

The Interactions among Student-Teacher Relationships, Self-Efficacy, and Gender in Predicting Engagement in Elementary Classrooms

Martinique A. Sealy & Christine L. Bae
Virginia Commonwealth University



Introduction

- **Student individual characteristics**, such as gender, self-efficacy, and **classroom teacher-student relationships**, strongly influence how students engage in learning tasks (Bae & Lai, 2019; Fredricks et. al., 2016)
- **Self-efficacy**, or perception of self abilities, is a strong individual-level predictor of academic outcomes. Further, research suggests that boys often have higher assurance of their abilities than their actual abilities, and girls often have lower assurance of their abilities than their actual abilities (Pajares, 2002).
- Students, particularly in urban classrooms, who perceive **positive relationships with teachers** often have greater academic achievement than students who perceive low or negative relationships with teachers (Spencer, Fegley, et. al., 2004).
- Unfortunately, student-teacher relationships typically decline overtime in both genders, particularly for boys (Hajovsky, Mason, & McCune, 2017).
- The purpose of this study is to determine if gender moderates the relationship between elementary students' relationships with teachers and engagement, as well as the relationship between self-efficacy and engagement in urban classrooms.

Research Questions and Methodology

1. Does student-teacher relationships predict elementary students' engagement?
2. Does self-efficacy predict elementary students' engagement?
3. Does gender moderate these relationships?

Questionnaire data was collected from a total of 470 second to fifth grade students during the fall, winter, and spring semester of the 2017-18 school year across 13 schools in an urban school division in the southeastern region of the United States (58.69% girls and 41.31% boys, 62.6% Black, 24.2% Latinx, 7.2% White, and 3.9% Other; 80.50% qualified for Free Reduced Lunch).

Results

Table 1. Descriptive statistics of observed variables.

	M	SD	Min	Max
Engagement	3.85	0.75	1	5
Student-Teacher	3.43	1.10	1	5
Self-efficacy	4.35	0.87	1	5

Based on the descriptive statistics, weak/low, average, and strong/high groups were created ($M - 1SD = \text{weak/low}$, $M = \text{average}$, $M + 1SD = \text{strong/high}$).

Select References

- Bae, C. L., & Lai, M. H. (2019). Opportunities to participate in science learning and student engagement: A mixed methods approach to examining person and context factors. *Journal of Educational Psychology*.
- Fredricks, J. A., Filsecker, M., & Lawson, M. A. (2016). Student engagement, context, and adjustment Addressing definitional, measurement, and methodological issues. *Contemporary Educational Psychology*.
- Pajares, F. (2002). Gender and perceived self-efficacy in self-regulated learning. *Theory into practice*, 41(2), 116-125.

Full references and copies of the poster are available upon request. Contact sealym@mymail.vcu.edu

Results (continued)

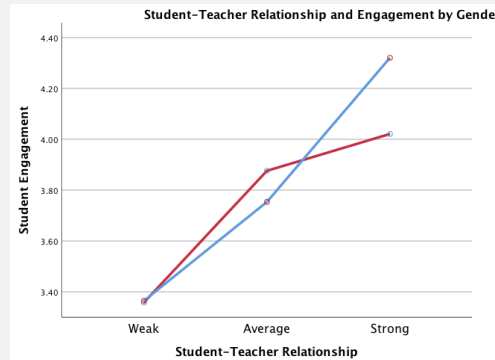


Fig 1. Interaction between gender and student-teacher relationships. Pattern indicates that for average adult relationship, girls' engagement is higher than boys, but for high adult relationships, engagement is higher for boys than girls.

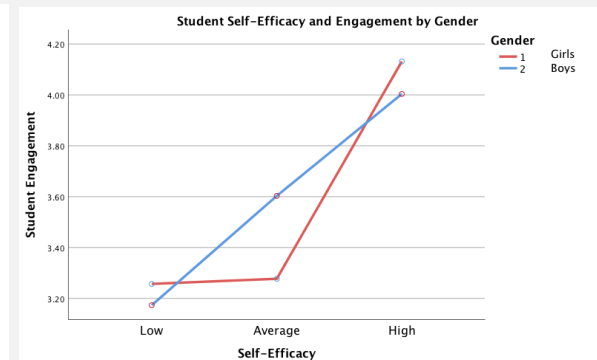


Fig 2. Interaction between gender and self-efficacy. Pattern indicates that for average self-efficacy, boys' engagement is higher than girls, but for high self-efficacy, engagement is higher for girls than boys.

A regression analysis with an interaction effect was conducted. The main effect of adult relationship was statistically significant ($p = .05$) whereas the main effect of gender ($p = .57$) and the interaction effect ($p = .07$) were not, $F(25, 145) = 2.66, p < .001$, partial eta squared = .36. The main effect of self-efficacy was statistically significant ($p < .01$) whereas the main effect of gender ($p = .54$) and the interaction effect ($p = .24$) were not, $F(18, 127) = 5.10, p < .001$, partial eta squared = .42.

Conclusions

- Results showed that student-teacher relationships and self-efficacy were both statistically significant predictors of engagement, indicating the importance of both individual and social factors in students' learning
- Gender was not a significant moderator in the examined relationships
- However, interactions patterns show that strong student-teacher relationships may be especially important for boys, and this aligns with the literature that show that unique adult support for Black male students may be needed
- Additionally, interaction patterns showed that for girls, the benefits of high self-efficacy on engagement emerges only when they have high beliefs about their academic ability. This aligns with the literature that show that girls tend to have lower feelings and experiences of ability in school compared to boys.



This work is supported by the VCU Presidential Research Quest Fund, PI: Christine Bae, Ph.D.