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The role of The Leader in Me in the social and emotional learning and youth voice development of elementary students

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SCHOOL OF EDUCATION

Dissertation

**THE ROLE OF *THE LEADER IN ME* IN THE SOCIAL AND
EMOTIONAL LEARNING AND YOUTH VOICE DEVELOPMENT
OF ELEMENTARY STUDENTS**

by

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ABSTRACT

The Leader in Me (Covey, 2008) is an approach to fostering social and emotional learning that has been adopted by more than 3,000 schools across the globe, but which has received relatively little empirical attention. Grounded in the seven habits from Stephen Covey's (1989) *The 7 Habits of Highly Effective People*, the school-based program *The Leader in Me* supports schools in fostering social and emotional learning and empowering students to take on leadership roles in their school. Using a mixed-methods approach, this study examines the social and emotional learning of elementary school students attending six public elementary schools that began implementation of *The Leader in Me* in 2014-15 in comparison to their peers at six structurally and demographically similar comparison schools within the same school districts. The survey and interview data from participating schools are analyzed through the lens of two main conceptual frameworks: social and emotional learning and youth voice. Quantitative results indicate that *Leader in Me* students demonstrated a significant, negative treatment*time effect for eight of the thirteen measures, and a significant, negative treatment effect for one additional measure, as compared to students attending the

matched comparison schools. Three of these measures are related to social and emotional learning, four are related to youth voice, and two are related to overall teacher and school support. Qualitative results reveal that while some students spoke of the 7 habits in ways that demonstrate awareness and application of social and emotional competencies, they also had varying levels of understanding of the habits themselves. Similarly, while some students and teachers spoke of the ways that *The Leader in Me* fosters youth voice and empowerment, other qualitative data suggest that the program is having the opposite effect, and that students are defining youth leadership as compliance. Findings from this study highlight the following recommendations for social emotional and youth voice reform efforts: a clearly communicated implementation framework at the classroom and school level accompanied by an aligned fidelity rubric; the adoption of an action-reflection cycle that includes both teacher and student perspectives; and the awareness of, and active preparation for, inherent power dynamics in schools.

Key Words: social and emotional learning, youth voice, *The Leader in Me*

TABLE OF CONTENTS

LIST OF TABLES.....	x
LIST OF FIGURES	xiv
Chapter 1: Introduction.....	1
Chapter 2: Review of the Literature	16
Chapter 3: Methods	45
Chapter 4: Results	97
Chapter 5: Discussion	212
Appendix A: Student Interview Protocol.....	241
Appendix B: Teacher Interview Protocol.....	243
Appendix C: Codebook.....	245
Appendix D: Coding example	253
Appendix E: Building multilevel models.....	256
Appendix F: Building multilevel models with fidelity variable.....	295
Appendix G: Fidelity scores and Fidelity rubric	309
References.....	313
Curriculum Vitae.....	336

LIST OF TABLES

Table 1. <i>Alignment of the 7 Habits to Social and Emotional Learning</i>	19
Table 2. <i>The Seven Habits</i>	47
Table 3. <i>Participating Pilot Schools</i>	56
Table 4. <i>Demographic Characteristics of Participating Schools (All Names are Pseudonyms)</i>	
Table 4.1. <i>Kullen School District</i>	61
Table 4.2. <i>Everest School District</i>	62
Table 4.3. <i>Ursa School District</i>	63
Table 5. <i>Survey Measures</i>	72–74
Table 6. <i>Interviews, 2014–15</i>	76
Table 7.1. <i>Average Fidelity</i>	82
Table 7.2. <i>Mean, Low & High Fidelity</i>	82
Table 8. <i>Descriptive Statistics</i>	99
Table 9. <i>Model Building for Youth Empowerment</i>	102
Table 10. <i>Summary of multilevel models used</i>	103
Table 11. <i>Multilevel Modeling Results</i>	105–109
Table 12. <i>Multilevel Modeling Results with Fidelity Variable</i>	135–139
Table 13.1. <i>Be proactive: understanding</i>	174
Table 13.2. <i>Be proactive: misunderstanding</i>	175
Table 14.1. <i>Begin with the end in mind: understanding</i>	177
Table 14.2. <i>Begin with the end in mind: misunderstanding</i>	178

Table 15.1. <i>Put first things first: understanding</i>	180
Table 15.2. <i>Put first things first: misunderstanding</i>	180
Table 16.1. <i>Think win-win: understanding</i>	182–183
Table 16.2. <i>Think win-win: misunderstanding</i>	183
Table 17.1. <i>Seek first to understand, then to be understood: understanding</i>	185
Table 17.2. <i>Seek first to understand, then to be understood: misunderstanding</i>	185
Table 18.1. <i>Synergize: understanding</i>	187–188
Table 18.2. <i>Synergize: misunderstanding</i>	189
Table 19.1. <i>Sharpen the saw: understanding</i>	191
Table 19.2. <i>Sharpen the saw: misunderstanding</i>	192
Table 20.1. <i>Student responses to the question, “What does it mean to you to be a leader?” Aligned with The Leader in Me definition of leadership</i>	209
Table 20.2. <i>Student responses to the question, “What does it mean to you to be a leader?” Aligned with definitions of behavior and compliance</i>	210
Table 21.1. <i>Coding example for Seek first to understand then to be understood: Part 1</i>	253
Table 21.2. <i>Coding example for Seek first to understand then to be understood: Part 2</i>	254–255
Table 22.1. <i>Model building for Voice- confidence measure</i>	258
Table 22.2. <i>Model building for Voice – civic participation skills measure</i>	261
Table 22.3. <i>Model building for Voice – value of group work measure</i>	264
Table 22.4. <i>Model building for Voice- communication measure</i>	267

Table 22.5. <i>Model building for Empowerment measure</i>	270
Table 22.6. <i>Model building for Voice: Quaglia measure</i>	273
Table 22.7. <i>Model building for School connectedness measure</i>	276
Table 22.8. <i>Model building for Teacher academic support measure</i>	279
Table 22.9. <i>Model building for Teacher personal support measure</i>	282
Table 22.10. <i>Model building for self-efficacy for enlisting social resources measure</i>	285
Table 22.11. <i>Model building for Self-efficacy for self-regulated learning measure</i>	288
Table 22.12. <i>Model building for Teamwork measure</i>	291
Table 22.13. <i>Model building for Perseverance measure</i>	294
Table 23.1. <i>Model building for Voice- confidence measure with fidelity variable</i>	296
Table 23.2. <i>Model building for Voice – civic participation skills measure with fidelity variable</i>	297
Table 23.3. <i>Model building for Voice – value of group work measure with fidelity variable</i>	298
Table 23.4. <i>Model building for Voice- communication measure with fidelity variable</i>	299
Table 23.5. <i>Model building for Empowerment measure with fidelity variable</i>	300
Table 23.6. <i>Model building for Voice: Quaglia measure with fidelity variable</i>	301
Table 23.7. <i>Model building for School connectedness measure with fidelity variable</i>	302
Table 23.8. <i>Model building for Teacher academic support measure with fidelity variable</i>	303
Table 23.9. <i>Model building for Teacher personal support measure with fidelity variable</i>	304

Table 23.10. <i>Model building for self-efficacy for enlisting social resources measure</i> <i>with fidelity variable</i>	305
Table 23.11. <i>Model building for Self-efficacy for self-regulated learning measure</i> <i>with fidelity variable</i>	306
Table 23.12. <i>Model building for Teamwork measure with fidelity variable</i>	307
Table 23.13. <i>Model building for Perseverance measure with fidelity variable</i>	308
Table 24.1. <i>Fidelity Scores</i> (in Appendix G)	309
Table 24.2. <i>Fidelity Rubric</i> (in Appendix G)	310–312

LIST OF FIGURES

<i>Figure 1.</i> SEL Conceptual Model (Weissberg, Durlak, Domitrovich, Gullotta, 2015, p. 7)	26
<i>Figure 2.</i> The Leader in Me Framework (The Leader in Me, 2017)	51
<i>Figure 3.</i> Self-efficacy in enlisting social resources Results	112
<i>Figure 4.</i> Self-efficacy in self-regulated learning Results	115
<i>Figure 5.</i> Teamwork Results	117
<i>Figure 6.</i> Voice: Communication Skills Results	120
<i>Figure 7.</i> Voice: Civic Participation Skills Results	122
<i>Figure 8.</i> Voice: Value of group work Results	125
<i>Figure 9.</i> Empowerment Results	128
<i>Figure 10.</i> School connectedness Results	130
<i>Figure 11.</i> Teacher personal support Results	133
<i>Figure 12.</i> Voice: Civic participation skills (with fidelity variable) Results	142
<i>Figure 13.</i> Voice: Communication (with fidelity variable) Results	143
<i>Figure 14.</i> Teacher personal support (with fidelity variable) Results	144
<i>Figure 15.</i> Self-efficacy in enlisting social resources (with fidelity variable) Results	145
<i>Figure 16.</i> Perseverance (with fidelity variable) Results	147
<i>Figure 17.</i> Voice: Confidence (with fidelity variable) Results	149
<i>Figure 18.</i> Quaglia Institute: My voice survey (with fidelity variable) Results	150
<i>Figure 19.</i> Teacher academic support (with fidelity variable) Results	152

The role of *The Leader in Me* in the social and emotional learning and youth voice
development of elementary students

Chapter 1

In the history of public education in the United States, the emphasis on non-academic skills (also called social and emotional skills, character education, leadership skills, 21st century skills) has ebbed and flowed. On the one hand, scholars note that schooling in America was built on the foundation of preparing students to be well-rounded citizens (Campbell, 2012; Johaneck, 2012; Mclellan, 1999; Seider, 2012). From Dewey's (1938, 1966) assertion that schools should build a foundation for democratic living, to Berkowitz's (2014) affirmation almost one hundred years later that the primary purpose of education is to socialize the next generation, scholars have advocated that teachers should focus on outcomes broader than academics alone (Berkowitz, 2014; Campbell, 2012; Dewey, 1938; Johaneck, 2012; Seider, 2012). On the other hand, a narrow emphasis on academics has often sidelined efforts to foster social and emotional learning in the classroom. Scholars point to a variety of causes for this tension, ranging from *A Nation at Risk's* refocusing of the country toward an economic purpose of schooling (Nichols, 2017) to *No Child Left Behind's* intense directive on high stakes testing (Nichols, 2017).

Partly in response to the trend toward a narrow academic focus (and partly in service to it), there has recently been a renewed interest in nonacademic factors in promoting student success (e.g. Duckworth & Seligman, 2005; Seider, 2012; Tough, 2011, 2012). Indeed, research consistently shows that nonacademic skills are associated

with a host of beneficial outcomes ranging from positive peer relationships (Adams, 1983; Schonert-Reichl, 1993) to resilience (Seligman, 1991) to academic achievement (Duckworth & Seligman, 2005; Seider, Gilbert, Novick & Gomez, 2013; Oberle et al., 2014; Wentzel, 1993, 2013) to youth empowerment (Wagaman, 2011; Youniss & Yates, 1997).

Despite these positive outcomes, there is no general consensus as to how these nonacademic skills should be defined, which combination of skills is most desirable, or how to best cultivate them. The term nonacademic itself is broadly used to encompass anything not directly associated with basic school subjects, such as personal growth and social responsibility (Wentzel, 1991), self-efficacy (McTigue & Liew, 2011), friendships and a sense of belonging (Hamm & Faircloth, 2005), social-emotional development (McTigue & Liew, 2011), emotional connections to school (Hamm & Faircloth, 2005), and so on. Umbrella terminology that has been used to describe collections of nonacademic factors include character education (Berkowitz, 2011; Character Lab, 2015; Jubilee Centre, 2015; Seider, 2012), social and emotional learning (CASEL, 2015; Jagers, Harris, Skoog, 2015; Weissberg, Durlak, Domitrovich & Gullotta, 2015), prosocial behavior (Berkowitz, 2011; Jennings & Greenberg, 2009), moral education (Berkowitz, 2011; Sanger & Osguthorpe, 2013), positive youth development (Zimmerman et al., 2008), soft skills (Heckman & Kautz, 2012), non-cognitive skills (Duckworth & Yeager, 2015; Tough, 2012), values education (Berkowitz, 2011), youth activism (Kirshner, 2015), and 21st century skills (Duckworth & Yeager, 2015). Given the breadth of terminology alone, it is perhaps unsurprising that there is no universal agreement on a

certain set of nonacademic skills to focus on in schools.

Furthermore, there is no universal approach to *fostering* nonacademic skills, with scholars advocating a variety of school- and classroom-based approaches to cultivate them. Berkowitz (2011), for example, recommends facilitating class discussions of moral dilemmas, fostering trust and trustworthiness, modeling and providing mentors of ethical behavior, empowering students, maintaining rigorous and high expectations, and explicitly teaching about morality and character in order to foster strong ethical and prosocial values in students. The Jubilee Centre (2015) states that virtues are best developed through a combination of modeling and positive school climate along with explicit teaching, and emphasizes the importance of making messages of character ubiquitous in schools. Other recommendations for fostering nonacademic skills include using an authoritative teaching approach (Davidov & Grusec, 2006), promoting student participation in extracurricular activities (Catterall, Chapleau, & Iwanaga, 1999), community service (Billig, 2000; Lakin & Mahoney, 2006), classroom activities that encourage reflection and perspective-taking (e.g. Damon & Killen, 1982; Kruger, 1992), emphasizing a “growth mindset” (Dweck, 2006), modeling socially responsible behavior (Wray-Lake & Syvertsen, 2012), establishing “open classrooms” (Campbell, 2008), and exposing students to experiential service learning (Flanagan & Levine, 2010; Galston, 2001).

Partly in response to the wide range of approaches to nonacademic skills and the short-term interventions in schools that were well-intentioned, but often insufficient to support students’ needs, the Fetzer Group (consisting of a group of researchers and

educators) coined the term social and emotional learning in 1994 to be used as a way to conceptualize and promote not just the academic, but also the social and emotional competence of youth (Weissberg, Durlak, Domitrovich, Gullotta, 2015). The group also launched CASEL, the Collaborative for Academic, Social, and Emotional Learning, in order to establish social and emotional learning as an essential, evidence-based practice for preschool through high school (Weissberg, Durlak, Domitrovich, Gullotta, 2015). CASEL aims to foster the knowledge, skills and attitudes required for intrapersonal, interpersonal, and cognitive ability (National Research Council. 2012; Weissberg, Durlak, Domitrovich, Gullotta, 2015), and is grounded in five competencies that serve as a unifying framework: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.

CASEL's definitions and frameworks now serve as a guiding force uniting much of the field (e.g. Bierman & Motamedi, 2015; Durlak et al., 2011; Durlak, Domitrovich, Weissberg, Gullotta, 2015; Jagers, Harris, Skoog, 2015; Rimm-Kaufman, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015; Williamson, Modecki, Guerra, 2015). However, some scholars note that social emotional learning does not sufficiently encompass key areas. Rose (2013), for example, argued that an emphasis on individual factors alone overlooks the critical consideration of underlying factors that lead to poverty and that influence children growing up in these conditions. He stressed the importance of implementing programs that address fundamental elements such as inadequate food and housing, street violence, and unemployment. Kirshner (2015) made a complementary case for schools to look beyond SEL programming alone to promote

youth activism and empower adolescents to identify meaningful social justice topics and to take action and be vocal in addressing these issues. Youth voice – defined here as young people feeling authentically empowered to express themselves and take action at the individual, group, and/or community level (Lensmire, 1998, 2000; Mitra, 2008, 2016; Mitra & Serriere, 2014; Mitra, Serriere & Kirshner, 2015; Quaglia, 2014; Quaglia & Corso, 2014) – in many ways encompasses these nonacademic elements not covered by social and emotional learning.

Despite the lack of consensus around how to define, measure and teach nonacademic skills, there are numerous programs currently in schools that aim to foster elements such as social emotional learning and youth voice in an attempt to comprehensively support student success (Weissberg, Durlak, Domitrovich, Gullotta, 2015). These programs have been implemented in a variety of ways and with varying degrees of success (Ruby & Doolittle, 2010; Weissberg, Durlak, Domitrovich, Gullotta, 2015). *The Leader in Me* is one such approach that aims to transform schools' cultures by targeting a range of nonacademic factors from compassion to leadership skills to self-efficacy. *The Leader in Me* is currently in place in over 3,000 schools reaching tens of thousands of students, but its effectiveness is not yet well established in the literature.

The Leader in Me Approach

The Leader in Me broadly markets itself as a “whole school transformation process” that “teaches 21st century leadership and life skills” and “creates a culture of student empowerment based on the idea that every child can be a leader” (The Leader in

Me, 2016). Drawing from the widely successful *7 Habits of Highly Effective People* (Covey, 1989), *The Leader in Me* program claims to play a positive role in a host of nonacademic areas by instilling the following seven habits in participating students: be proactive, begin with the end in mind, put first things first, think win-win, seek first to understand then to be understood, synergize (work together), and sharpen the saw (self-improvement and balance). These habits are taught through classroom lessons and activities, teacher trainings, student-government, and school-wide infusion. The program itself has currently been adopted in over 3,000 elementary schools both nationally and internationally. A more comprehensive description of *The Leader in Me* is presented in Chapter 3.

The Leader in Me organization has published a book of the same name (Covey, 2008) that recounts numerous stories of the successful impact of *The Leader in Me* on participating schools, administrators, teachers, students, and communities. However, these accounts are anecdotal in nature and do not concretely address specific outcomes or specific pathways to achieve those outcomes. Likewise, empirical studies evaluating the impact of *The Leader in Me* are limited. Of those that are published in the literature, reported outcome measures cover relatively few of the program's outcome claims (see *The Leader in Me*, 2016). Therefore, the purpose of this research was to investigate empirically the role of *The Leader in Me* in promoting nonacademic skills, looking specifically at two overarching areas: social and emotional learning and student voice.

Theoretical Framework

The Leader in Me outcome assertions are far-reaching, claiming to promote thoughtful students, collaboration between peers, intrinsic motivation to learn, decreased behavioral incidents, self-regulation, compassion, leadership skills, agency, a common school language, and school culture transformation, to name only a few (Covey, 2008). In synthesizing these outcome claims, and also taking into consideration the extant scholarship and analysis of pilot data (see Chapter 3 for pilot study details), two frameworks were selected through which to consider *The Leader in Me* approach: social emotional learning (encompassing outcomes such as thoughtful students, collaboration between peers, intrinsic motivation to learn, decreased behavioral incidents, self-regulation, compassion) and youth voice (encompassing such outcomes as leadership skills and agency). These frameworks provide a useful way of categorizing the broad outcome claims of *The Leader in Me* and investigating the program's influence on participating students.

