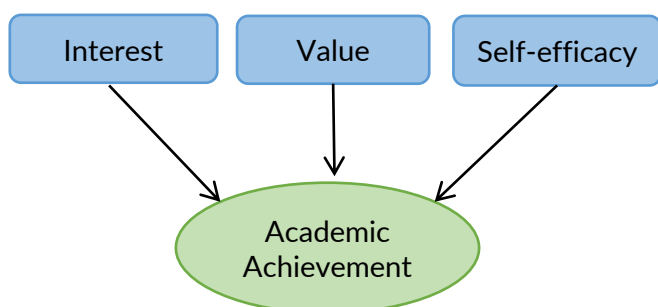


Self-efficacy matters for scientific literacy in middle school, but competence comes first



#2300024 Science Sprouts 2.0: Extending and replicating a longitudinal investigation of the roots of scientific literacy and interests

Attitudes appear to contribute to achievement across academic domains.



But does it hold ...

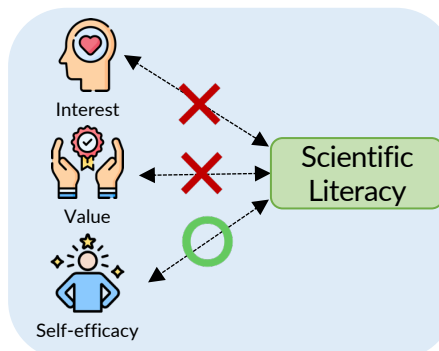


For the domain of science?

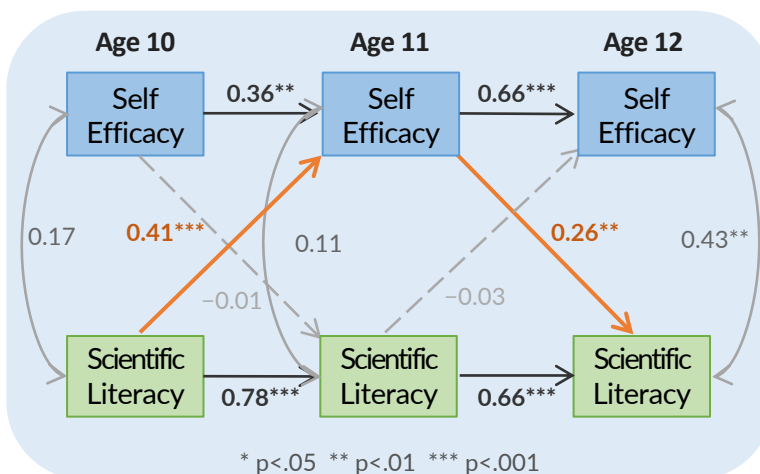


Through the rapid changes in skills & experiences characteristic of the transition to middle school?

Findings #1
Not all attitudes were equally associated with scientific literacy



Findings #2 Self-efficacy predicts scientific literacy from 11 to 12 years, but self-efficacy at 11 years is best predicted by children's scientific literacy as they enter middle school



Methods

Longitudinal

Cross-Lagged Panel Analysis



75 children: $M_{age1} = 10.4$, $M_{age2} = 11.2$, $M_{age3} = 12.0$



Zoom sessions measured interest in, value of, and self-efficacy in science, as well as scientific literacy



Cross-lagged panel analyses explored relations between attitudes and literacy over time

Challenge Area

Participant Retention

Measures

- Re-engaging with participants after pause in funding
- Finding psychometrically sound measures of scientific literacy that extend beyond factual knowledge

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