From Arithmetic to Emergent Algebraic Thinking: Case Studies in Three Australian Schools

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It is well-established that moving successfully from arithmetic thinking to the more abstract field of algebra is problematic for early high school learners. While there may be many reasons behind this, a recent study found that the single largest factor inhibiting students' ability to move successfully from arithmetic thinking to algebraic thinking was explained by student's access to multiplicative thinking. This presentation will compare findings from three schools participating in the Reframing Mathematical Futures national project (RMFII). The targeted teaching approach used a coherent set of teaching materials designed to improve students' multiplicative thinking and scaffold their algebraic reasoning.

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