A Panel SEM of the Effects of Trust and Sympathy on Learner Outcomes

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Introduction

• Social-Emotional Learning (SEL) is increasingly relevant in light of our need to better understand student learning and assessment in the 21st century (Pellegrino & Hilton, 2012)
• Leighton, Seitz and Chu (2013) proposed a theoretical model called the Learning Errors and Formative Feedback (LEAFF) model (see also Durlak, 2015; ETS, 2014; Poropat, 2014)
• Purpose: To empirically examine the effects of key socio-emotional variables – trust and sympathy – based on the LEAFF model, on student academic achievement

The LEAFF Model

Selected References:

Method

Participants
• 262 students in Grades 1 to 6 (ages 6 - 12 years; 47% male, 47% female, 6 % undisclosed)
• 12 teachers from elementary school in metropolitan city

Procedure
• Students completed series of surveys measuring their perceptions of trust in teachers, sympathy for self and peers, motivation, avoidance of errors and wellbeing
• Two waves of data collection to conduct Panel SEM
• Teachers trained to administer surveys in class
• Academic achievement grades collected for Language Arts, math, science and social studies

Data Analysis
• Step 1: Survey item selection; Step 2: Longitudinal CFA
• Step 3a & 3b: Cross-sectional SEMs (time 1 & time 2)
• Step 4: Panel SEM

Results: Cross Sectional and Panel SEM

Major Findings

• Student-reported trust for teachers was the principal catalytic variable influencing student-reported sympathy for peers, which in turn has an effect on teacher-reported student engagement and achievement
• Student-reported trust for teachers also has a direct effect on student wellbeing
• Over time, students, who trust their teachers, feel sympathy towards their peers may exhibit superior academic performance on summative assessments
• Overall, the panel SEM explained between 45%-70% of the variance in academic achievement across subject-matter content at time 2, 62% of the variance in student engagement at time 2, and 89% of the variance in wellbeing at time 2

Significance and Future Directions

• Guided by the LEAFF model, our work contributes to the literature by providing theoretically-driven evidence that affective aspects of student perceptual experiences are measurable and have an effect on learning outcomes
• More research on lesser-studies variables such as a trust and sympathy that have formative and powerful effects on the learning experiences of students in classrooms are needed

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