Towards Embodied Validity in Mathematics Education Research

Nathalie Sinclair
Faculty of Education,
Simon Fraser University
<nathalie_sinclair@sfu.ca>

In 1993, Patti Lather proposed the notion of voluptuous, or embodied, validity. As part of her broader post-structural methodological inquiry, embodied validity was a way of speaking to the importance of lived experience. Consider the transcript with a parenthetical remark indicating that a student has laughed. Now start laughing yourself: part your lips and stretch them out, feel the air coming out of your nose and the contraction of your chest; notice your eyes squinting, the repetitive heaving accompanied by unusual sounds. Not the same thing!

This talk was an adventure in thinking, one that explored why embodied validity matters in mathematics education research (MER), as a method both for creating data and for communicating research. Despite the growing interest in theories of embodiment, the methods that have been used in MER are still largely static, language-dominant and cognitively focused, often failing to adequately express what matters in teaching and learning. The stakes are political because focusing only on what is said, or what can be objectively seen and heard, frames both mathematics and knowledge in exclusive ways (de Freitas & Sinclair, 2014).

The talk comprised three parts: (1) Working with Howes (2022), I expand the five "cardinal" senses to consider how other senses such as proprioception, pressure, rhythm, as well as mixed senses such as hand-eye matter might matter in MER; (2) Working with forensic architects Fuller and Weizman (2021), I consider the use of simulations as a means of eliciting such senses. I show how re-enacting research videos enables researchers to *feel* these senses, which are invisible in videos (see Günes et al., 2024); (3) I draw on Shapin (1984), who traces the technologies of scientific research that were devised in the 1650s, and that have since become normative in empirical research (including MER). Shapin argues that Boyles created a literary technology of virtual witnessing, which was "the production in a reader's mind of such an image of an experimental scene as obviates the necessity for either its direct witness or its replication" (p. 491). I challenge the assumption that research papers obviate the necessity for direct experience and propose re-enactments (for the reader) as more valid ways of accounting for experience in which multiple senses are at stake (see Sinclair, 2024).

References

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