Social and Emotional Learning

Social and emotional learning (SEL) can be defined as “the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (CASEL, 2015). More specifically, social and emotional learning is comprised of five competencies: self-awareness, self-management, social awareness,

relationship skills, and responsible decision-making. Social emotional learning has been implemented in schools at the curriculum, classroom, school and even district level, and is associated with positive outcomes including increased self-esteem (Durlak et al., 2011), reduced emotional distress (Durlak et al., 2011), fewer destructive behaviors such as bullying and violence (CASEL, 2015), and improved academic success (Durlak et al., 2011). *The Leader in Me* is not grounded in social-emotional research, and it was not designed to support the five competencies outlined by CASEL. However, the seven habits are aligned with these competencies: ***self-awareness*** incorporates *sharpen the saw*; ***self-management*** integrates *be proactive*, *begin with the end in mind*, and *put first things first*; ***social-awareness*** encompasses *seek first to understand then to be understood*; ***relationship skills*** are aligned with *synergize* and *think win-win*; and ***responsible decision-making*** includes *put first things first* and *begin with the end in mind*. *The Leader in Me* has also recently taken initial steps to achieve CASEL SEL certification (email communication with *The Leader in Me*, 2016), indicating their perceived alignment with the framework. As such, this dissertation will use the social emotional framework as a key lens to evaluate the influence of *The Leader in Me* on participating students.

Youth Voice

While the field of social emotional learning tends to be more focused on the development of individual and interpersonal skills (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015), the dimension of *The Leader in Me* that focuses on

leadership skills and youth empowerment falls more within the realm of youth voice (Kirshner, 2015). In order to sufficiently encompass these concepts, this study uses the additional theoretical framework of youth voice to investigate the influence of *The Leader in Me*.

Drawing on the work of many scholars in the field (Lensmire, 1998, 2000; Mitra, 2008, 2016; Mitra & Serriere, 2014; Mitra, Serriere & Kirshner, 2015; Quaglia, 2014; Quaglia & Corso, 2014) this dissertation defines youth voice as young people feeling authentically empowered to express themselves and take action at the individual, group, and/or community level. Voice is associated with positive student outcomes including improved confidence and leadership skills (Mitra, 2008), increased levels of civic efficacy and civic engagement (Mitra & Serriere, 2012), and stronger connections to one's school (Mitra, 2008). Much of the literature on how to foster youth voice in schools focuses on the importance of creating safe school environments that authentically engage and listen to students' opinions and ideas (Mitra, 2008; Mitra & Serriere, 2012; Mitra, Serriere & Kirshner, 2014). In order to explore more thoroughly the role of *The Leader in Me* in fostering students' voice, the literature review also considers the extant research on youth voice development in schools.

Present Study

In order to investigate the role of *The Leader in Me* on developing students' social and emotional learning and student voice, the present study employs a mixed-methods approach including quantitative surveys and qualitative interviews with students, teachers

and administrators. Participants are 4th and 5th graders (n=982; 36 qualitative interviews) as well as their teachers and school administrators (12 qualitative interviews), attending twelve public schools located in three distinct types of school districts (urban, suburban, rural) in the eastern United States. Six of the twelve schools served as treatment schools (adopted *The Leader in Me* in the 2014-15 school year) and six as comparison schools (did not adopt *The Leader in Me* program), and all serve student bodies comprised predominantly of low-income youth and primarily students of color (see Table 3).

Surveys were administered to 4th and 5th grade students at all schools in the fall (Time 1) and spring (Time 2) of the 2014-15 school year. The survey tool consists of previously validated measures related to social and emotional learning and youth voice including self-efficacy, perseverance, youth voice, youth empowerment, teamwork, and perceived levels of teacher and school support (see Table 3 in Chapter 3). The 982 students surveyed were members of a total of 78 homeroom classes at their respective schools. As such, multilevel modeling was used to analyze the survey measure results. In these analyses, time was included as a level-one grouping variable, students were included as a level-two grouping variable, and classrooms were included as a level-three grouping variable (see Chapter 3 for equations and methods).

Qualitative interviews were conducted in the spring of 2015 with 36 students and 12 teachers and administrators across the six treatment schools. Interviews were conducted using a semi-structured format (Seidman, 1991), lasting an average of 30 minutes each, and sought to understand how students, teachers and administrators describe the impact of *The Leader in Me* on themselves, their students and their schools.

Some student interview questions include, “Tell me about one way one of the 7 Habits has come up recently during your school day” and “What does the habit ___ mean to you? How does it come up in your life?” Teacher interviews included questions such as, “How do you feel like *The Leader in Me* has impacted your teaching?” and “Has *The Leader in Me* impacted the way you think about students?”

Taking into account the outcome claims of *The Leader in Me* approach as well as the pilot study, two research questions were developed to guide this study:

1. What influence does *The Leader in Me* approach have on participating students’ social and emotional learning and youth voice in comparison to matched control schools?
2. How do participating students and teachers describe and understand the effects of *The Leader in Me* on their social and emotional learning and youth voice?

Present Study Results

Students attending *Leader in Me* schools demonstrated a significant, negative treatment*time effect for 8 of the 13 measures in comparison to students attending the matched comparison schools. There was also a significant, negative treatment effect (but not treatment*time) for one additional measure (teamwork). As I will describe in more detail below, three of these measures are aligned with social and emotional competencies: teamwork (aligned with relationship skills), self-efficacy in self-regulated learning (aligned with self management), and self-efficacy in enlisting social resources (aligned

with social awareness). Four of these measures are related to youth voice: voice-civic participation skills, voice-value of group work, voice-communication, and youth empowerment. Finally, two of these measures are related to overall school support: teacher personal support and school connectedness.

Incorporating a fidelity measure into the HLM models revealed mixed results. For five measures (voice-civic participation skills, voice-communication skills, teacher personal support, self-efficacy in enlisting social resources, and perseverance), high fidelity was found to be more favorable than low fidelity, but less favorable than comparison schools. For three measures (voice-confidence, the Quaglia Institute My Voice Survey, and teacher academic support), students attending high fidelity *Leader in Me* schools had outcome results that were equal to or more favorable than comparison schools.

Qualitative interviews with the 36 students, teachers and administrators help to explain these quantitative results in the following ways. In terms of the program's impact on social and emotional learning, one theme that emerged is that students spoke of the 7 habits in ways that demonstrate awareness and application of the social and emotional competencies. However, another theme identified in the data is that students had varying levels of understanding of the habits themselves, ranging from complex comprehension to misunderstandings to complete confusion. One potential explanation for these results is a reference bias on the part of *Leader in Me* students in completing the surveys. This means that *Leader in Me* students, now exposed to the messages of the habits, may be holding themselves to higher expectations and may be rating themselves more critically.

A second possible explanation for these results is that despite the program's emphasis on creating a common language, students across the *Leader in Me* school studies do not seem consistently well-versed in the habits' lessons. As I discuss in more detail later, it is possible that students were learning about the program in a way that was not only confusing, but that was also preventing more authentic social and emotional learning from taking place. Finally, a third possible explanation is that the program's framework for implementation was not sufficiently communicated to, or understood by, all school staff.

In regards to the program's impact on youth voice, one theme that emerged is that some students and teachers spoke about some ways in which *The Leader in Me* fosters youth voice and empowerment. However, a second theme of note is that 17 students, when asked the question, "What does it mean to you to be a leader? What is something a leader does?" answered by talking about the importance of following the rules and showing good behavior. In addition, five other students spoke about the way that *The Leader in Me* has helped them and others to behave. Although *The Leader in Me* does speak of ways in which the program can positively impact school behaviors by reducing referrals and harmful behavior (Covey, 2008), this understanding of leadership as compliance lies in stark contrast to the program's outcome claims and to definitions of youth voice and leadership. One explanation for these results is that *Leader in Me* students were exposed to the idea of empowerment and leadership, but then did not experience these ideals in an authentic way, leaving them disillusioned. Another possible reason for this disconnect is the entrenched hierarchical nature of schools where teachers

are in positions of power and expect students to comply (e.g., Freire, 1970; Morrell & Duncan-Andrade, 2008; Rubin & Silva, 2003; Shor, 1992; Silva, 2003). Another possibility is that teachers, both intentionally and unintentionally, can be resistant to change, and can implement reform efforts with only surface-level changes. Ultimately, students' interpretation of leadership as compliance may be impacting their lower scores on the measures of youth voice.

The results from this dissertation suggest implications for *The Leader in Me* program itself, social emotional and youth voice reform efforts, teachers, the educational system more broadly, and future research on social-emotional learning and youth voice initiatives. Recommendations include a clearly communicated implementation framework (that focuses on both classroom pedagogical practices as well as school-wide integration), with an aligned fidelity rubric; the adoption of an action-reflection cycle aimed at evaluating student outcomes, gauging student perceptions, supporting teachers through resistance to change, and authentic implementation; and the awareness of, and active preparation for, inherent power dynamics in schools.

Overview

In Chapter 2: Review of the Literature, I frame the current study by describing the two theoretical frameworks in detail: social and emotional learning and youth voice. I begin by defining each concept, and go on to outline the positive outcomes associated with each, together with how each has been effectively implemented. For the section on social and emotional learning, I briefly discuss how growth in this area can be measured,

and I list some common criticisms associated with the practice of measuring non-academic skills.

In Chapter 3: Methods, I begin by describing *The Leader in Me* approach in greater detail. I then outline the pilot study procedure and design, followed by a longer description of the current study procedure and design including the demographics of each participating school, the study's survey measures, and the qualitative interview process. I next report on the quantitative multilevel modeling data analysis (Robson & Pevalin, 2016) as well as the qualitative thematic analysis approach (Bazeley, 2013; Braun & Clarke, 2013; Miles, Huberman & Saldaña, 2014). I conclude Chapter 3 with a limitations section.

In Chapter 4: Results, I report on the quantitative and qualitative findings. In Chapter 5: Discussion, I reflect on the results and conclude with final implications for this research.

Chapter Two: Review of the Literature

The Leader in Me asserts a broad range of positive outcomes including (but not limited to) thoughtful students, collaboration between peers, intrinsic motivation to learn, decreased behavioral incidents, self-regulation, compassion, leadership skills, agency, a common school language, and school culture transformation (Covey, 2008). In synthesizing these claims, and also taking into consideration relevant scholarship, two overarching themes are used to guide the framework of this dissertation: social emotional learning and youth voice. I describe each in turn below, placing special emphasis on the areas that apply directly to the implementation of *The Leader in Me*.

Social and Emotional Learning

The Leader in Me does not fall squarely into one particular field of non-academic learning, in part because its outcome statements are so broad in claiming to promote thoughtful students, collaboration between peers, intrinsic motivation to learn, decreased behavioral incidents and inspired learners (Covey, 2008). However, a common thread that runs throughout these outcome claims and throughout the seven habits is a commitment to supporting students in managing their actions and emotions, showing compassion for others, and building relationships with peers – all tenets shared with the field of social emotional learning (SEL). The literature review on SEL below lays a foundation for analyzing and understanding the role of the *The Leader in Me* and

considers the ways that the program does, or does not impact the social emotional learning of participating students.

Defining Social and Emotional Learning

The Collaborative for Academic, Social, and Emotional Learning (CASEL) defines social emotional learning (SEL) as “the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (CASEL, 2015). CASEL deliberately uses the term *learning* when referring to ‘social emotional learning’ to illustrate the process inherent in the acquisition of the skills and attitudes of SEL, and also to emphasize that schools are a primary location where this kind of learning takes place (Weissberg, Durlak, Domitrovich, Gullotta, 2015).

To build on this definition, CASEL identified five sets of competencies that are interrelated. These competencies are self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. ***Self-awareness*** is the ability to accurately understand one’s own emotions, values and personal goals. This includes the capacity to assess one’s own strengths and areas of growth as well as the possession of a positive mindset, sense of optimism and sense of self-efficacy. Self-awareness also involves the ability to see how one’s thoughts, feelings, and actions are interconnected (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015). ***Self-management*** involves possessing the skills and attitudes required to regulate behaviors and emotions.

Examples of self-management include the ability to persevere through challenge, delay gratification, control impulses, and manage stress (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015). ***Social awareness*** encompasses perspective-taking (especially with others from diverse backgrounds and cultures), compassion, empathy, understanding social and behavioral norms, and recognizing resources and supports from school, family and communities (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015). Competence in ***relationship skills*** includes cooperating, resisting negative social pressures, constructively navigating conflict, communicating and listening, and seeking help when necessary (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015). ***Responsible decision-making*** refers to the knowledge, skills, and attitudes required to make productive choices about one's own behaviors and social interactions in multiple settings. This particular competency involves the consideration of safety concerns, ethical standards, and the ability to accurately assess risky behavior and consequences of different actions (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015).

While *The Leader in Me* program (Covey, 2008) does not specifically reference these competencies, the seven habits are aligned. For example, ***self-awareness*** encompasses *be proactive* and *sharpen the saw*; ***self-management*** might include *be proactive* and *begin with the end in mind*; ***social-awareness*** incorporates *seek first to understand then to be understood*; ***relationship skills*** are akin to *synergize*, *think win-win*; and *seek first to understand then to be understood*; ***responsible decision-making*** is aligned with *put first things first* and *begin with the end in mind*. See Table 1. In addition,

The Leader in Me has also recently taken steps to achieve CASE=L SEL certification indicating their perceived alignment with the framework.

Table 1. *Alignment of the 7 Habits to Social and Emotional Learning*

Social and Emotional Learning Competency	<i>The Leader in Me</i> Habits
Self-management	Be proactive Begin with the end in mind Put first things first
Self-awareness	Sharpen the saw
Social awareness	Seek first to understand then to be understood
Relationship skills	Think win-win Synergize
Responsible decision-making	Put first things first

Social and Emotional Learning and Key Outcomes

A meta-analysis of 213 studies and more than 270,000 students indicated that SEL is associated with improved academic performance, prosocial behaviors, increased levels of self-esteem, reduced emotional distress such as anxiety and depression, and reduced behavioral incidents (Durlak et al., 2011). CASEL (2015) posits that social and emotional skills are not only key to being a productive student, citizen, and worker, but that these skills (when implemented effectively and long-term) can reduce and prevent risky behaviors such as violence, bullying, dropping out of school, and drug use.

Other benefits of social and emotional learning include positive attitudes toward one's self, more constructive relationships with adults and peers, reduced risk-taking behaviors, more positive social behaviors, decreased emotional distress, and improved

academic success including attendance, grades and test scores (Durlak et al., 2011; Farrington et al., 2012; Sklad et al., 2012; Weissberg, Durlak, Domitrovich, Gullotta, 2015; Zins, Weissberg, Wang, Walberg, 2004). Advocates argue that the long-term impact of social and emotional learning can increase high school graduation rates, college-readiness, career success, beneficial relationships with colleagues and family, stronger mental health, reduced criminal behavior, and active citizenship (Hawkins, Kosterman, Catalano, Hill, & Abbott, 2008; Weissberg, Durlak, Domitrovich, Gullotta, 2015).

Much of the research on social and emotional learning has examined the impact of specific SEL programs and the extent to which these programs have been effective in positively influencing the social and emotional skills of participating students and schools. The Handbook of Social Emotional Learning (Durlak, Domitrovich, Weissberg, Gullotta, 2015) includes separate chapters dedicated to assessing the state of the research of social emotional programs in preschool, elementary school, middle school, high school, and higher education. The Handbook has a unifying set of criteria to categorize SEL programs into three levels: what works, what is promising, and what does not work. “What works” is defined as programs that have been subjected to three or more successful evaluation trials that are “reasonably well controlled” (Weissberg, Durlak, Domitrovich, Gullotta, 2015, p. 16). “What is promising” is defined as programs that have less than three successful evaluation trials. “What does not work” refers to programs that have been subjected to trials and were found to be ineffective.

At the elementary school level, programs that have been shown to work (again,

programs that have the support of three or more empirical studies) include Caring School Community (CSC), Promoting Alternative Thinking Strategies (PATHS), Positive Action (PA), the Responsive Classroom approach (RC), and Second Step (Rimm-Kaufman, 2015). Programs that seem to be promising include Tribes Learning Communities, The RULER Feeling Words Curriculum, MindUP, RCCP (The Resolving Conflict Creatively Program), and The 4Rs (Reading, Writing, Respect, and Resolution) (Rimm-Kaufman, 2015). Though the author does not assign any specific approaches to the “does not work” group, Rimm-Kaufman (2015) does outline three factors that contribute to interventions being ineffective. The first are programs that have been adopted, but not entirely implemented. The second are programs that have been adopted incorrectly such that they lose the integrity of the intervention. The third are programs that have been integrated in early childhood, but not maintained as the students develop (Rimm-Kaufman, 2015). A review of how SEL programs can be implemented effectively is considered later in this section.

At the middle school level, Jagers, Harris and Skoog (2015) argue that classrooms infused with SEL-based approaches that also integrate the concepts of risk prevention and positive development are most appropriately aligned with the needs of adolescents. They adapted the CASEL framework to outline five social and emotional competencies that comprise being a “healthy youth” (p. 4). These include a positive sense of self (e.g. self-esteem and agency); self-control (e.g. regulation of emotions, behaviors and cognitions); decision-making (e.g. making choices aimed at positive outcomes); a moral belief system (e.g. empathy, moral reasoning, and perspective taking); and prosocial connectedness

(e.g. a sense of belonging, and engagement and bonding in multiple settings). Grounding their search for effective middle school SEL programming in this context, Jagers, Harris and Skoog (2015) found that two programs fit the criteria of programs that work: Life Skills Training Program (LST) and Responding in Peaceful and Positive Ways. Eight appear to be promising: the Aban Aya Youth Project, All Stars and All Stars Plus, Facing History and Ourselves, Keepin' It Real, Lions Quest, MindUP, Olweus, and TimeWise.

Importantly, a robust study in 2010 contradicts some of the findings outlined above. The Institute of Education Sciences (IES) partnered with the Division of Violence Prevention in the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (CDC) to conduct an evaluation of the impact of programs that were working to improve students' behavior (Ruby & Doolittle, 2010). This evaluation study looked specifically at approaches labeled as Social and Character Development programs (SACD). Seven school-based programs were evaluated: Academic and Behavioral Competencies Program, Competence Support Program, Love In a Big World, Positive Action, Promoting Alternative Thinking Strategies (PATHS), The 4Rs Program (Reading, Writing, Respect, and Resolution), and Second Step. To evaluate these programs, 20 school and student outcomes were used that can be grouped into four areas: social and emotional competence, behavior, academics, and perceptions of school climate. Findings from the study concluded that none of the seven SACD programs improved student outcomes. The authors hypothesized four possible reasons why this may have been the case: inadequate conceptualization and design of the interventions themselves, poor implementation of the interventions (a topic I will return to later in this

section), nonsubstantial differences between the treatment and control schools in terms of SACD interventions, and methodological limitations. Each of these explanations is considered when analyzing the results of the present study.

