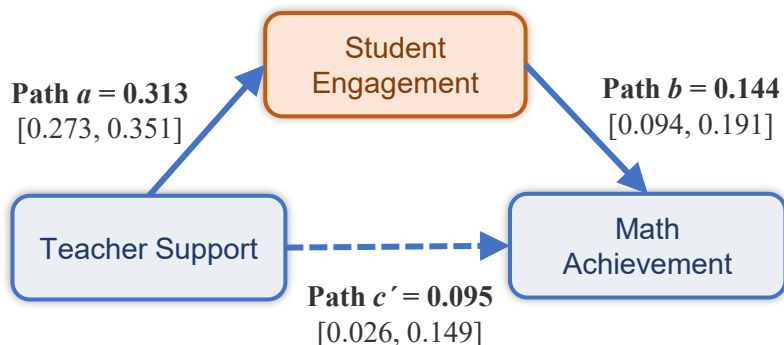


How does teacher support work? Through student engagement

#2300738: Meta-Analysis of the Instructional-Relational Model of Student Engagement and Math Achievement

Teacher support improves math achievement, but through which mechanisms?
We meta-analyzed 67 studies to test whether student engagement mediates this effect.

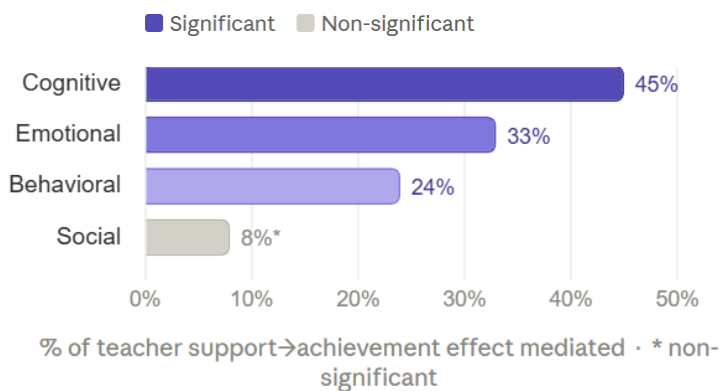
The "What" (Core Findings)



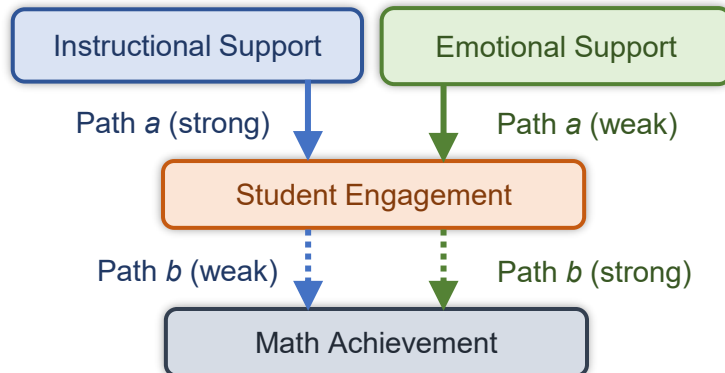
67 studies, 698 effect sizes

~32% of teacher support's effect on achievement is *mediated* through engagement

Student engagement breaks into four types
— *cognitive* and *emotional* carry the most weight



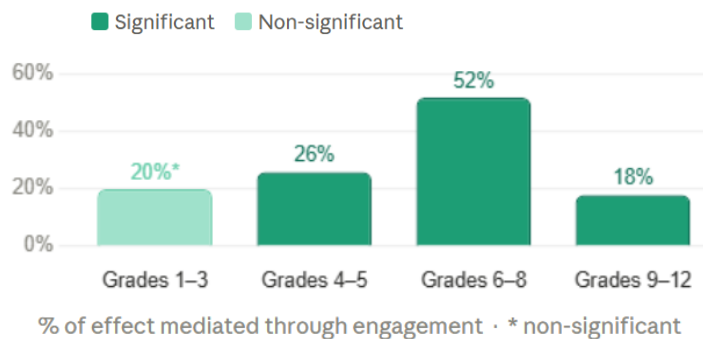
The "How It Varies" (Nuance)



Complementary, Not Interchangeable

Emotional support gets students into engagement; Instructional support turns that engagement into learning

Mediation is strongest in middle school (Grades 6–8: 52%)



Methods

Meta-Analysis

SEM

- Meta-analysis of 67 studies, 698 correlational effects, K-12 math
- Two-Stage Meta-Analytic SEM (MASEM)

Implications

- Practical implication: classrooms need *both* emotional climate *and* instructional quality
- Need research distinguishing causal ordering (current evidence is correlational)