

Fostering multimodal dialogues in collaborative learning

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Abstract

The presentation will be centered around the *multimodal dialogue* concept: multimodal interaction between distinct multimodal experiences with the world (“Voices”). I introduce the multimodal dialogue, demonstrate it in the case of collaborative mathematics learning, and induce a conversation among the participants on how this idea may be relevant to their works on embodied cognition and learning. Embodied cognition is a theoretical approach operating under the premise that thinking and communication are multimodal activities (Galetzka, 2017). Dialogue happens when and where two or more *distinct* and *equal* voices interact while being open to the possibility to change (Bakhtin, 2013). Accordingly, Abdu et al. (2021) combined dialogic and embodied learning theories to create a unified analytic lens we called *Multimodal Dialogue*. To demonstrate this phenomenon, we analyzed a learning sequence by two third-grade students who participated in a mathematics lesson to foster embodied learning of proportion with a tablet-based app, Mathematics Imagery Trainer (Abrahamson, 2015), and dialogic pedagogy principles (Wegerif, 2011) was used to induce students’ movements. In the presentation, I will zoom in on the phenomenon of a multimodal voice as a speech-and-movement bundle situated within a learning context (Arzarello et al., 2009) and show how multimodal dialogic gaps – differences between multimodal voices within and between modalities – drive communication and eventual voices changes.

Dialogic thinking theory can be elaborated to include learning as a multimodal phenomenon. The embodied design perspective can lean on dialogic thinking theories to analyze and design for peer-to-peer interactive movement. From a design perspective, eliciting multimodal voices before and within the interaction may increase the chances of a dialogic gap at the interaction’s onset and the chances of learning congruently. I would love to encourage a discussion among the workshop’s participants: can you share how these principles may apply in your studies on learning and instruction?