Seider (2012) referenced the IES study mentioned above to highlight the importance of infusing character education and social-emotional learning into the culture of a school, and not relying on pre-packaged approaches that do not take context into account. *The Leader in Me* does not consider itself to be a prepackaged curriculum, but rather an approach that can be adapted to the unique needs of each participating institution. Additional literature on implementing social and emotional learning curricula are described below.

Implementing Social and Emotional Learning in the Classroom

There is a consensus among SEL experts that classroom (and school) implementation of social and emotional learning must be grounded in theory and empirical research (Brackett, Elbertson & Rivers, 2017; Zins, Bloodworth, Weissberg & Walberg, 2004). Brackett, Elbertson and Rivers (2017) assert that this is true for both the content of the social and emotional programming as well as the context. In terms of content, they note the importance of theory in selecting the skills that will be developed and the targeted outcomes of those skills (Brackett, Elbertson & Rivers, 2017). In terms of implementation, these scholars also emphasize that a theory of development is necessary to effectively support students at different stages to inform how the selected skills can be developed, how to best teach them at different developmental levels, and which kinds of lessons will best support each one at different stages (Brackett, Elbertson

& Rivers, 2017). The SEL program PATHS, for example (mentioned above as an empirically-backed effective program), is grounded in emotional and psychoanalytic developmental theory (Brackett, Elbertson & Rivers, 2017; Kusché & Greenberg, 1994) to ensure age-appropriate support for students in better understanding their own feelings and behaviors. This developmental theory also informs the developmentally appropriate instruction that is delivered to support students in identifying, naming, communicating, and regulating their feelings (Brackett, Elbertson & Rivers, 2017). Other programs such as Roots of Empathy have specific curricula for different age groups from kindergarten, early elementary, upper elementary, and middle school (Brackett, Elbertson & Rivers, 2017; Gordon, 2004) in recognition of the different developmental needs of students.

As noted in chapter one, there is no universally accepted set of best practices for fostering social and emotional learning. However, many scholars do agree on some empirically-backed approaches. These include modeling social-emotional competencies (Baehr, 2015; Berkowitz, 2011; Jubilee Centre, 2015; Lapsley, Holter & Narvaez, 2013; Wray-Lake & Syvertsen, 2012), explicit teaching (Baehr, 2015; Berkowitz, 2011; Jubilee Centre, 2015), and the creation of a safe classroom climate where social and emotional learning is integrated throughout the day (Carter, 2011; Tough, 2016).

Implementing Social and Emotional Learning at the School and District Level

One of the driving forces behind the founding of CASEL was a response to fragmented curricula being introduced and removed from schools with no unified mission or set of goals (Weissberg, Durlak, Domitrovich, Gullotta, 2015). As a result, recommendations exist for roll-out and sustainable implementation for social and

emotional work in schools. Weissberg, Durlak, Domitrovich and Gullotta (2015) describe a social-emotional learning framework (See Figure 1) in which the five SEL competencies (self-awareness, self-management, social awareness, relationship skills, and responsible decision-making) are surrounded by three concentric circles that illustrate the contextual factors influencing the core competencies: *Classroom curriculum and instruction; School climate, policies, and practices; and Family and community partnerships*. Outside those circles lie the broader contextual factors of *Schoolwide SEL, Districtwide SEL, State policies and supports, and Federal policies and supports*. This framework illustrates the importance of implementing social and emotional learning in a supportive environment.

Importantly, rather than using the term “dissemination,” SEL scholars advocate a diffusion model (Rogers, 2003; Weissberg, Durlak, Domitrovich, Gullotta, 2015). Rogers’ (2003) diffusion model outlines five stages that are separate, but related. The first stage is *dissemination*, which involves the communication of useful and accurate information to potential users. The second stage is *adoption*, when these potential users try the program. The third stage, *implementation*, involves a high-quality application of the program to fairly test the program’s ability to promote change. *Evaluation*, the fourth stage, involves an assessment of how well the program is meeting its goals. The fifth and final stage is *sustainability*. If a program successfully reaches this stage, then it has become a structural component of the organization’s policies and procedures (Rogers, 2003; Weissberg, Durlak, Domitrovich, Gullotta, 2015).

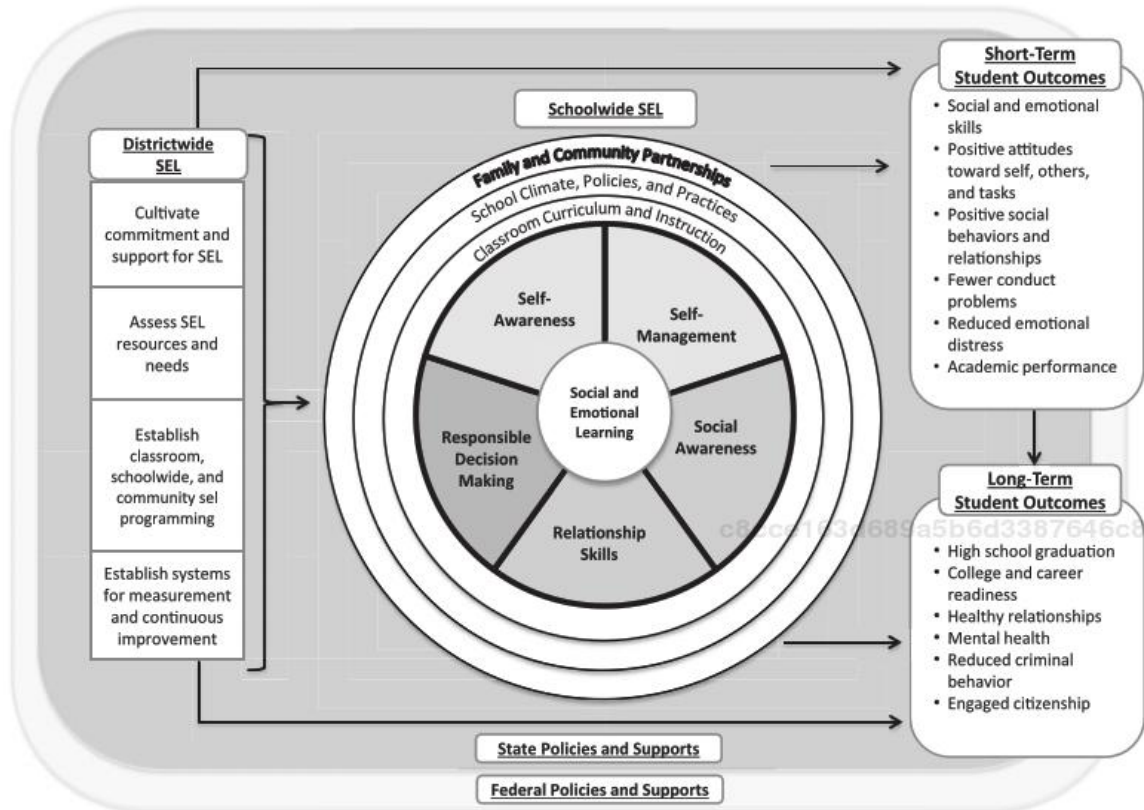


Figure 1. SEL Conceptual Model (Weissberg, Durlak, Domitrovich, Gullotta, 2015, p. 7)

In the field of education more broadly (though less prominent in the SEL literature), scholars have emphasized the importance of action-reflection cycles for implementing lasting and meaningful change in schools (Dobbs, Ippolito & Charner-Laird, 2017; Freire, 1970; Gallimore, Ermeling, Saunders & Goldenberg, 2009). These kinds of cycles build on educators' existing knowledge, and entrust teachers with the responsibility of actively identifying a problem to be solved, reflecting on possible solutions, enacting these solutions, and then reflecting on outcomes to then begin the cycle again (e.g. Dobbs, Ippolito & Charner-Laird, 2017; Freire, 1970; Gallimore, Ermeling, Saunders & Goldenberg, 2009). Dobbs, Ippolito and Charner-Laird (2017)

emphasize the importance of such cycles by first drawing on the work of Heifetz, Grashow and Linsky (2009) who distinguish between technical versus adaptive change. Technical changes usually have a relatively clear outcome, and an empirically-backed solution to reach that outcome (Heifetz, Grashow & Linsky, 2009). The path to this goal might not be easy, but there is nonetheless a clear vision, outcome, and identified pathway (Heifetz, Grashow & Linsky, 2009). Adaptive changes, on the other hand, are those whose outcomes are not necessarily clearly defined, nor the solutions to reach those outcomes (Heifetz, Grashow & Linsky, 2009). Social and emotional learning can be categorized as an adaptive change given its broad range of outcomes and the multiple pathways to reach those outcomes. When schools need to make adaptive changes, Dobbs, Ippolito and Charner-Laird (2017) advocate for the use of inquiry cycles leveraged by teacher leaders and professional learning communities (to provide structure for ongoing teacher learning). Dobbs, Ippolito and Charner-Laird (2017) note that a typical inquiry cycle is comprised of the following steps: “defining an inquiry question or topic; building background knowledge and drawing on experts; collaborative idea generation; individual “idea testing”; shared reflection and idea revision” (p. 35). Even though these scholars work in a different field (disciplinary literacy), their work highlights the ways in which inquiry cycles, professional learning communities, and teacher leaders led to meaningful adaptive changes in schools similar to those desired by SEL scholars.

Similarly, the work of Gallimore, Ermeling, Saunders, and Goldenberg (2009), in a five-year quasi-experimental study, demonstrated that grade-level teams using an inquiry-focused protocol significantly increased student achievement. The authors

attribute these changes in part due to the teachers, who were invested in the inquiry cycles, seeing causal changes as directly connected to the sustained changes they were making. Again, these scholars focused on a different area (grade-level academic achievement), but the emphasis on inquiry cycles used by grade-level teams illustrate an important way that authentic, sustained changes can be made by teachers at the classroom and school level.

The Leader in Me markets itself not as a curriculum, but rather as an *approach* to social-emotional development. Faculty and administrators in *Leader in Me* schools learn about the approach and then decide as a community how to best bring it to their own particular community and context. While they do not advocate for inquiry cycles, they do advocate for a teacher leadership team (Lighthouse Team). This team of teacher-leaders is not given specific guidelines, but they are charged with spearheading efforts to spread the program throughout the school. The implementation and fidelity of implementation of *The Leader in Me* is an important component that is considered in this study in assessing its effectiveness.

Assessing Implementation for Social and Emotional Learning Programming

As noted above, scholars in the field of social and emotional learning believe in the importance of paying close attention to program implementation (Durlak, 2016; Rogers, 2003; Weissberg, Durlak, Domitrovich, Gullotta, 2015). Durlak (2016) argues that it is impossible to assess the effectiveness of social and emotional learning programming without considering implementation because of the importance of disentangling the effect of the program itself and the way it is disseminated. More specifically, Durlak (2016)

isolates distinct components of program implementation and advocates for the consideration of each one. He distinguishes between fidelity (the extent to which key components have been delivered), dosage (how much and how often a program is used), quality of delivery (how well a program has been conducted), adaptation (changes made), participant responsiveness (the extent to which participants are actively engaged), program differentiation (ways in which the program is different from other comparable programs), monitoring control conditions (the extent to which the treatment and comparison conditions overlap), and program reach (how much of the population participated).

This study takes into account Durlak's (2016) dimensions of implementation in considering the program's effectiveness.

Common Language and Social and Emotional Learning

Scholars in the field of social and emotional learning and character education have reported on the importance of consistency and a common vocabulary (Seider, 2012; Simonsen et al., 2008; Weissberg, Durlak, Domitrovich, Gullotta, 2015). Seider (2012), for example, in his year-long mixed methods analysis of three schools with explicit commitments to character education has emphasized the importance of both a common vocabulary as well as a depth of understanding of that language. This is aligned with the work of other scholars who found that classroom teachers who implement a few positively stated rules are more effective than teachers who either have no rules at all or those who have many, overly specific rules (Seider, 2012; Simonsen et al., 2008). This is also aligned with the SEL model in Figure 1, that rests on the foundational components of

a common language and common understanding of the social and emotional competencies. A primary claim of *The Leader in Me* is that it brings a common language to schools with its seven habits. One purpose of the qualitative analyses conducted in this study was to explore the extent to which this is the case.

Social and Emotional Learning and Leadership

Some scholars have connected social and emotional learning to leadership. Goleman (2004), a psychologist and co-founder of CASEL, conducted research that investigated which personal characteristics influenced outstanding performance in organizations. He looked at employees in 188 companies, specifically considering 3 capabilities: technical skills (i.e., accounting and planning), cognitive abilities (i.e., analytical reasoning), and emotional intelligence (i.e., the ability to work with others). Goleman found that when he compared lead performers to average performers in senior leadership roles, almost 90% of difference in profiles was attributed to emotional intelligence, and that emotional intelligence was two times as important as the other capabilities (technical skills and cognitive abilities) in outstanding performance. From this work, Goleman (2004) outlined five components of emotional intelligence, which are closely aligned with the five competencies of social and emotional learning: self-awareness, self-regulation, motivation, empathy, and social skills. He noted that the first three (self-awareness, self-regulation, and motivation) have to do with self-management, while the last two (empathy and social skills) entail relationships with others.

As I will discuss more in Chapter 3 when describing *The Leader in Me* in greater detail, Covey (2008) references Goleman (2004) and also connects leadership to social

and emotional learning. Covey (2008) claims that the seven habits from the program comprise different elements of leadership. The first three habits (be proactive, begin with the end in mind, and put first things first) are the key components of independence, or what he refers to as “self-leadership” (Covey, 2008, p. 46). The next three habits (think win-win, seek first to understand then to be understood, and synergize) are essential for interdependence (Covey, 2008). The final habit (sharpen the saw) emphasizes the principle of renewal and encourages balance (Covey, 2008). This connection of social and emotional learning to leadership made by both Covey (2008) and Goleman (2004) will be explored further in the results section when considering the impact of *The Leader in Me* on social and emotional learning and youth voice.

Measuring Social and Emotional Learning

Documenting social and emotional learning includes a complicated question of measurement: how should social emotional learning be assessed and to what extent should SEL factors be used for accountability purposes (Duckworth & Yeager, 2015). Given the current climate of high-stakes testing and accountability related to academic achievement, there is significant pressure on schools to provide evidence that classroom interventions are effective. However, there are no universally agreed upon ways to measure non-academic and SEL skills, and scholars in the field have voiced concerns over making widespread policy decisions based on any such data. Duckworth (2016), best known in the field for her work on grit, has cautioned against using non-academic skills for accountability purposes such as evaluating teachers and schools (as cited in Felton, 2016). Two primary areas related to measuring non-academic skills are addressed

below: self-reporting and growth sensitive measures. It is important to consider both areas as they relate to this evaluation of *The Leader in Me* in part because of the social emotional claims made by the program, and in part because of this study's design and use of self-report measures of non-academic factors.

Scholars are divided on the appropriateness of using self-report scales to measure character. On one side, Duckworth and Yeager (2015) present a five-part argument for why self-report questionnaires of both students and teachers are problematic. First, they argue that participants may interpret the survey item differently than the researcher intended. Second, the students and teachers might not have sufficient information or insight into the behaviors and internal emotions of themselves or others. Third, they argue that survey scores may not be sufficiently sensitive to measure change over short periods of time. Fourth, reference bias can skew results depending on the culture and implicit principles of individual contexts. Finally, they point to the potential for students and teachers to answer questions in socially desirable, and possibly inaccurate ways.

While the reasons above present a compelling argument against the use of self-report measures, these measures remain an important way of documenting subjects' perceptions of themselves, their actions, and their own character (Ericsson & Simon, 1980; Park & Peterson, 2005; Quaglia & Corso, 2014).

Scholars also question whether or not survey measures are adequately sensitive to measure the nuanced change in character over a relatively short period of time (Duckworth & Yeager, 2015; Meier, 2004; Vermeersch, Lambert & Burlingame, 2000). Historically, test developers aimed to create measures that could evaluate certain

characteristics that would show consistency over time (Meier, 2004). These kinds of surveys are not designed, then, to measure change, especially the kind of subtle changes that are often seen in the development of social emotional competencies. Meier (2004) proposed a set of guidelines that can be used to evaluate the effectiveness of measures to be used before, during, and after implementation of a survey tool. These include grounding survey measures in relevant scholarship to allow for accurate interpretation of results; aggregating item responses to reduce random error; avoiding floor and ceiling effects; assessing change after an intervention; demonstrating change in the expected direction; exhibiting change in the treatment group; demonstrating no differences between control and treatment groups before the intervention; examining systematic errors; and validating with additional studies (Meier, 2004). While it is not expected that researchers employ each guideline for each study, the framework is designed to create measures that increase validity for testing constructs that are sensitive to change (Meier, 2004).

Vermeersch, Lambert and Burlingame (2000) considered similar issues of validity and propose two primary criteria for assessing sensitivity to change. They first argue that validity concerns include scales that contain irrelevant items not under investigation; categorical responses that do not allow for sufficient range to detect change; questions that ask about a range of time (not conducive to detecting change) as opposed to a point in time; instruments that assess more stable traits; and measure items susceptible to ceiling and floor effects (Vermeersch, Lambert & Burlingame, 2000). Considering these factors, Vermeersch, Lambert and Burlingame (2000) suggest two criteria for identifying

measures that are sensitive to change. The first is that items change in the hypothesized direction, and the second is that the items change significantly greater for treatment groups than control groups.

The present study employs self-report survey measures and evaluates social emotional growth over a single school year. Recognizing the concerns outlined above, this study employs a mixed-methods approach and supplements the student survey self-reports with student, administrator, and teacher interviews.

Youth Voice

Although Covey (2008) conceptualizes leadership and social and emotional learning as deeply connected, the work of other scholars suggests that there is a clear distinction between the field of social and emotional learning and that of youth voice (Kirshner, 2015; Rose, 2013). Indeed, despite the clear ties between social emotional learning and positive youth outcomes outlined above, some educators argue that a focus on social emotional skills alone is not sufficient, especially for students from low-income backgrounds, students of color, and students from other historically marginalized groups (Kirshner, 2015; Rose, 2013).

