

The Sowder Mathematics & Science Education Research Seminar Series 2022



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Monday, 2/28/2022
10 am - 11 am
Zoom link:

[https://ucsd.zoom.us/
j/92663427907](https://ucsd.zoom.us/j/92663427907)

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Students Meaningful Participation in Scientific Sensemaking Practices: What and Why?

Abstract: Effective learning requires that learners engage in disciplinary sensemaking practices. While the field of education has long argued for learners to learn through participation in sensemaking practices, it has also shown that this is not the norm and can be challenging to foster. I use sociocultural lenses to understand this challenge, arguing that engagement in sensemaking requires that learning activities be experienced by the classroom community as practices that work towards a sensemaking goal, rather than as a set of disconnected procedures that satisfy an evaluative audience (i.e., a teacher). In this talk, I present this argument, connecting the NGSS turn to “scientific practices” to “meaningful participation.” I conclude by asking whether and how “meaningful participation” relates to pedagogical approaches that foreground equity and social justice.

Biography: Leema K. Berland (Ph.D. 2008, Learning Sciences, Northwestern University) is broadly interested in facilitating and studying students as they engage in sensemaking practices (with a focus on K-12 students sensemaking about scientific phenomena and teacher candidates sensemaking about pedagogical phenomena). In this work, she uses sociocultural lenses to argue that engagement in sensemaking requires that learning activities be experienced by the classroom community as working towards a sensemaking goal, rather than as a set of disconnected procedures that satisfy an evaluative audience (i.e., a teacher). Thus, she focuses on understanding how students interpret sensemaking opportunities, how those interpretations influence their participation in the sensemaking, and why they interpret it in the ways that they do. Each of these questions is designed to better understand the dynamics of how and why students are able (or unable) to productively engage in sensemaking and have implications for the design of learning environments..