

Repurposing Bronfenbrenner's Ecological Theory to Focus on Very Young Preverbal Children's Mathematical Engagement

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It is important for early childhood educators to 'think differently' about their beliefs regarding their role and their engagement with very young children (Garvis & Prendergast, 2015). This presentation is designed to share one way of addressing this. It is a theoretical consideration of Bronfenbrenner's (1977) ecological theory with the aim of repurposing it to function more as a 'coat hanger' (Tudge et al., 2016)—a frame—on which the early childhood educator can consider the aspects that will impact the opportunities created for very young preverbal children to engage with mathematical thinking. Specifically, this presentation uses the nested structures of Bronfenbrenner's (1977) ecological theory as a frame to help early childhood educators focus on the elements that may impact very young preverbal children's demonstration of and engagement with mathematical thinking.

Bronfenbrenner (1977) positions his ecology of human development as a description of how the growing individual interacts with their environment. He views the environment as both the close context the individual inhabits and the more distant settings within which the individual's context is situated, as well as the interactions that occur between the contexts and settings. These contexts, settings, and interactions incorporate formal and informal elements. Bronfenbrenner's (1977) ecological theory explores the interactions that are possible, framing the relationships between all elements within the environment as not just one-way processes.

The very young preverbal child is an active participant in their world and in their mathematical learning within their world (Franzén, 2015). Blömeke et al. (2020) note that there are many mathematical opportunities in the young child's everyday life and throughout their play. The nested structures of Bronfenbrenner's (1977) ecological theory can assist the early childhood educator in deconstructing the environment in which the child resides. Forcing the elements of this deconstruction into the nested structures, much like hanging clothes on coat hangers in a wardrobe, provides an organisation that can help the early childhood educator to see and attend to each of the elements, to consider their impact on the child's capacity to engage with mathematical thinking, and to identify the affordances offered by the interactions of these elements.

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