Even though *The Leader in Me* claims to positively influence social and emotional learning, their focus on leadership skills and youth empowerment is also a defining and distinct feature. A key stated goal of the program is for all students to become leaders in their schools and in their lives (Covey, 2008), and a somewhat lesser-known 8th habit implemented in some participating schools is “Find your Voice and

Inspire Others to Find Theirs” (Covey, 2006, p. 5; The Leader in Me Blog, 2016). Based on another one of Covey’s books, *The 8th Habit: From Effectiveness to Greatness* (Covey, 2006), this habit is defined as “unique personal significance” (Covey, 2006, p. 5) and encourages both teachers and students to be empowered and to find their own inspiration and voice. As such, the following section considers the literature on youth voice to provide a lens through which to view *The Leader in Me* as potentially moving beyond social emotional learning, and noting to what extent it could be considered as having a more civic-oriented focus.

Defining Youth Voice

Mitra, Serriere and Kirshner (2015) have defined voice as the various ways that young people have opportunities to participate in school decision-making in ways that impact their lives and those of their peers. Youth voice can be conceptualized in a variety of ways from students simply sharing their opinions on school problems, to collaborating with faculty, to taking on leadership roles, to working toward larger school reform (Mitra, 2008; Mitra & Serriere, 2012). Mitra (2016) states that voice refers to youth being able to make a difference in their own lives, in their schools, and in their communities. Quaglia and Corso (2014) define voice “from an operational perspective” noting that student voice occurs “when students are meaningfully engaged in decision making and improvement-related processes in their schools” (Quaglia & Corso, 2014, p. xiv). Quaglia (2014) explicitly stresses that a definition of true student voice must include the understanding that this voice be authentically listened to and heard. Lensmire (1998, 2000) parsed voice into three classifications: voice as “individual expression,”

“participation” and “project.” Voice as individual expression refers to a communication of one’s self. Voice as participation signifies a critical voice that is used in the service of democracy. Voice as project is a more radical conceptualization that aims to more fully recognize the conflicts and complexities of student expression, to more adequately support burgeoning student voices in schools, and to bring a measure of justice to the challenges that students face when they write and speak in schools (Lensmire, 1998, 2000). Drawing on elements of each of these conceptualizations, this study defines youth voice as young people feeling authentically empowered to express themselves and take action at the individual, group, and/or community level.

Youth Voice & Key Outcomes

Student voice, also sometimes referred to as “active citizenship,” “youth empowerment,” “student participation,” and “youth leadership” (Mitra, 2008, p. 7), is not often aligned with traditional conceptualizations of schooling (Mitra, 2008), and yet it has been shown to be predictive of a number of positive youth outcomes. Fostering student voice and creating conditions in which youth are heard in schools has been shown to help students recognize the strengths of their own capabilities (Oldfather, 1995), improve youth understanding of how they learn (Johnston & Nicholls, 1995), increase student awareness of their ability to affect change in their schools (Oldfather, 1995), foster skills such as public speaking, project planning and teamwork (Mitra, 2008), and increase student confidence and leadership (Mitra, 2008). Youth voice can also engage and motivate youth by giving them a sense of ownership in their classrooms and schools (deCharms, 1977; Mitra, 2008), enhance youth attachment to institutions (Mitra, 2008),

and even support teachers in comprehending and meeting student needs (Johnston & Nicholls, 1995). Mitra and Serriere (2012) report that student voice in elementary school can play an important role in increasing the civic engagement and civic efficacy of youth, including cultivating the belief that young people can affect change on an individual and community level. This study's examination of the role that *The Leader in Me* plays in the development of youth voice will consider these outcomes in the analysis.

Implementing Youth Voice

The scholarship on youth voice reports on ways in which students have been empowered and have developed their own voice through supportive environments, specific pedagogical practices, and more traditional academic means. I outline these approaches below, and (as I will describe in the methods section) I also coded for student mentions of any of these practices in my qualitative analysis.

Much of the literature on student voice explores different ways that teachers and schools have created *environments* in which students feel safe, empowered, and allowed to speak their minds (e.g. deCharms, 1977; Mitra, 2008; Mitra & Serriere, 2012; Mitra, Serriere & Kirshner, 2014). For example, deCharms (1977) outlines steps teachers can take to make effective transitions to empowering youth that range from believing in the capabilities of all students, to giving authentic choices, to allowing for student influence in the classroom. Mitra (2008), in an in-depth case study of a high school in California, describes what she refers to as a “best case scenario” (p. 2) of student voice in which students serve on advisory committees and are included in a range of conversations from textbook selection to classroom climate to professional development to broader school

reform efforts. Qualitative analysis of student and teacher interviews considers teacher and student perspectives about the extent to which *The Leader in Me* is (or is not) creating these kinds of environments that are consistent with fostering youth voice.

Three specific *pedagogical* practices that are consistent with youth voice in schools can be found in the civic development literature: open classrooms (Campbell, 2008; Levinson, 2012a), controversial conversations (Hess, 2002, 2009), and youth activism (Kirshner, 2005; Mitra & Serriere, 2012). An open classroom environment “fosters a free, open, and respectful exchange of ideas” (Campbell, 2008, p. 450), and is one in which “students feel comfortable and supported taking on controversial points of view and listening to others’ perspectives” (Levinson, 2012a, p. 97). Open classrooms can create an atmosphere conducive to the development of social responsibility (Flanagan, Cumsille, Gill, & Gallay, 2007; Wray-Lake & Syvertsen, 2011), a sense of trust and equal membership between students and teachers (Campbell, 2008; Levinson, 2012a), and political discussions both in and out of the classroom (Levinson, 2012a; Torney-Purta, 2001). Campbell (2008) specifically addressed the connection between open classrooms, youth voice, and civic engagement noting, “with more voice in the classroom, perhaps there could be more equality in political engagement” (p. 451).

While much of the research on open classrooms has been done at the high school level, Mitra, Serriere, and Kirshner (2014) describe a similar practice at the elementary school level referred to as ‘carpettime democracy.’ Carpettime democracy is characterized by children coming together to talk about a range of academic or non-academic concerns, and encourages teachers to engage students in “considering multiple

perspectives as a process for students to make decisions necessary to solve problems of their lives, their society and the world” (Mitra, Serriere & Kirshner, 2014, p. 294). This egalitarian classroom approach to teaching and problem-solving is considered to be an important way to foster student voice and to ultimately encourage future civic participation (Mitra, Serriere & Kirshner, 2014).

Another pedagogical practice that has been shown to foster student voice is the use of controversial conversations (Hess, 2002, 2009). Hess (2002, 2009) defines these controversial public issues (CPI) as “unresolved questions of public policy that spark significant disagreement” (Hess, 2002, p. 11) and argues that they contribute to positive academic outcomes as well to a more democratic society. Indeed, other scholars have noted that learning to contend with opposing viewpoints while being exposed to different perspectives is a crucial component of building a democratic society and supporting responsible citizens (e.g., Kahne & Middaugh, 2008; McLeod, Shah, Hess & Lee, 2010; Levinson, 2012b). The aligned practices of debates and mock trials also allow student voice to be prioritized in the classroom and can help students learn to resolve conflicts fairly, peacefully, and objectively (Saavedra, 2012). Having opportunities to reflect on others’ perspectives, and to share one’s opinions has powerful ramifications for the development of one’s voice and for active democratic participation.

Youth activism has also been shown to foster youth voice (Kirshner, 2005, 2015; Mitra & Serriere, 2012). Kirshner (2005), for example, has emphasized how youth activism can be a way to encourage young people to develop their own “moral voices” (p. 31) about matters they care about. Mitra and Serriere (2012) have also reported on the

power of youth activism in developing student voice. In an examination of the development of student voice at an elementary school, the authors followed the progress of five fifth grade girls who advocated for a salad option for their school lunch. The students first spoke to their principal, who then guided them in an inquiry-based effort to further examine their concern. The girls worked with their principal and teachers, spoke to their peers, gathered opinion poll data from students in kindergarten through fifth grade, conducted research on the health benefits of salad, presented their position to the head cafeteria coordinator, and ultimately succeeded in making changes at their school (Mitra & Serriere, 2012). Qualitative analysis of student and teacher interviews considers teacher and student perspectives of the extent to which *The Leader in Me* is (or is not) leveraging these pedagogical practices consistent with fostering youth voice.

Finally, student voice can also be fostered through more traditional academic avenues. For example, scholars have noted the positive impact of literacy on fostering student voice in adolescents (e.g. Ciardiello, 2004; Hernandez-Zamora, 2010; Kim, 2013; Stewart, 2013; Tatum & Gue, 2010). Kim (2013), in a qualitative analysis of the impact of spoken word poetry on youth voice, reported that spoken word literacy can give students a sense of purpose in the context of society, fuel self-discovery, and provide a path to finding one's own voice. Tatum and Gue (2010) reported on 'raw' writing as a way to activate individual and collective voice. In a five-week African American Adolescent Male Summer Literacy Institute hosting twelve adolescent males from ages 12 to 17, the institute reported positive outcomes for participants' sense of power, individual voice, and collective voice (or counternarrative). Stewart (2013) advocated the

use of writing to give voice to the stories of youth (with a focus on immigrant youth), and to foster agency through literacy. Qualitative analysis of the present data considers each of these approaches to fostering youth voice.

Authentic Implementation of Youth Voice Efforts

It is important to reiterate Quaglia's (2014) point that efforts to empower student voice must be authentic: when students speak up and are ignored, or when they are disingenuously listened to, they can be left feeling disillusioned and disempowered (e.g. Levinson, 2012b; Quaglia, 2014; Quaglia & Corso, 2014; Quiroz, 2001; Silva, 2003; Silva & Rubin, 2003). Given the long-standing structure of schools that require students to sit quietly and listen to their teachers and to have very little input or voice (Freire, 1970; Morrell & Duncan-Andrade, 2008; Rubin & Silva, 2003; Shor, 1992; Silva, 2003) this kind of authentic implementation can be challenging to achieve. Silva (2003), for example, discusses some challenges that can arise in even the best-intentioned efforts including difficulty recruiting student participation, student voices being easily dismissed, and the prioritization of certain privileged voices above others. Some scholars (Fielding, 2001, 2004a; Mitra, 2008) specifically talk about the importance of collaborating with youth and elevating their voice, as opposed to speaking on their behalf, or listening only as a conciliatory gesture. Indeed, while Greene, Burke and McKenna (2013) point to the potential power of research as a way to include the voices of youth in local reform efforts, Fielding (2004b) cautions against using research as a way to speak for and about others. This question of authenticity is a critical one in analyzing whether *The Leader in Me* truly gives students voice or if the program's

language of empowerment is more rhetorical than efficacy-building.

Teacher Resistance to Change

Teacher resistance to change (both intentional and unintentional) is another important consideration when implementing reform efforts, especially those aimed at fostering youth voice. Evans (1996), who has written extensively on teacher responses to reform, presents some important roadblocks to implementation. Though Evans does not specifically reference implications in regards to youth voice development, his framework captured in *The Human Side of School Change* (Evans, 1996) examines the ways that teachers' and administrators' emotions, competencies, histories, fears, and reactions play critical roles in impacting the successes and failures of implementing such reforms. Three of the areas that Evans (1996) addresses are important to consider in the context of *The Leader in Me* program.

First, Evans (1996) noted that reform efforts challenge teachers' competence in their way of doing things. Educators, especially those who have been teaching for a long time, may feel as though they are novices again when asked to try new programs (Evans, 1996). As a coping mechanism, often unintentionally, these teachers will try to fit new techniques into old ways of doing things, resulting in limited net change (Evans, 1996). This claim is an important one to consider when exploring this study's findings.

Second, Evans (1996) and other scholars (e.g. Cohen, 1990; Green & Hauser, 2009) note that in order for reform to be effective, all stakeholders must be clear on end goals and the processes to reach those goals. If unclear on the deeper purpose and outcome of a reform, teachers will sometimes make surface level changes without truly

understanding the importance of a significant change (Evans, 1996). Evans (1996) commented that educators will often “teach the new text and try the new method, but without incorporating key elements of the reform and clinging, often without being aware of it, to familiar techniques and understandings” (Evans, 1996, p. 78). This is sometimes referred to as “false clarity” (Evans, 1996; Fullan, 1991, p. 70.) and is personified in Cohen’s (1990) qualitative case study of a teacher who proudly explains how she has implemented a new math program, while the researcher perceives her practices as ineffective and virtually unchanged. This “false clarity” is another crucial piece to consider when examining the impact of *The Leader in Me* on participating students’ voice development.

Finally, Evans (1996) noted that even when teachers are committed to a new reform effort, scholars note that there is a gap between intent and action that must be addressed on the part of the teachers, schools, and students themselves (Kegan & Lahey, 2009). Even if teachers are deeply committed, change can be especially difficult if teachers are pulled in many different directions from a range of constituencies such as students, parents, district demands, curriculum, program expectations, and even their own commitments (Evans, 1996). If teachers are impacted by any of these three areas of concern (feel that their competence is being challenged, are unclear on the deeper purpose and implement only surface level changes, or are confronted with conflicting commitments), then efforts to foster authentic student voice can fall short.

Research Questions

The Leader in Me program claims that participating students are positively influenced in a variety of ways, especially in the areas of social and emotional learning and youth voice development. This dissertation aims to contribute to the literature by investigating the influence of *The Leader in Me* program, paying special attention to these two key areas. By extension, this study also seeks to identify which practices appear to be effective in fostering social emotional learning and student voice. Using the above literature as a framework for analysis, research questions guiding this study are as follows:

1. What influence does *The Leader in Me* approach have on participating students' social and emotional learning and youth voice in comparison to students attending matched comparison schools?
2. How do participating students and teachers describe and understand the effects of *The Leader in Me* on their social and emotional learning and youth voice?

Chapter Three: Methods

The present study investigates the influence of *The Leader in Me* on student social and emotional learning and student voice employing a mixed-methods approach including twelve schools in three states, 982 quantitative student surveys and 48 qualitative interviews with students, teachers, and administrators in the 2014-15 academic school year. The investigation was preceded by a smaller pilot study of two schools in the 2013-14 school year involving 594 quantitative student surveys, 10 student interviews, and 6 teacher and administrator surveys. A mixed-methods approach was chosen for this study to gather a range of data points on the program's impact and to triangulate the data from self-report surveys, student, teacher, and administrator interviews. This approach also attempts to address some of the concerns outlined in Chapter 2 around measuring social and emotional learning. The section below first describes *The Leader in Me* intervention itself, then summarizes the pilot study, and finally outlines the present study's methods.

Of note, this dissertation was initiated when leaders from within *The Leader in Me* organization reached out to Professor Scott Seider at Boston University requesting that an empirical study be conducted to investigate the program's impact on participating students. Through an agreement with *The Leader in Me* and the ROI Institute, Dr. Seider developed a survey tool, which was then administered to schools by the ROI Institute. I analyzed this data along with the qualitative interviews (which I conducted) in order to obtain the results reported on in this study.

The Leader in Me Approach

In 1989 Stephen Covey published *The 7 Habits of Highly Effective People*, a self-help guide that aimed to support readers in improving their own lives by adopting seven foundational practices. Since its initial publication, *The 7 Habits of Highly Effective People* has sold over 25 million copies in 40 languages (Covey, 2016) and has led to the launching of other popular books such as *The 7 Habits of Highly Effective Families* (Covey, 1998) and *The 7 Habits of Highly Effective Teens* (Covey, 1998).

The seven habits (described in greater detail below) serve as the foundation for *The Leader in Me* program, which is currently being used in over 3,000 schools nationally and internationally (*The Leader in Me*, 2016). *The Leader in Me* claims to be a “whole-school transformation process” that positively impacts student social emotional learning and student voice and empowerment skills (*The Leader in Me*, 2016). *The Leader in Me* publication (Covey, 2008) is a celebration of the program that describes how the approach has been successful in schools throughout the world. The sections below outline the primary components and philosophies of the program (the seven habits, leadership, core paradigms, training and implementation) as well as prior research into the program’s effectiveness.

The Seven Habits

The seven habits at the center of this program are: be proactive; begin with the end in mind; put first things first; think win-win; seek first to understand then to be understood; synergize; and sharpen the saw. Table 2 below provides the definitions of each that are used by *The Leader in Me* program. The short phrase that accompanies each

habit is a succinct definition that summarizes the habit's meaning. The longer italicized definition below each phrase describes the more robust meaning of each habit. In the results chapter, I consider each component of these definitions to report on how students understand the different elements of each habit.

Table 2. *The Seven Habits*

Habit	Definition used for Students
1. Be Proactive	You're in charge <i>I am a responsible person. I take initiative. I choose my actions, attitudes, and moods. I do not blame others for my wrong actions. I do the right thing without being asked, even when no one is looking.</i>
2. Begin with the end in mind	Have a plan <i>I plan ahead and set goals. I do things that have meaning and make a difference. I am an important part of my classroom and contribute to my school's mission and vision. I look for ways to be a good citizen.</i>
3. Put first things first	Work First, then play <i>I spend my time on things that are most important. This means I say no to things I know I should not do. I set priorities, make a schedule, and follow my plan. I am disciplined and organized.</i>
4. Think win-win	Everyone can win <i>I balance courage for getting what I want with consideration for what others want. I make deposits in others' Emotional Bank Accounts. When conflicts arise, I look for third alternatives.</i>
5. Seek first to understand then to be understood	Listen before you talk <i>I listen to other people's ideas and feelings. I try to see things from their viewpoints. I listen to others without interrupting. I am confident in voicing my ideas. I look people in the eyes when talking.</i>
6. Synergize	Together is better <i>I value other people's strengths and learn from them. I get along well with others, even people who are different than me. I work well in groups. I seek out other people's ideas to solve problems because I know that by teaming with others we can create better solutions than anyone of us can alone. I am humble.</i>
7. Sharpen the saw	Balance feels best <i>I take care of my body by eating right, exercising and getting sleep. I spend time with family and friends. I learn in lots of ways and lots of places, not just at school. I find meaningful ways to help others.</i>

(Definitions retrieved from <http://www.theleaderinme.org/the-7-habits-for-kids>)

The Leader in Me & Leadership

The Leader in Me claims that it supports “schools and parents around the world” in “inspiring greatness, one child at a time” (Covey, 2008, cover) It aims to foster “primary greatness” (Covey, 2008, p. 9) which encompasses one’s integrity, motivation, treatment of others, work ethic, character and creativity. According to Covey (2008), primary greatness is open to everyone (not a select few) and is not related to specific achievements. This lies in opposition to “secondary greatness” which encompasses achievements, awards, titles and fame (Covey, 2008). Covey noted that the seven habits comprise different elements of the leadership necessary to achieve primary greatness. The first three habits (be proactive, begin with the end in mind, and put first things first) are the key components of independence, or what he refers to as “private victory” or “self-leadership” (Covey, 2008, p. 46). The next three habits (think win-win, seek first to understand then to be understood, and synergize) are essential for interdependence (Covey, 2008). The final habit (sharpen the saw) emphasizes the principle of renewal and encourages balance (Covey, 2008).

