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Embodied Cognition in Mathematics Education

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Embodied Cognition in Mathematics Education

According to the theory of embodied cognition, humans draw on sensory-motor systems to build conceptual knowledge in the mind. A set of embodied practices enables the user to produce, transform, or elaborate on expressive forms (Nemirovsky et al., 2013). The deeper explorations of how the body functions in knowledge construction are meaningful to the improvement of educational strategies. An interdisciplinary undergraduate course merging geometry, body, dance and beauty was implemented in an American university this spring. By observing how teachers and non-STEM background students use their bodies to interact with geometrical conceptions and analyzing their reflections on the studying process, I desire to know the body's role in forming mathematical conceptions or knowledge in humans' minds.

Reference

Nemirovsky, R., Kelton, M. L., & Rhodehamel, B. (2013). Playing Mathematical Instruments: Emerging Perceptuomotor Integration With an Interactive Mathematics Exhibit. *Journal for Research in Mathematics Education*, 44(2), 372–415. <https://doi.org/10.5951/jresematheduc.44.2.0372>