Davis* (micdavis@berkeley.edu). *Understanding and addressing the social/emotional needs of learners with histories of difficulty in mathematics.*

This presentation integrates a series of studies conducted by the author (Davis, 2008; Davis, in press) and a larger body of research on learning to explore factors that shape students' engagement and participation in mathematics. A sociocultural theoretical framework is used that supports a full consideration of the complex ecology of learning environments. More specifically, the presentation examines how students' identities, beliefs, and emotions interact with curriculum and pedagogy and shape the ways students engage and disengage in mathematics. Particular attention will be given to how these factors affect students with histories of difficulty with mathematics. The presentation will also consider approaches that have been found to promote more productive and sustained engagement for these students. These strategies include supporting changes in: beliefs about the nature of intelligence, definitions of mathematical competence, and expectations for mathematical activity. Ways to develop meta-cognitive skills, including emotion regulation, cognitive monitoring, and goal setting will also be considered. Methods for implementing these strategies in the college context through course work and support programs will be considered. (Received September 17, 2009)