As noted in chapter 2, Covey (2008) also conceptualizes leadership as closely aligned with the work of Goleman (2004) who connected strong leadership ability to emotional intelligence. Goleman outlined five elements of emotional intelligence which are very similar to the five competencies of social and emotional learning: self-awareness, self-regulation, motivation, empathy, and social skills. Similar to Covey (2008), he noted that the first three (self-awareness, self-regulation, and motivation) have to do with self-management, while the last two (empathy and social skills) have to do

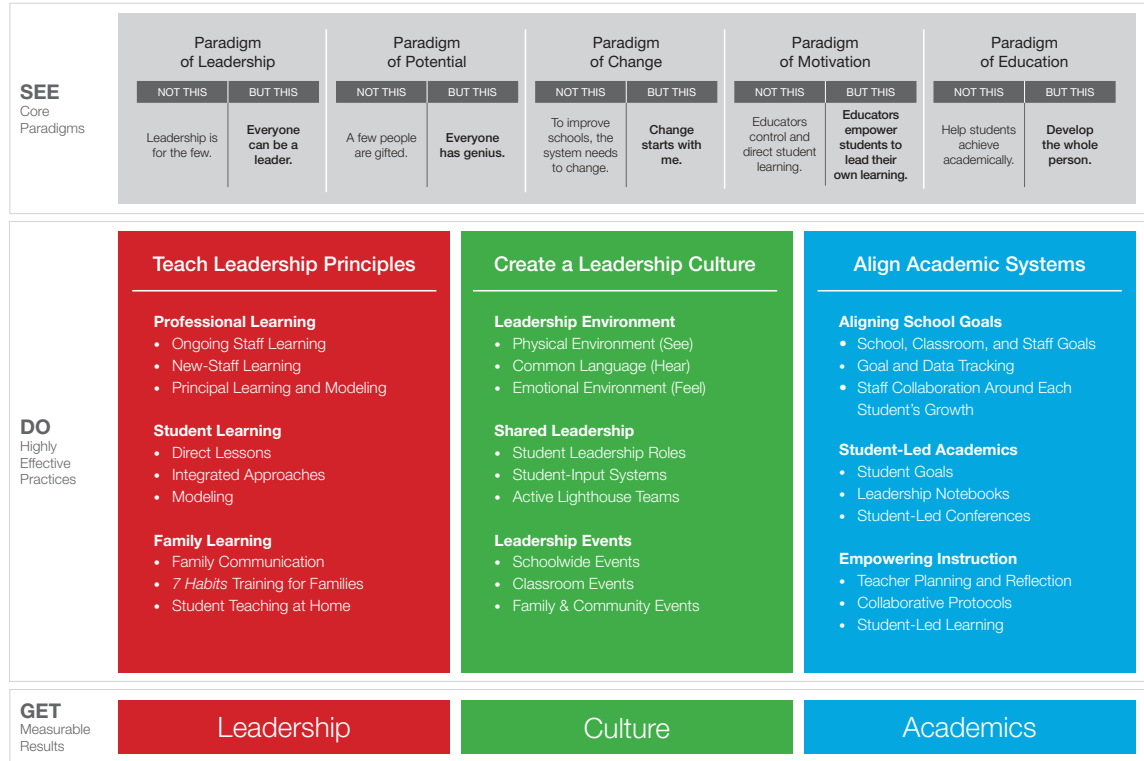
with relationships with others. In short, *The Leader in Me* program seeks to empower all students to be leaders, and not to think about leadership as something that only a few students can achieve.

The Leader in Me Implementation

The Leader in Me claims that one of the key reasons why its program is implemented effectively in schools, and why it stands out from other reform initiatives is that it embodies a different “paradigm” and initiates a “paradigm shift” (Covey, 2008, p. 126) in schools. To explain this paradigm shift, *The Leader in Me* presents five kinds of paradigms: paradigm of leadership, paradigm of potential, paradigm of change, paradigm of motivation, and paradigm of education (*The Leader in Me*, 2017). Within each category, they give an example of ways to shift one’s thinking. For example, in the paradigm of leadership, the suggestion is not to think, “leadership is for the few,” but rather, “everyone can be a leader” (*The Leader in Me*, 2017). In the paradigm of potential, educators are urged not to believe that only “a few people are gifted,” but to recognize that “everyone has genius” (*The Leader in Me*, 2017). For the paradigm of change they discourage the idea that “to improve schools, the system needs to change,” and instead encourage the idea that “change starts with me” (*The Leader in Me*, 2017). In the paradigm of motivation schools are urged to shift their thinking away from the idea that “educators control and direct student learning” toward the idea that “educators empower students to lead their own learning” (*The Leader in Me*, 2017). Finally, in the paradigm of education they encourage educators to strive not only to “help students achieve academically” but rather to “develop the whole person” (*The Leader in Me*,

2017).

This paradigm shift paves the way for what they call “highly effective practices” (*The Leader in Me*, 2017). They claim that by implementing these highly effective practices – teach leadership principles, create a leadership culture, and align academic systems – the outcome will be leadership, culture, and academics. This framework is presented below in Figure 2. It is important to note that while no empirical research is cited in this figure, many of the recommended practices are aligned with evidence-based practices. For example, the combination of “direct lessons, integrated approaches, and modeling” under the category of student learning are aligned with the evidence-based practices of explicit instruction, integrated learning, and authentic modeling (e.g. Baehr, 2015; Brackett, Elbertson, Rivers, 2017).



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Figure 2. The Leader in Me Framework (*The Leader in Me*, 2017)

The Leader in Me states that it is different from other reform efforts in four primary ways. Two of these ways have been described above: “it embodies a different paradigm” and “it uses a common language—The 7 Habits” (*The Leader in Me*, 2017). The program states that it is also unique because “it works from the inside out” and “the implementation is ubiquitous” (*The Leader in Me*, 2017). These final two elements of the program are described below.

The Leader in Me supports schools in adopting its program in a way that uniquely suits the school’s needs. Rather than prescribing strict guidelines, *The Leader in Me* trains and supports school staff in making the program most effective for the school’s

own environment. They first bring a trainer to each new *Leader in Me* School and conduct a three-day orientation for all staff. These trainings focus primarily on fostering the seven habits in the teachers themselves and helping the teachers to understand the importance of these habits in their own lives. Only then are the teachers instructed as to how they can begin to infuse the seven habits into their school and classrooms. The philosophy behind this approach is that the entire staff must be authentically on board, and must believe in the seven habits themselves in order to communicate the benefits to their students. A subset of teachers then voluntarily joins the Lighthouse Team, which is the onsite group in charge of *The Leader in Me* implementation.

There are only a limited number of coaching days provided by *The Leader in Me* staff during the year, so the Lighthouse Team is charged with devising a timeline for rolling out the program and providing *The Leader in Me* staff with benchmarks of implementation. These benchmarks usually depend on the school's own vision; a key element of the approach is to empower schools and teachers to take ownership of the process. This staff Lighthouse Team also supports the formation of a student Lighthouse Team, which serves as a student body government for each school.

At the classroom level, the faculty is advised on certain elements of *The Leader in Me* that they should bring to their classrooms, but many further elements are left up to individual teachers. For example, it is suggested that each classroom have a mission statement (a short goal, or declaration of the class's larger purpose for the year); leadership roles (an extension of regular classroom jobs that the students apply for based on their strengths); and posters around the room reminding students of the importance of

the seven habits. Faculty members are also provided with some concrete resources such as a *Leader in Me* workbook that shares stories of characters exemplifying certain habits. However, teachers are generally expected to find resources on their own using *The Leader in Me* website, or other online resources such as *The Leader in Me* on Pinterest.

At the school level, *The Leader in Me* encourages schools to adapt their program in a way that fits with their individual school cultures by establishing common behaviors, language, artifacts (programmatic elements displayed throughout the school), traditions (school-wide events), and folklore (success stories passed along from year to year) that can be unique to each institution, depending on the school's needs (Covey, 2008).

Finally, *The Leader in Me* aims to be a part of all elements of the school day. Rather than depending on scripted lesson plans taught at certain parts of the day, teachers are encouraged to assimilate what they have learned and infuse it into everything. For example, literacy teachers are encouraged to hold discussions around which habits book characters embody; science teachers might ask students to consider which habits they are using when planning an experiment; students are reminded to think about the habits even when eating lunch with their friends. The philosophy behind this approach is that *The Leader in Me* does not want to be viewed as an additional task for teachers but rather a ubiquitous part of everyday life (Covey, 2008).

The Leader in Me Prior Research

The Leader in Me has used this approach nationally and internationally, asserting numerous positive outcomes. *The Leader in Me* publication (Covey, 2008) presents many examples and quotations from enthusiastic students, teachers, administrators and parents.

A.B. Combs Elementary in North Carolina is one such example. Covey details how principal Muriel Thomas Summers, inspired by *The 7 Habits of Highly Effective People*, worked to infuse the seven habits into all parts of her school culture. The book asserts that the framework of the seven habits played a foundational role in transforming the school from one in danger of losing its status as a magnet school to a thriving paragon of empowered student leaders. Despite stories such as these, the claims made in *The Leader in Me* publication (Covey, 2008) are primarily anecdotal, and few of these citations are grounded in research or outside evaluations.

Recently, there have been some studies investigating the impact of *The Leader in Me* (see *The Leader in Me*, 2016). For example, the ROI Institute (2014) analyzed eight *Leader in Me* schools across two districts looking at teacher and student responses, student learning and application and overall impact, and found a number of positive outcomes including school reports that *The Leader in Me* played an important role in helping students succeed both in school and in life, and reports from both students and teachers that students acquired new skills which positively impacted their leadership abilities. Similarly, a mixed methods study of 17 *Leader in Me* schools conducted at the University of Northern Iowa found a number of positive program outcomes including 57% of schools reporting decreased incidents of bullying, and an increase from 23% to 95% of teachers who believe that high expectations are set for all students (Reade, 2014). The *Leader in Me Parent Perceptions Report* (Lighthouse research and development, Inc., 2015) was also compiled for Franklin Covey, analyzing parent surveys and finding that 78% of parents are highly satisfied with how *The Leader in Me* develops character, and

that 75% reported being highly satisfied with the leadership qualities developing in their students.

This dissertation adds to the existing research in two primary ways. First, it employs a robust mixed-methods design involving six treatment schools and six comparison schools, triangulating data across nearly 1000 quantitative surveys, 36 qualitative student interviews, and 12 qualitative teacher and administrator interviews. Second, this dissertation considers the range of outcome claims of *The Leader in Me* and synthesizes them to specifically look at outcomes related to social and emotional learning and student voice. It combines multilevel statistical analyses and qualitative procedures, considering these outcomes within the framework of the extant literature in these areas.

Pilot Study Procedure & Design

The present study was preceded by a smaller pilot study. The pilot study employed a mixed-methods design including quantitative student surveys and qualitative interviews with students and school staff in the 2013-2014 academic year. The section below describes the pilot study participants, procedures, methods of analysis, and results that informed the current study.

Pilot Study Participants

Participants in the pilot study included 594 students in grades 4-8 attending two public schools in a large northeastern city. Ashbury Elementary School¹, a public elementary school in a large northeastern city serving over 500 students in grades K-8,

¹ All school, district, and student names are pseudonyms.

chose to adopt *The Leader in Me* in the 2013-14 academic year under the leadership of their principal, in part to establish a positive school climate in the midst of a district that was struggling academically and financially. Vines Elementary School, a public school in the same school district that did not employ *The Leader in Me*, was chosen as a comparison school because of its structural and demographic similarities to Ashbury Elementary (see Table 3).

Table 3. *Participating Pilot Schools*

School Name	Ashbury	Vasquez
District	Kullen	Kullen
The Leader in Me or Comparison	The Leader in Me	Comparison
Location	Large city in the north east	Large city in the north east
School Type	K-8	K-8
Grades Surveyed	4-8	4-8
Total Enrollment	520	873
Free/Reduced Lunch	94.3%	94.5%
African American	54.6%	34.2%
White	8.1%	20.7%
Asian	4.6%	14.3%
Latino	28.7%	21.5%
ELLs	15.4%	16.2%
4 th Grade Math Proficiency	68.3%	53.6%
4 th Grade ELA Proficiency	34.2%	47.1%
5 th Grade Math Proficiency	49.0%	32.4%
5 th Grade ELA Proficiency	40.0%	29.1%
6 th Grade Math Proficiency	62.2%	63.0%
6 th Grade ELA Proficiency	35.6%	48.8%
7 th Grade Math Proficiency	60.7%	59.3%
7 th Grade ELA Proficiency	55.4%	44.1%
8 th Grade Math Proficiency	74.0%	47.3%
8 th Grade ELA Proficiency	56.0%	56.7%
Special Education: students with disabilities	15.0%	8.7%
Special Education: gifted	2.3%	2.6%

Pilot Study Methods

Ashbury and Vines students in grades 4-8 completed a survey in the opening

weeks of the 2013-14 academic year (Time 1) and then completed the same survey in June of 2014 (Time 2). Descriptions of the measures used can be found in the section below on the current study.

I visited Ashbury Elementary School in the spring of 2014 to conduct qualitative interviews of students and staff. Using a semi-structured approach (Seidman, 1991), I conducted 10 student interviews, my advisor, Dr. Scott Seider, conducted 5 faculty interviews, and we co-interviewed the principal. Interviews lasted an average of approximately 30 minutes each.

One aim of the pilot study was to give direction to the present study and to identify more focused outcomes of *The Leader in Me*. As such, the pilot study interviews asked broader questions than the present study, focusing on interviewees' perceptions of the impact of *The Leader in Me* on students' leadership skills, overall character development, and student success. Questions included on the student interview protocol included "What is one way you try to be a leader in your class?" and "How does "Habit #1: Be proactive," come up in your life?" and "How is your school different this year than it was before *The Leader in Me* came?" Questions on the teacher interview protocol included "Has *The Leader in Me* impacted the way you interact with your students?" and "Do you feel as if your students act differently this year in comparison to previous years?"

I transcribed all interviews verbatim, and took frequent memos during the process to record additional themes. Based on these early steps I developed a draft codebook using both etic and emic perspectives (Maxwell, 2013) during the summer of 2014. These

codes included elements such as the social and emotional learning competencies, youth voice and empowerment, school culture, and students' and teachers' responses to the program.

Pilot Study Quantitative and Qualitative Data Analysis

The first step in the analyses of the survey data from the 4th-8th grade students at Ashbury and Vines Elementary Schools was to conduct exploratory factor analysis (EFA) to determine how many factors exist within each of the sub-measures included on the pre-post surveys and whether the hypothesized construct for each measure was in fact the predominant factor. Adjustments to the sub-measure factors (i.e. exclusion of a particular survey item) were made as deemed necessary by the EFA process. Next, we used a single-level multiple regression method to test for differences in each survey measure between the two participating schools. We began these analyses by fitting baseline control models for each of the sub-measures, with students' Time 2 (Spring 2014) scores on these measures as the dependent variable, and the following predictor variables: gender, grade level and Time 1 (Fall 2013) scores on the tested measure. Next, we added to the model the question predictor of interest: the school (Ashbury or Vines) attended by participating students. The final fitted model for analyzing these data was as follows:

$$\text{Sub-MeasureTime2}_i = B_0 + B_1\text{Sub-MeasureTime1}_i + B_2\text{Gender}_i + B_3\text{Grade}_i + B_4\text{SchoolType}_i + \varepsilon_i$$

where:

- B_0 is the intercept parameter
- B_1 - B_3 represent the effects of demographic control predictors on the outcome
- B_4 represents the effects of school type on the outcome
- ε_i represents the random effects for each participant (residual error)

All interviews conducted for this study were audio recorded and transcribed verbatim. During the transcription process I did some initial coding and wrote memos (Glaser & Strauss, 1967) using primarily descriptive and in vivo coding approaches (Miles, Huberman & Saldaña, 2014). I next read through the interviews and coded with broad descriptive codes pertaining to the purported goals of *The Leader in Me* such as school culture, common language, and understanding of the habits. Based on these early analysis steps I created a draft codebook during the summer of 2014 before the launch of the present study.

Pilot Study Results

Quantitative data from the pilot year, analyzed using the OLS regression process described above, revealed several measures upon which students at Ashbury Elementary School demonstrated growth, where students in the comparison school did not. However, only one of these measures was near significant: Youth Voice—Student Empowerment ($p=.06$). These pilot quantitative findings, coupled with analysis of the pilot qualitative interviews helped to confirm the decision to use two primary theoretical frameworks to analyze the influence of *The Leader in Me*: social and emotional learning and youth voice. More specifically, qualitative analyses revealed the common theme of students and teachers speaking of ways in which *The Leader in Me* was influencing students in these two primary areas.

Present Study Procedure & Design

Below I describe the following elements of the present study's procedure and design: participants and participating schools, the quantitative surveys, and the qualitative interview protocol.

Participants and Participating Schools

The participants in this study are 4th and 5th grade students attending twelve public schools located in three districts in the eastern part of the United States (n=982). The Kullen School District is located in a large urban city (population approximately 1.5 million), the Everest School District is in the suburb of a mid-size city (population approximately 200,000), and the Ursa School District is located in a more rural area, outside a smaller city (population approximately 60,000). Six of the twelve schools served as treatment schools (adopted *The Leader in Me* in the 2014-15 school year) and six as comparison schools (did not adopt *The Leader in Me* program), and all serve student bodies comprised predominantly of low-income youth and primarily students of color (see Tables 4.1, 4.2, and 4.3 below). While each of the six treatment schools chose to adopt *The Leader in Me* for its own individual reasons, each expressed a commitment to improving school climate, increasing student social-emotional support, or empowering the faculty and student body. In addition, each of the treatment schools had one or more teachers/administrators who advocated for the program and applied for a grant to bring it to their school. The six matched comparison schools are in the same public school districts as their corresponding institutions, and are structurally and demographically similar (see Table 4).

Table 4. Demographic Characteristics of Participating Schools (All Names are Pseudonyms)

Table 4.1. Kullen School District

School Name	Waterberry (Leader in Me)	Wright (Comparison)	Hill (Leader in Me)	Yuri (Comparison)
District	Kullen	Kullen	Kullen	Kullen
The Leader in Me or Comparison	The Leader in Me	Comparison	The Leader in Me	Comparison
Location	Large city in the north east	Large city in the north east	Large city in the north east	Large city in the north east
School Type	K-8	K-8	K-8	K-8
Grades Surveyed	4-8	4-8	4-8	4-8
Total Enrollment	292	458	564	541
Free/Reduced Lunch	83.5%	75.7%	89.9%	93.9%
African American	35.8%	34.1%	13.1%	11.9%
White	47.6%	50.2%	9.6%	29.4%
Asian	1.4%	1.1%	45%	35.0%
Latino	4.1%	3.1%	27.3%	16.8%
ELLs	1.0%	0.0%	42.2%	21.2%
4 th Grade Math Proficiency	88.5%	91.9%	46.5%	70.6%
4 th Grade ELA Proficiency	84.6%	89.2%	33.3%	62.7%
5 th Grade Math Proficiency	57.1%	63.8%	53.6%	56.7%
5 th Grade ELA Proficiency	62.0%	55.0%	24.0%	52.2%
Special Education: students with disabilities	20.1%	13.3%	11.3%	8.1%
Special Education: gifted	5.7%	2.4%	0.0%	0.9%

Table 4.2. *Everest School District*

School Name	Venture (<i>Leader in Me</i>)	Washington (Comparison)	Tully (<i>Leader in Me</i>)	Baker (Comparison)
District	Everest	Everest	Everest	Everest
The Leader in Me or Comparison	The Leader in Me	Comparison	The Leader in Me	Comparison
Location	Midsized city in the mid-Atlantic	Midsized city in the mid-Atlantic	Midsized city in the mid-Atlantic	Midsized city in the mid-Atlantic
School Type	PK-5	PK-5	PK-5	PK-5
Grades Surveyed	4-5	4-5	4-5	4-5
Total Enrollment	443	482	687	528
Free/Reduced Lunch	72%	66%	72%	68%
African-American	81%	74%	44%	56%
White	4%	9%	21%	26%
Asian	0%	2%	6%	0%
Latino	11%	9%	25%	12%
ELLs	Not available	Not available	Not available	Not available
4 th Grade Math Proficiency	82%	86%	55%	68%
4 th Grade ELA Proficiency	60%	64%	49%	62%
5 th Grade Math Proficiency	71%	74%	60%	55%
5 th Grade ELA Proficiency	66%	72%	69%	57%
Special Education: students with disabilities	Not available	Not available	Not available	Not available
Special Education: gifted	Not available	Not available	Not available	Not available

Table 4.3. *Ursa School District*

School Name	Orion (<i>Leader in Me</i>)	Potter (Comparison)	Nodes (<i>Leader in Me</i>)	Hayes (Comparison)
District	Ursa	Ursa	Ursa	Ursa
The Leader in Me or Comparison	The Leader in Me	Comparison	The Leader in Me	Comparison
Location	Rural; near a midsize city in the south east	Rural; near a midsize city in the south east	Rural; near a midsize city in the south east	Rural; near a midsize city in the south east
School Type	PK-5	PK-5	PK-5	K-5
Grades Surveyed	4-5	4-5	4-5	4-5
Total Enrollment	1024	733	845	698
Free/Reduced Lunch	84.4%	88.0%	94.0%	90.0%
African American	19%	17%	21%	1%
White	28%	22%	16%	15%
Asian	1%	1%	0%	1%
Latino	49%	55%	60%	82%
ELLs	9.5%	8.3%	19.9%	27.8%
4 th Grade Math Proficiency	48%	45%	39%	47%
4 th Grade ELA Proficiency	43%	36%	33%	42%
5 th Grade Math Proficiency	45%	57%	45%	58%
5 th Grade ELA Proficiency	43%	43%	35%	41%
Special Education: students with disabilities	12.1%	10.1%	15.0%	9.0%
Special Education: gifted	3.6%	2.3%	2.5%	8.6%

Quantitative Surveys

Surveys were administered to 4th and 5th grade students at all six *Leader in Me* schools as well as their matched comparison schools in the fall and spring of the 2014-15 school year. (These surveys were the same as the ones administered in the pilot study.)

The survey measured nonacademic areas that *The Leader in Me* claims to impact including youth voice, perceived levels of teacher and school support, self-efficacy, teamwork, and perseverance. Each of these survey measures is described in more detail

below and in Table 5. Cronbach's alpha from Time 1 and Time 2 is also reported for each measure below. I use Acock's (2013) alpha guidelines of $\alpha > .80$ as good reliability and $\alpha > .70$ as adequate reliability. Some of the alpha measures from this study fall into the $\alpha > .60$ range, which is also considered adequate with a study such as this with a large sample size that is not being used for high-stakes or psychometric purposes (Harbaugh, 2017, personal communication).

Social and Emotional Learning

Four of the scales used in the survey relate to social and emotional learning. They are grouped together below under the categories of Self-Efficacy (aligned with social awareness and self-management) and Values in Action Inventory: Teamwork & Perseverance (aligned with relationship skills and self-management).

Self-Efficacy

Two of the scales used in the survey relate to self-efficacy, or people's beliefs about their own capabilities to act (Bandura, 1991). These subscales are self-efficacy in enlisting social resources and self-efficacy for self-regulated learning (Bandura, 1990). These subscales are aligned with the *Leader in Me* habits of begin with the end in mind, and put first things first in that both of these habits encourage students to take initiative, plan ahead, and take action to achieve success. These measures are also aligned with two social and emotional competencies. Self-efficacy in enlisting social resources is aligned with the competency of social awareness in that it measures students' recognition of social supports and ability to ask for help. Self-efficacy for self-regulated learning is

aligned with the social and emotional competency of self management in that it measures the ability to regulate and manage one's learning. Both of the self-efficacy subscales are described below.

Self-Efficacy in Enlisting Social Resources

The self-efficacy in enlisting social resources subscale (Bandura, 1990) measures students' beliefs in their ability to access resources around them. It falls on a five-point Likert-type scale ranging from a 1 ("Not like me at all!") to a 5 ("A lot like me!") and includes questions such as, "I can get teachers to help me when I get stuck on schoolwork" and "I can get a friend to help me when I have a problem." Cronbach's alpha for this scale was .71 at Time 1 and .73 at Time 2.

Self-Efficacy for Self-Regulated Learning

The self-efficacy for self-regulated learning subscale (Bandura, 1990) measures students' perceptions of their own ability to regulate their learning practices. It falls on a five-point Likert-type scale ranging from a 1 ("Not like me at all!") to a 5 ("A lot like me!") and includes questions such as, "I always concentrate on school subjects during class" and "I can finish my homework assignments on time." Cronbach's alpha for this scale was .62 at Time 1 and .71 at Time 2.

Values in Action Inventory: Teamwork & Perseverance

The Values in Action Inventory for Youth (Park & Peterson, 2005) measures 24 character strengths, two of which were included in the present survey: teamwork and perseverance. Teamwork refers to one's ability to work together with a group, and perseverance refers to one's ability to be resilient in the face of challenges (Park &

Peterson, 2005). These scales are aligned with the following *Leader in Me* habits: synergize, think win-win, and seek first to understand, then to be understood. These measures are also aligned with social and emotional learning. Teamwork is aligned with relationship skills (i.e., the ability to work well with others) and perseverance is also aligned with self-management (i.e., the ability to work hard and motivate one's self). These Values in Action sub-scales are described below.

Teamwork and Group Loyalty

The teamwork and group loyalty subscale measures the extent to which youth work well in groups and value the experience. It includes 7 questions such as “If it is helpful I am always willing to do more work for our team” and “Even if I do not agree, I respect the ideas of others in my team.” The subscale falls along a five-point Likert-type scale ranging from a 1 (“Not like me at all!”) to a 5 (“A lot like me!”) and the Values in Action (VIA) Institute reports an alpha levels of .87 for the youth perseverance scale (VIA, 2016). Cronbach's alpha for this scale was .59 at Time 1 and .64 at Time 2.

Industry and Perseverance

The industry and perseverance subscale measures youth work ethic and ability to persevere in the face of challenge. It includes 8 questions such as “I keep at my homework until I am done with it” and “I keep trying even after I fail.” The subscale falls along a five-point Likert-type scale ranging from a 1 (“Not like me at all!”) to a 5 (“A lot like me!”), and the Values in Action (VIA) Institute reports an alpha levels of .85 for the teamwork scales (VIA, 2016). Cronbach's alpha for this scale was .70 at Time 1 and .75 at Time 2.

Youth Voice

Six of the scales used in the survey relate to youth voice and empowerment. The first four were originally developed as part of a pilot study (Mitra, 2013) measuring four areas considered to be related to youth voice: confidence, civic participation skills, value of group work, and communication skills. The fifth, the Quaglia Institute My Voice survey, is adapted from the Quaglia Institute My Aspirations Framework (Bundick, 2011; Quaglia & Corso, 2014; Quaglia, 2014; Quaglia, 2016), and the sixth is a student empowerment scale (Frymier, Shulman & Houser, 1996). These youth voice scales align with the following *Leader in Me* habits: be proactive, seek first to understand, then to be understood, and find your voice. Each of these six sub-measures of youth voice is described below.

Youth Voice - Confidence

The Youth Voice- Confidence subscale falls along a 5-point Likert-type scale ranging from a 1 (“No Way!”) to a 5 (“Yes!”) and measures confidence in the context of youth voice. It includes questions such as “I feel like I have a lot to be proud of” and “All in all, I am glad I am me.” Cronbach’s alpha for the Youth Voice – Confidence subscale was .70 at Time 1 and .80 at Time 2.

Youth Voice - Civic Participation Skills

The Youth Voice- Civic Participation subscale falls along a 5-point Likert-type scale ranging from a 1 (“No Way!”) to a 5 (“Yes!”) and measures civic participation skills in the context of youth voice. It includes questions such as “I make sure I understand what another person is saying before I respond” and “I make sure I

understand what another person is saying before I respond.” Cronbach’s alpha for the Youth Voice – Civic Participation subscale was .63 at Time 1 and .71 at Time 2.

Youth Voice – Value of Group Work

The Youth Voice- Value of Group Work subscale falls along a 5-point Likert-type scale ranging from a 1 (“No Way!”) to a 5 (“Yes!”) and measures the extent to which students value working in groups and how that connects to youth voice. It includes questions such as “I can learn more from working on group projects than from working alone” and “I like working with other people on group projects.” Cronbach’s alpha for the Youth Voice – Value of Group Work subscale was .60 at Time 1 and .65 for Time 2.

Youth Voice – Communication Skills

The Youth Voice- Communication Skills subscale falls along a 5-point Likert-type scale ranging from a 1 (“No Way!”) to a 5 (“Yes!”) and measures communication skills and their connection to youth voice. It includes questions such as “I try to watch other people’s faces and body language to understand what they are trying to say” and “I summarize what another person said to make sure I understand.” Cronbach’s alpha for the Youth Voice – Communication Skills subscale was .62 at Time 1 and .68 for Time 2.

Youth Voice: The Quaglia Institute My Voice Survey

The Quaglia Institute My Voice survey is a 63-question scale aligned to the Quaglia Institute My Aspirations Framework (Bundick, 2011; Quaglia & Corso, 2014; Quaglia, 2014; Quaglia, 2016). The survey measure administered for the present study is adapted from this survey and includes questions such as “Students help to make the school rules” measured on a five-point Likert-type scale ranging from a 1 (“No Way!”) to

a 5 (“Yes!”). Reliability (Cronbach’s alpha) for this scale was .54 at Time 1 and .65 for Time 2.

Youth Voice: Student Empowerment

The student empowerment scale (Frymier, Shulman & Houser, 1996) is adapted from a 35-item scale measuring three components of empowerment: impact, meaningfulness and competence. The survey used in this study is composed of a subset of 8 questions from the “impact” component and falls on a five-point Likert-type scale ranging from a 1 (“No Way!”) to a 5 (“Yes!”). The language was adapted slightly for some questions since the scale was originally tested on undergraduates. For example, the original scale includes the question, “I have freedom to choose among options in this class” while the present survey states, “I get to choose what happens in this class.” The internal consistency of the “impact” portion of the scale had a Cronbach’s alpha of .95 (Frymier, Shulman & Houser, 1996). Reliability (Cronbach’s alpha) for this scale was .69 at Time 1 and .71 for Time 2.

Teacher and School Support

Three of the scales used in the survey relate to student perceptions of teacher and school support. These areas are considered necessary preconditions for social-emotional learning and youth voice development (Brackett, Elbertson, & Rivers, 2017; Campbell, 2008; Carter, 2011; Deci & Ryan, 1985; Levinson, 2012a; Quaglia & Corso, 2014; Tough, 2016). The first is a school connectedness scale (Tyler & Degoey, 1995), the second is a classroom life scale (Van Ryzin et al. 2009) that measures student perceptions

of teacher academic support, and the third is a classroom life scale (Van Ryzin et al. 2009) that measures student perceptions of teacher personal support. These teacher and school support scales align with the *Leader in Me* habit ‘synergize’ as well as the goal of the program to create a unifying school culture in which the habits can be fostered and thrive. These three subscales of teacher and school support are described in turn below.

School Connectedness

The school connectedness scale (Tyler & DeGoey, 1995), measures how connected and included students feel at school. It falls on a five-point Likert-type scale ranging from a 1 (“No Way!”) to a 5 (“Yes!”) and includes questions such as, “I am happy to be at my school” and “I feel like I personally belong at my school.” Cronbach’s alpha for this scale was .79 at Time 1 and .84 at Time 2.

Classroom Life Scale: Teacher Academic Support

The classroom life scale: teacher academic support (Van Ryzin, Gravely & Roseth, 2009) measures student perceptions of teacher support in areas related to schoolwork and learning. It falls on a five-point Likert-type scale ranging from a 1 (“No Way!”) to a 5 (“Yes!”) and includes questions such as “My teacher wants me to do my best on my schoolwork” and “My teacher cares about how much I learn.” The original measure was administered on a four-point scale, but it was adapted to a five point Likert-type scale ranging from a 1 (“No Way!”) to a 5 (“Yes!”) to maintain consistency with the rest of the survey. Van Ryzin, Gravely and Roseth (2009) report Cronbach’s alpha of .90 and .91 in two stages of reliability testing for the overall classroom life scale; Cronbach’s alpha for this scale was .65 at Time 1 and .76 at Time 2.

Classroom Life Scale: Teacher Personal Support

The second classroom life scale, teacher personal support, (Van Ryzin, Gravely & Roseth, 2009) measures student perceptions of teacher support in personal areas. It falls on a five-point Likert-type scale ranging from a 1 (“No Way!”) to a 5 (“Yes!”) and includes questions such as “My teacher cares about my feelings” and “My teacher likes me as much as he/she likes other students.” The original measure was administered on a four-point scale, but it was adapted to a five point Likert-type scale ranging from a 1 (“No Way!”) to a 5 (“Yes!”) to maintain consistency with the rest of the survey. Van Ryzin, Gravely and Roseth (2009) report Cronbach’s alpha of .90 and .91 in two stages of reliability testing for the overall classroom life scale; Cronbach’s alpha for this scale was .71 at Time 1 and .82 at Time 2.

Table 5. *Survey Measures*

Survey Measure	Citation	Questions	# Items	Alpha T1	Alpha T2
Youth voice-confidence	Mitra, 2013	1. All in all, I am glad I am me 2. When I am an adult, I am sure I will have a good life 3. I feel like I have a lot to be proud of 4. All in all, I like myself	4	.70	.80
Youth voice-civic participation skills	Mitra, 2013	1. I make sure I understand what another person is saying before I respond 2. When I am listening to someone, I try to understand what they are feeling 3. I try to think how someone else would feel before I say something	3	.63	.71
Leadership & Youth Voice	Mitra, 2013	1. I can learn more from working on group projects than from working alone 2. I like working with other people on group projects 3. To solve most problems, I have to learn how to work with others	3	.60	.65
Youth voice-communication skills	Mitra, 2013	1. I summarize what another person said to make sure I understand 2. I try to think before I say something 3. I try to watch other people's faces and body language to understand what they are trying to say	3	.62	.68
Quaglia Institute My Voice Survey	Quaglia Institute, 2014	1. Students work with adults to find solutions to problems 2. Adults at this school listen to students' ideas 3. Students help to make the school rules 4. Adults and students work together to make our school better	4	.54	.65
Student empowerment Scale	Frymier, Shulman & Houser, 1996	1. My participation in class is important to my teacher 2. In my class, I often get to choose what type of schoolwork to work on	8	.69	.71

			3. I can change my teacher's mind			
			4. I have the power to make a difference in how things are done in my class			
			5. I help other students in the class to learn			
			6. I have the chance to make important decisions in this class			
			7. I get to choose what happens in this class			
			8. I feel appreciated in this class.			
	School connectedness Scale	Tyler & Degoey, 1995	1. I feel close to people at my school	5	.79	.84
			2. I feel like I am a part of my school			
			3. I am happy to be at my school			
			4. I feel like I personally belong at my school			
			5. I feel like an important part of my school			
Perceived School and Teacher Support	Classroom life scale- teacher academic support	Van Ryzin et al. 2009	1. My teacher wants me to do my best on my schoolwork	4	.65	.76
			2. My teacher likes to help me learn			
			3. My teacher likes to see my work			
			4. My teacher cares about how much I learn			
	Classroom life scale- teacher personal support sub-scale	Van Ryzin et al., 2009	1. My teacher likes me as much as he/she likes other students	4	.71	.82
			2. My teacher really cares about me			
			3. My teacher cares about my feelings			
			4. My teacher thinks it is important to be my friend			
	Self-efficacy in enlisting social resources	Bandura, 1990	1. I can get teachers to help me when I get stuck on schoolwork	4	.71	.73
			2. I can get a friend to help me when I have a problem			
			3. I can get adults to help me when I have a problem			
			4. I can get another student to help me when I get stuck on schoolwork			
Self-Efficacy	Self-efficacy scale for self-regulated learning	Bandura, 1990	1. I can finish my homework assignments on time	6	.62	.71
			2. I get myself to do school work			
			3. I always concentrate on school subjects during class			
			4. I plan my schoolwork for the day			

			5. I organize my school work			
			6. I sometimes skip my homework if there are other interesting things to do. (Reverse)			
	VIA Teamwork & group loyalty	Park & Peterson, 2005	1. I get frustrated when my team does not choose my idea (Reverse)	7	.59	.64
			2. I work really well with a group			
			3. When I disagree with someone, I have trouble finding a solution (Reverse)			
			4. I won't go along with a group decision if I don't agree with it (Reverse)			
			5. If it is helpful I am always willing to do more work for our team			
			6. I listen to others in our group when we make decisions			
			7. Even if I do not agree, I respect the ideas of others in my team			
Values in Action	VIA strengths survey for children- industry and perseverance	Park & Peterson, 2005	1. I keep at my homework until I am done with it	8	.70	.75
			2. Whenever I do something, I put all my effort into it			
			3. If my schoolwork is hard I give up easily (Reversed)			
			4. I keep trying even after I fail			
			5. I am a hard worker			
			6. I sometimes skip my responsibilities at school or home (Reversed)			
			7. I sometimes put work off until tomorrow (Reversed)			
			8. People can count on me to get things done			

Qualitative Interviews

In order to understand *The Leader in Me* from the perspective of its participants, I visited each treatment school for one full day in the spring of 2015. I conducted on-site semi-structured qualitative interviews (Seidman, 1991) with thirty-six randomly selected 4th and 5th grade students and twelve randomly selected teachers (who work with 4th and 5th graders) and administrators in the treatment schools (see Table 6 below for students and teachers interviewed at each school). Students and teachers agreed to participate through informed consent permission forms for student parents or guardians, and through informed consent forms for teachers and administrators.

Interviews lasted an average of approximately 30 minutes each and focused on interviewees' perceptions of the impact of *The Leader in Me* on students' social and emotional learning and student voice and empowerment. I informed interviewees that we were conducting a study of *The Leader in Me* program, trying to understand how it was impacting participating students, teachers and schools. They were specifically told that I was not a representative of *The Leader in Me*, and that my role was to learn more about the program from their perspective. Some examples of questions for students include, "Tell me about one way one of the 7 Habits has come up recently during your school day" and "Tell me about a way in which your teacher encourages you and your classmates to be leaders" and "What does the habit ___ mean to you? How does it come up in your life?" and (if the student felt positively about the program), "Why do you think *The Leader in Me* is working?" Interview questions for teachers included questions such as, "How do you feel like *The Leader in Me* has impacted your teaching?" and "Has *The*

Leader in Me impacted the way you think about students?” and “Tell me about the impact *The Leader in Me* approach has had on the culture of your school.” The semi-structured protocol (Seidman, 1991) allows for questions more tailored to the individual schools, and they were deliberately conducted with students, teachers and administrators in order to get a thorough understanding of the program’s influence, and to consider the extent to which their perspectives and experiences were similar or distinct. The semi-structured interview protocol used for both students and teachers is included in Appendix A and Appendix B.

Table 6. *Interviews, 2014–15*

District	School	Students	Teachers	Principal	Total
Kullen School District	Hill	4	1	1	6
	Waterberry	0	1	1	2
Everest School District	Tully	8	2	1	11
	Venture	7	2	1	10
Ursa School District	Orion	7	0	0	7
	Nodes	10	2	0	12
	Total	36	8	4	48

Data Analysis

Below I describe the quantitative data analysis followed by an explanation of how I analyzed the qualitative data.

Quantitative Data Analysis

The following independent variables were collected at Time 1 and Time 2 for students at all 12 participating schools: school district, school attended, classroom, grade, and gender. Time 2 scores on each measure served as the dependent variables, with

school attended (i.e., *Leader in Me* school or comparison school) as the primary independent variable of interest.

To analyze the data, I first matched student surveys from Time 1 to Time 2. Students were asked a series of questions that maintained their anonymity, but that allowed for matching the fall baseline surveys to the end-of-year spring surveys. After this matching process, 466 student surveys were dropped from Time 1 and 688 student surveys were dropped from Time 2 because they did not have a matched survey.

I then reviewed the survey responses and deleted disingenuous cases and incomplete surveys. Disingenuous cases were evaluated based primarily on the questions asked to match students (i.e., number of siblings), and surveys were considered incomplete if they were missing more than 1/3 of the responses. After dropping cases with no match as described above, only 3 additional cases were dropped from the data set because of disingenuous responses. After these omissions, the final data set included 982 student surveys at Time 1 and 982 matched student surveys at Time 2 (the same students). For participants missing some data, but fewer than 1/3 of responses, I employed maximum likelihood estimation (Rabe-Hesketh & Skrondal, 2012).

In order to ensure the reliability of each of the measures, I ran Cronbach's Alpha for each measure using Stata to see how well the constructs are being evaluated. I use Acock's (2013) alpha guidelines of $\alpha > .80$ as good reliability and $\alpha > .70$ as adequate reliability. Some of the alpha measures from this study fall into the $\alpha > .60$ range, which is also considered adequate with a study such as this with a large sample size that is not being used for high-stakes or psychometric purposes (Harbaugh, 2017, personal

communication). It is also important to note that I will evaluate the impact of *The Leader in Me* on each composite measure separately, and not as an overall composite outcome.

As participating students are members of 78 classrooms within their respective schools, I analyzed the data using multilevel modeling (Robson & Pevalin, 2016). In these analyses, Time is a level one grouping variable, students are level two grouping variables, and classroom is a level three grouping variable. To first confirm the appropriateness of this approach, I first ran a null model for each measure. I then ran analyses to find the intraclass correlation coefficient (ICC) for each measure, using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. As I will outline in the results section, only two measures met this threshold to justify using classroom as a grouping variable: the Teacher Personal Support scale and the Empowerment scale. For all others, the final models used Time as a level one grouping variable and students as a level two grouping variable (with grade, gender, and treatment as fixed variables at level two).

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment (a binary variable indicating if a school was a *Leader in Me* school or a matched comparison school); grade, gender and time; an interaction term of treatment*time. I reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were dropping, indicating a model with better fit (Robson & Pevalin, 2016). I then followed the same steps using a random coefficient model, also comparing this model to the previous random intercept model using

likelihood ratio tests and reviewing the AIC and BIC to determine the best model to use.

As I will describe in the results, 9 measures used a random coefficient model and 4 measures used a random intercept model. The equations that follow reflect the different models used.

Random Intercept with Two Levels

$$Y = \beta_0 + \beta_1 Treatment_j + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Treatment_j * Time_i + \mu_j + \varepsilon_{ij}$$

β_0 is the intercept parameter (representing the average score of the dependent variable of interest at Time 1)

β_1 represents the time-invariant Level-2 predictor, treatment, on the outcome

β_2 represents the time-varying Level-1 predictor, time

β_3 and β_4 represent the effects of Level-2 demographic predictors, grade and gender, on the outcome

β_5 represents the interaction between time at Level-1 and the treatment predictor at Level-2

μ_j represents student – level random intercepts

ε_{ij} represents level-1 residual error

i=occasion

j=student

Random Intercept with Three Levels

$$Y = \beta_0 + \beta_1 Treatment_k + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Treatment_k * Time_i + \mu_{jk} + \mu_k + \varepsilon_{ijk}$$

β_0 is the intercept parameter (representing the average score of the dependent variable of interest at Time 0)

β_1 represents the time-invariant Level-3 predictor, treatment, on the outcome

β_2 represents the time-varying Level-1 predictor, time

β_3 and β_4 represent the effects of Level-2 demographic predictors, grade and gender, on the outcome

β_5 represents the interaction between time at Level-1 and the treatment predictor at Level-2

μ_{jk} represents student – level random intercepts

μ_k represents classroom – level random intercepts

ε_{ijk} represents level-1 residual error

i=occasion

j=student

k=classroom

Random Coefficient with Two Levels

$$Y = \beta_0 + \beta_1 Treatment_j + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Treatment_j * Time_i + \mu_{1j} + \mu_{2j} Time_{ij} + \varepsilon_{ij}$$

B_0 is the intercept parameter (representing the average score of the dependent variable of interest at Time 0)

B_1 represents the time-invariant Level-2 predictor, treatment, on the outcome

B_2 represents the time-varying Level-1 predictor, time

B_3 and B_4 represent the effects of Level-2 demographic predictors, grade and gender, on the outcome

B_5 represents the interaction between time at Level-1 and the treatment predictor at Level-2

μ_{1j} represents student – level random intercept

μ_{2j} represents student – level random slope

ε_{ij} represents level-1 residual error

i=occasion

j=student

The random coefficient model allows for variability of growth trajectories at the student level because children may vary in their individual rate of growth on these measures.

Random Coefficient with Three Levels

$$Y = \beta_0 + \beta_1 Treatment_j + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Treatment_j * Time_i + \mu_{1jk} + \mu_{2jk} Time_{ij} + \mu_k + \varepsilon_{ijk}$$

B_0 is the intercept parameter (representing the average score of the dependent variable of interest at Time 0)

B_1 represents the time-invariant Level-2 predictor, treatment, on the outcome

B_2 represents the time-varying Level-1 predictor, time

B_3 and B_4 represent the effects of Level-2 demographic predictors, grade and gender, on the outcome

B_5 represents the interaction between time at Level-1 and the treatment predictor at Level-2

μ_{1jk} represents student – level random intercept

μ_{2jk} represents student – level random slope

μ_k represents classroom – level random intercept

ε_{ijk} represents level-1 residual error

i=occasion

j=student

k=classroom

The random coefficient model allows for variability of growth trajectories at the student level because children may vary in their individual rate of growth on these measures.

Once each model had been determined, I calculated the R^2 to demonstrate the amount of variance explained by the covariates in these final models of interest.

Following the recommendations of Rabe-Hesketh & Skrondal (2012), I calculated R^2 using the following equation:

$$R^2 = \frac{[\varphi_0 + \theta_0] - [\varphi_1 + \theta_1]}{\varphi_0 + \theta_0}$$

Where φ_0 and θ_0 are the residual estimates for the null model and φ_1 and θ_1 are the residual estimates for the model of interest. For random coefficient models I used the residual estimates from the closest random intercept models, following the recommendation of Snijders and Bosker (2012).

Finally, I calculated the prediction intervals for time for all random coefficient models by using the following formula put forth by Robson and Pevalin (2016):

$$\text{Time coefficient} \pm (1.96) (\text{sd time}).$$

For all random intercept models, I calculated the prediction intervals for the intercept using the following formula, also recommended by Robson and Pevalin (2016):

$$\text{Intercept} \pm (1.96) (\text{sd_cons})$$

Fidelity Data Analysis

Fidelity scores were also assigned to each school by *The Leader in Me* training staff based on a rubric designed by the organization. Each school received a score of 1-5

on the following measures: Lighthouse team, leadership environment, integrated instruction and curriculum, staff collaboration, student leadership, parent involvement, leadership events, and goal tracking. Fidelity scores were averaged so as to assign each treatment school with a single fidelity score (see Table 7.1). I then calculated the mean (3.04) and standard deviation (.73) of all fidelity scores so that I could include low fidelity (one standard deviation below the mean) and high fidelity (one standard deviation above the mean) in the equations (see Table 7.2). The variable Fidelity as well as an interaction term of Fidelity*Time were added to the model as a student-level variable (or classroom-level variable, depending on the model used for each measure).

Table 7.1. *Average Fidelity*

School	Average Fidelity
Hill	2.25
Waterberry	2.75
Orion	3.25
Nodes	4.375
Venture	2.875
Tully	2.75

Table 7.2. *Mean, Low & High Fidelity*

Mean Fidelity	3.04
Standard Deviation	0.73
Low Fidelity	2.31
High Fidelity	3.77

Fidelity models were kept separate from the models described above for one primary reason. As I will discuss in more detail in the discussion, the fidelity rubric used by *The Leader in Me* in 2014-15, and used in the present study, is not directly aligned with the implementation framework put forth by *The Leader in Me* (see Figure 2). That is, the fidelity measure employed is useful in that it allows for additional insight into the

extent to which *Leader in Me* schools integrated a Lighthouse team, leadership environment, integrated instruction and curriculum, staff collaboration, student leadership, parent involvement, leadership events, and goal tracking, and the ways in which this may have impacted student outcomes. However, the rubric does not give sufficient insight into the degree to which schools actually implemented the program in the way that the framework suggests. Thus, the present fidelity measure is useful to an extent, but because of its design, it seemed prudent to keep the analysis separate.

Comparison schools were not assigned a fidelity score, and therefore simply assigning a fidelity score of “0” would not accurately reflect the absence of the program versus the presence of a program with differing degrees of fidelity. As such, I took the approach described below.

First I created a variable Comparison, which was a reverse code of the variable Treatment. That is, while Treatment was coded 1 for *Leader in Me* schools and 0 for comparison schools in the original models, in the fidelity models, the variable Comparison was coded 1 for comparison schools and 0 for *Leader in Me* schools. This allowed me to assign a fidelity score of 0 to these schools while also retaining school information for the comparison schools in the equations. I use the measure of Self-Efficacy in Enlisting Social Resources (in which I used a random intercept model with time and student as level-one and level-two grouping variables, respectively) below to illustrate how the equations allow for this and why a Comparison variable that is the reverse of the treatment variable is needed. All other fidelity equations are outlined following this illustration.

Equation for Self-Efficacy in Enlisting Social Resources with Fidelity:

$$Y = \beta_0 + \beta_1 \text{Comparison}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Comparison}_j * \text{Time}_i + B_6 \text{Fidelity}_j + B_7 \text{Fidelity}_j * \text{Time}_i + \mu_j + \varepsilon_{ij}$$

B_0 is the intercept parameter (representing the average score of the dependent variable of interest—in this case Self Efficacy in enlisting social resources— at Time 0)

B_1 represents the time-invariant Level-2 predictor, comparison, on the outcome

B_2 represents the time-varying Level-1 predictor, time

B_3 and B_4 represent the effects of Level-2 demographic predictors, grade and gender, on the outcome

B_5 represents the interaction between time at Level-1 and the Comparison predictor at Level-2

B_6 represents the time-invariant Level-2 predictor Fidelity

B_7 represents the interaction between time at Level-1 and the Comparison predictor at Level-2

μ_j represents student – level random intercepts

ε_{ij} represents level-1 residual error

i=occasion

j=student

Note:

High Fidelity for *Leader in Me* schools=3.77 (one standard deviation above the mean)

Low Fidelity for *Leader in Me* schools=2.31 (one standard deviation below the mean)

Fidelity for comparison schools = 0.

I calculate the outcome variable below for when Gender equals 0 (female) and Grade equals 0 (4th grade):

Self Efficacy Resource

$$= \beta_0 + \beta_1 \text{Comparison}_j + \beta_2 \text{Time}_i + \beta_5 \text{Comparison}_j * \text{Time}_i + B_6 \text{Fidelity}_j + B_7 \text{Fidelity}_j * \text{Time}_i + \mu_j + \varepsilon_{ij}$$

Comparison Schools (Comparison=1) at Time=0 Fidelity=0

$$= 3.60 + (0.64)(1) + (0.34)(0) + (-0.41)(1)(0) + (0.24)(0) + (-0.17)(0)(0) = 4.24$$

Comparison Schools (Comparison=1) at Time=1 Fidelity=0

$$= 3.60 + (0.64)(1) + (0.34)(1) + (-0.41)(1)(1) + (0.24)(0) + (-0.17)(0)(0) = 4.17$$

Low Fidelity (2.30) at *Leader in Me* schools (Comparison=0) at Time=0
 $= 3.60 + (0.64)(0) + (0.34)(0) + (-0.41)(0)(0) + (0.24)(2.30) + (-0.17)(2.30)(0) = 4.15$

Low Fidelity (2.30) at *Leader in Me* schools (Comparison=0) at Time=1
 $= 3.60 + (0.64)(0) + (0.34)(1) + (-0.41)(0)(1) + (0.24)(2.30) + (-0.17)(2.30)(1) = 4.10$

High Fidelity (3.66) at *Leader in Me* schools (Comparison=0) at Time=0
 $= 3.60 + (0.64)(0) + (0.34)(0) + (-0.41)(0)(0) + (0.24)(3.66) + (-0.17)(3.66)(0) = 4.48$

High Fidelity (3.66) at *Leader in Me* schools (Comparison=0) at Time=1
 $= 3.60 + (0.64)(0) + (0.34)(1) + (-0.41)(0)(1) + (0.24)(3.66) + (-0.17)(3.66)(1) = 4.20$

If I had simply added the Fidelity and Fidelity*Time variables to the original equations (without switching a Comparison variable for a Treatment variable), then no school information would have been taken into account at the comparison schools:

Self Efficacy Resources

$$= \beta_0 + \beta_1 Treatment_j + \beta_2 Time_i + \beta_5 Treatment_j * Time_i + B_6 Fidelity_j + B_7 Fidelity_j * Time_i + \mu_j + \epsilon_{ij}$$

Comparison Schools (Treatment=0) at Time=0 Fidelity=0

$$= B_0 + B_1 (0) + B_2 (0) + B_3 (0)(0) + B_4 (0) + B_5 (0)(0) = B_0$$

Comparison Schools (Treatment=0) at Time=1 Fidelity=0

$$= B_0 + B_1 (0) + B_2 (1) + B_3 (0)(1) + B_4 (0) + B_5 (0)(1) = B_0 + B_2 Time$$

In this scenario, only the intercept (the average of all dependent variable scores at Time=0) is taken into account at Time=0, and only the intercept and time coefficient is included in Time=1. Furthermore, it is not accurate to assign a fidelity score of zero in this case because that would represent a low fidelity score (which isn't even included on the fidelity rubric used by *The Leader in Me*). In the equations I ultimately used, on the other hand, a fidelity score of zero indicates the absence of fidelity score, as opposed to a low one. In addition, the final equations consider the impact of the Comparison school in relation to *Leader in Me* schools at varying levels of fidelity.

Moving forward with this approach, when adding the fidelity and fidelity*time variables into the final equations, I again used both random intercept and random coefficient models depending on which approach was found to be the best fit. Below are the four equations used for the fidelity models.

Fidelity Model: Random Intercept with Two Levels

$$Y = \beta_0 + \beta_1 \text{Comparison}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Comparison}_j * \text{Time}_i + B_6 \text{Fidelity}_j + B_7 \text{Fidelity}_j * \text{Time}_i + \mu_j + \varepsilon_{ij}$$

B_0 is the intercept parameter (representing the average score of the dependent variable of interest at Time 1)

B_1 represents the time-invariant Level-2 predictor, comparison, on the outcome

B_2 represents the time-varying Level-1 predictor, time

B_3 and B_4 represent the effects of Level-2 demographic predictors, grade and gender, on the outcome

B_5 represents the interaction between time at Level-1 and the comparison predictor at Level-2

B_6 represents the time-invariant Level-2 predictor Fidelity

B_7 represents the interaction between time at Level-1 and the comparison predictor at Level-2

μ_j represents student – level random intercept

ε_{ij} represents level-1 residual error

i=occasion

j=student

Fidelity Model: Random Intercept with Three Levels

$$Y = \beta_0 + \beta_1 \text{Comparison}_k + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Comparison}_k * \text{Time}_i + B_6 \text{Fidelity}_j + B_7 \text{Fidelity}_j * \text{Time}_i + \mu_{jk} + \mu_k + \varepsilon_{ijk}$$

B_0 is the intercept parameter (representing the average score of the dependent variable of interest at Time 0)

B_1 represents the time-invariant Level-3 predictor, comparison, on the outcome

B_2 represents the time-varying Level-1 predictor, time

B_3 and B_4 represent the effects of Level-2 demographic predictors, grade and gender, on the outcome

B_5 represents the interaction between time at Level-1 and the comparison predictor at Level-2

B_6 represents the time-invariant Level-2 predictor Fidelity

B_7 represents the interaction between time at Level-1 and the comparison predictor at Level-2

μ_{jk} represents student – level random intercepts
 μ_k represents classroom – level random intercepts
 ε_{ijk} represents level-1 residual error
i=occasion
j=student
k=classroom

Fidelity Model: Random Coefficient with Two Levels

$$\begin{aligned}
 Y = & \beta_0 + \beta_1 \text{Comparison}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Comparison}_j \\
 & * \text{Time}_i + B_6 \text{Fidelity}_j + B_7 \text{Fidelity}_j * \text{Time}_i + \mu_{1j} + \mu_{2j} \text{Time}_{ij} \\
 & + \varepsilon_{ij}
 \end{aligned}$$

B_0 is the intercept parameter (representing the average score of the dependent variable of interest at Time 0)

B_1 represents the time-invariant Level-2 predictor, comparison, on the outcome

B_2 represents the time-varying Level-1 predictor, time

B_3 and B_4 represent the effects of Level-2 demographic predictors, grade and gender, on the outcome

B_5 represents the interaction between time at Level-1 and the comparison predictor at Level-2

B_6 represents the time-invariant Level-2 predictor Fidelity

B_7 represents the interaction between time at Level-1 and the comparison predictor at Level-2

μ_{1j} represents student – level random intercept

μ_{2j} represents student – level random slope

ε_{ij} represents level-1 residual error

i=occasion

j=student

The random coefficient model allows for variability of growth trajectories at the student

level because children may vary in their individual rate of growth on these measures.

Fidelity Model: Random Coefficient with Three Levels

$$\begin{aligned}
 Y = & \beta_0 + \beta_1 \text{Comparison}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Comparison}_j \\
 & * \text{Time}_i + B_6 \text{Fidelity}_j + B_7 \text{Fidelity}_j * \text{Time}_i + \mu_{1jk} + \mu_{2jk} \text{Time}_{ij} \\
 & + \mu_k + \varepsilon_{ijk}
 \end{aligned}$$

B_0 is the intercept parameter (representing the average score of the dependent variable of interest at Time 0)

B_1 represents the time-invariant Level-2 predictor, comparison, on the outcome

B_2 represents the time-varying Level-1 predictor, time

B_3 and B_4 represent the effects of Level-2 demographic predictors, grade and gender, on the outcome

B_5 represents the interaction between time at Level-1 and the comparison predictor at Level-2

B_6 represents the time-invariant Level-2 predictor Fidelity

B_7 represents the interaction between time at Level-1 and the comparison predictor at Level-2

μ_{1jk} represents student – level random intercept

μ_{2jk} represents student – level random slope

μ_k represents classroom – level random intercept

ε_{ijk} represents level-1 residual error

i =occasion

j =student

k =classroom

The random coefficient model allows for variability of growth trajectories at the student level because children may vary in their individual rate of growth on these measures.

Qualitative Data Analysis

Qualitative interview data was analyzed using a thematic analysis approach (Bazeley, 2013; Braun & Clarke, 2013; Miles, Huberman & Saldaña, 2014). Each interview was audio recorded, and then transcribed verbatim by myself and two undergraduate research assistants. During this process of interviewing and transcribing, I wrote memos to note common themes (such as student empowerment/ownership, inconsistent understanding of the habits, and behavior) and the research assistants noted common trends as they transcribed (such as the program's emphasis on individualism). Based on the interviews, memos, extant literature, pilot data results, and stated program outcomes, I developed a codebook of both etic and emic codes to find common themes in the data (Appendix C). More specifically, using MAXQDA (a qualitative data analysis software), I first read through the interviews and coded with broad descriptive codes

(Miles, Huberman & Saldaña, 2014) from within the data such as culture, teacher messaging, overall impression. I then read through the transcripts again to identify more specific codes drawing from both theoretical perspectives (etic codes such as “voice” and “social and emotional learning”) and codes identified in the transcripts (emic codes such as “roadblocks to implementation” and “leadership roles”) (Miles, Huberman & Saldaña, 2014).

To increase coding validity, I asked one research assistant to also code a subset of the interviews (approximately one interview per school for a total of 7 interviews). We compared codes and discussed and recoded until our findings were consistent. Any initial inconsistencies and subsequent conversations were used to inform the remaining coding. For example, if the research assistant and I coded an excerpt differently, we discussed why this was the case, heard each other’s perspectives, and used the consensus we agreed upon to align similar inconsistencies. I then read through all transcripts again to ensure that coding was aligned with our conversations and to confirm all codes. Finally, I reviewed all of the descriptive codes and identified patterns using thematic analysis (Bazeley, 2013; Braun & Clarke, 2013; Miles, Huberman & Saldaña, 2014). I then used the resulting final codebook (see Appendix C) to identify and sort themes. Throughout the coding process I analyzed the interviews while engaging in constant comparative analysis (Charmaz, 2006; Glaser & Strauss, 1967) to see how the data might inform the codes. For example, if I identified a new code or theme in the data, I updated the codebook accordingly and reviewed previously read data to see if any codes needed updating.

When I began to notice a pattern that students seemed to be interpreting and understanding *The Leader in Me* in somewhat conflicting ways, I took the following steps to see if this was actually the case. First, I had already coded each of the seven habits (whether they were asked about directly or brought up in any context), so I used a function in MAXQDA (2016) to export all references to each habit into separate spreadsheets so that I had a single spreadsheet for each habit. I then re-read each student and teacher comment and summarized the ways in which they were talking about each habit. I recorded these summaries in an additional column on the spreadsheet. I then created a new excel tab with the students and summaries on the y axis and common themes in a row on the top of the spreadsheet (on the x axis). I then revisited the definitions provided by *The Leader in Me* and added each element of the definition to the x-axis if it was not already present. I then highlighted cells on the resulting spreadsheet matrix to note how often each theme was mentioned.

For example, for the habit seek first to understand then to be understood, I first used MAXQDA (2016) to export all 41 coded references to that habit to an excel spreadsheet. I then reread each response and recorded a brief summary of each student's explanation of the habit. For example, Lance, a 5th grader at Venture Elementary School said that to him, seek first to understand then to be understood means,

You're gonna tell – you're like – if you're mad like, if you're in a conflict with somebody, you're gonna tell – first you're, it's either you or the other person. You gotta say something like, I don't like what you're saying about me or something like that. And then – they – you want them to understand you and then you'll –

then you'll understand them. And then the conflict will be over.

A summary of this response was recorded as, “if in a conflict, you want them to understand you and then you'll understand them, and then the conflict will be over.”

Next I created a new tab with the students and their summaries on the y-axis, and common themes of student responses on the x-axis. For example, three of the most common ways that students spoke about seek first to understand then to be understood were listen to what others have to say, listen then talk, and speaking about perspective taking and/or understanding other people. These three themes were examples of what were added to the top row (x-axis) of the spreadsheet. I then revisited *The Leader in Me*'s definition of seek first to understand then to be understood—“Listen before you talk; I listen to other people's ideas and feelings. I try to see things from their viewpoints. I listen to others without interrupting. I am confident in voicing my ideas. I look people in the eyes when talking” (*The Leader in Me*, 2016) – and added any missing components of the definition to the x-axis. I then reread all student responses, compared them to the habit's definitions, and highlighted cells on the resulting matrix to record how often each theme/definition component was mentioned. See Appendix D for spreadsheet examples for seek first to understand then to be understood.

I followed this same procedure to analyze the different ways that students answered the question, “What does it mean to you to be a leader?” Finally, I followed a similar procedure when analyzing the alignment of the program with the five social and emotional competencies (self awareness, self management, social awareness, relationship skills, and responsible decision-making) and the alignment of the program with my

definition of youth voice. For example, for social and emotional learning, I again exported all comments aligned to each competency in a separate spreadsheet and noted the commonalities in the ways in which students and teachers saw *The Leader in Me* as bolstering aspects of students' social and emotional learning and youth voice development.

Miles, Huberman and Saldaña (2014) outline thirteen steps that can be taken to mitigate bias in qualitative research and analysis. I took steps to address as many of these as possible including checking for representativeness and researcher effects, triangulating data, considering the meaning of outliers, including extreme cases, searching for negative evidence, and considering rival explanations (Miles, Huberman and Saldaña, 2014, pp. 294-310). For example, in order to mitigate researcher effects I altered my interview style early in the study's process. A few early interviews involved my asking the students to define each of the habits in their own words. Sensing from one or two students that it felt quiz-like (i.e., discomfort if they didn't know one), I subsequently changed my approach. First, I phrased the question as, "I've read the book and I've seen what the habits mean on paper, but I really want to understand what they mean from your point of view. So for example, 'think win-win' what does that mean to you?" Second, I only asked about 2-3 of the habits to get a sampling from each student, rather than asking about all 7. Finally, for all interviews, I presented myself as learning about the program, not associated with *The Leader in Me* (which seemed to put the teachers in particular at ease), and just trying to understand how the program works from the people who knew it better than I did. The purpose of this was to position the students and teachers as the ones who knew about the

program and as more knowledgeable.

Second, to triangulate the data, I included quantitative data as well as qualitative data from multiple parties including students, teachers, and administrators. I analyzed each of these data sources keeping in mind the perspectives and results from each. Next, to consider the meaning of outliers, I reviewed the data to look not only for common themes, but also for responses that seemed inconsistent with the others. For example, a teacher at Waterberry Elementary School (Ms. Lewis) spoke about a school-wide initiative to align their school's mission with *The Leader in Me*'s framework. This was the only example of its kind, which highlighted not only its potential impact at Waterberry, but also the absence of this kind of approach at the other schools. Finally, even when I identified themes that seemed clear at first, I searched for negative evidence and considered rival explanations to ensure that I was not reinforcing an idea that was not backed by the data.

Limitations

I outline important study limitations below organized by study design, quantitative limitations, and qualitative limitations.

Study Design Limitations

There are two primary limitations to this dissertation related to the design of the study. The first relates to school selection: the treatment schools were selected in part because they had chosen to adopt *The Leader in Me*, and in part because they agreed to participate in the study. Comparison schools from the same districts were chosen because of their locations and demographic similarities to the treatment schools. As such, *The*

Leader in Me was not randomly assigned, leading to the possibility of unobserved differences between the *Leader in Me* and comparison schools, including potential priming of target schools given their desire to implement the program. This project works to account for this limitation by carefully selecting comparison schools from within the same districts as the treatment schools (see method section) taking into account school size, racial composition, English Language Arts test scores, Math test scores, and percentage of English Language Learners. Next, *The Leader in Me* is designed for implementation over a few years, and this study considers its impact over the course of a single (and first) year of implementation. This restricted time frame limits how much growth we may be able to observe at each school as a result of *The Leader in Me*.

Quantitative Limitations

A primary quantitative limitation relates to potential “reference bias” in the student surveys. As mentioned in the ‘Measuring Social Emotional Learning’ section in chapter 2, scholars have argued that self-report measures are susceptible to “reference bias” (Heine, Lehman, Peng, & Greenholtz, 2002; Duckworth and Yeager, 2015). Reference bias refers to the idea that survey respondents complete self-report questionnaires within their contextual frames of reference, which can skew results (Duckworth & Yeager, 2015). For example, a study of KIPP students who spent more time on homework and who had higher test scores than students at a matched control school found that these KIPP students did not score higher than their matched peers on the self-report question “I come to class prepared” (Tuttle et al., 2013 as cited in Duckworth & Yeager, 2015), suggesting that these KIPP students had set higher

standards for themselves as a result of this “reference bias.” In analyzing the quantitative data it will be important to consider the possibility that students at *Leader in Me* schools may become more critical consumers about the measures in question (e.g. students may be exposed to the idea of “put first things first” and subsequently realize that they could be working harder to do their homework before they hang out with their friends, and may subsequently rate themselves lower than before program implementation). Although the quantitative survey did not account for reference bias, the study’s mixed-methods approach and interviews with multiple stakeholders aims to give a holistic overview of the influence of *The Leader in Me*. This idea of reference bias is also addressed in the discussion.

Qualitative Limitations

This dissertation has two primary qualitative limitations. First, I did not visit the matched comparison schools or conduct interviews with students, teachers or administrators there. I therefore do not have information on the “business as usual” practices there related to social and emotional learning and youth voice. Next, though I was able to stop into a few classrooms informally on most of the school visits, I did not conduct formal classroom observations, which would have informed qualitative analysis and contributed to my ability to triangulate the data. I aim to compensate for these limitations through the triangulation of data from surveys, as well as student, teacher, and administrator interviews. Next, though I asked that interviewed students be selected at random, a number of these students were representatives from the student lighthouse team. These students were likely more familiar with and in favor of the program than

other students not on the lighthouse team. Finally, largely as a result of logistics, student and teacher interviews were not evenly distributed across the six treatment schools, potentially giving more attention to some schools over others. I aim to compensate for this by reporting data across all schools, and not limiting my reports to schools with a higher number of interviews.

Chapter Four: Results

As I will describe in more detail below, there was a significant, negative interaction effect of treatment*time on eight of thirteen measures for students attending *Leader in Me* schools as compared to students attending matched comparison schools. There was also a significant, negative treatment effect for one additional measure (teamwork) for students attending *Leader in Me* schools. Of these nine measures, three are aligned with social and emotional competencies: teamwork (aligned with relationship skills), self-efficacy in self-regulated learning (aligned with self management), and self-efficacy in enlisting social resources (aligned with social awareness). Four of these measures are related to youth voice: voice-civic participation skills, voice-value of group work, voice-communication, and youth empowerment. Two of these measures are related to overall school support: teacher personal support and school connectedness.

As I will also describe below, the student, teacher and administrator interviews help to explain these results. In terms of the program's impact on social and emotional learning, students did speak of the 7 habits in ways that demonstrate awareness and application of the social and emotional competencies, but they also had varying levels of understanding of the habits themselves, ranging from comprehensive understanding to complete confusion. In regards to the program's impact on youth voice, some students and teachers did speak about some ways in which *The Leader in Me* fosters youth voice and empowerment, but other student responses suggest that the program is not having this effect at all, and that students are actually conceptualizing leadership and voice as being quiet and behaving.

The sections below describe these results in greater detail. I first report the descriptive statistics. I then describe the statistical analyses for building the multilevel models for each measure. Next, I report on the findings from the final models used for each measure. The next section analyzes the impact of a fidelity measure on outcome results. I conclude this section by describing the qualitative findings that help to explain these quantitative results.

Quantitative Results

Descriptive Statistics

The descriptive statistics for all participating students (in the 6 *Leader in Me* and 6 comparison schools) are presented in Table 8. Two trends are notable from these descriptive statistics. The first is that all of the scores (at both *Leader in Me* and comparison schools) decrease from Time 1 to Time 2. The second pattern is that the scores for *Leader in Me* students show sharper declines from Time 1 to Time 2. These patterns are explored further through multilevel model analyses in the sections below.

Table 8. *Descriptive Statistics*

	Voice-confidence		Voice-civic participation		Voice- value of group	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Comparison	4.60 (.62)	4.50 (.75)	4.28 (.78)	4.15 (.82)	4.25 (.83)	4.16 (.87)
TLIM	4.63 (.53)	4.51 (.69)	4.32 (.73)	4.06 (.80)	4.28 (.80)	4.04 (.95)
	Voice-communication		Empowerment		Quaglia: My voice	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Comparison	4.12 (.81)	4.00 (.87)	3.25 (.72)	3.12 (.71)	3.96 (.76)	3.68 (.84)
TLIM	4.11 (.84)	3.84 (.91)	3.26 (.71)	3.03 (.70)	3.96 (.74)	3.63 (.86)
	School connectedness		Teacher academic support		Teacher personal support	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Comparison	4.07 (.85)	3.98 (.95)	4.82 (.38)	4.73 (.49)	4.48 (.70)	4.33 (.86)
TLIM	4.04 (.86)	3.81 (1.01)	4.78 (.43)	4.70 (.54)	4.42 (.72)	4.10 (.99)
	Self-efficacy in enlisting social resources		Self-efficacy in self-regulated learning		Teamwork	
	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Comparison	4.16 (.76)	4.09 (.78)	4.09 (.68)	3.90 (.76)	3.92 (.62)	3.88 (.69)
TLIM	4.26 (.77)	4.06 (.86)	4.07 (.72)	3.72 (.82)	3.84 (.69)	3.76 (.75)
	Perseverance					
	Time 1	Time 2				
Comparison	4.19 (.63)	4.11 (.66)				
TLIM	4.17 (.69)	4.01 (.74)				

Note: Standard deviations in parentheses

Building Model Results

As described in Chapter 3, I built a model for each measure by first reviewing the ICC at each level (individual at level 2 and classroom at level 3) to determine the appropriateness of each grouping variable. I next added variables and evaluated their

presence in the model using likelihood ratio tests and reviewing the AIC, BIC, log-likelihood, and random effect parameters. I then compared a random intercept approach to a random coefficient approach. I describe the full model-building approach for one measure below (youth empowerment) along with Table 9 to show how I arrived at each final model. I include the same description and tables for all of the other measures in Appendix E. Table 10 also summarizes the final models used for each measure (e.g. random intercept or random coefficient as well as the grouping variables used).

Sample Model Building: Student empowerment

For the student empowerment model, I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For empowerment, the ICC at level 2 (the individual level) was .412, and at level 3 (the classroom level) was .127. This means that 41.2% of the variation in student empowerment scores can be attributed to individual differences, and 12.7% of the variation in student empowerment can be attributed to differences between classrooms. These numbers indicate that there was sufficient variance accounted for by the individual and the classroom to include them as level 2 and level 3 grouping variables, respectively. As such, a three-level multilevel modeling approach was pursued for the empowerment measure (time at level 1, nested in students

at level 2, nested in classrooms at level 3).

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; the interaction term of treatment*time. The random intercept model with treatment, time, gender, grade, and treatment*time emerged as the best model (model 4). More specifically, the likelihood ratio test comparing model 3 (random intercept with treatment, time, gender and grade) to model 4 (also random intercept including the same variables with the addition of the treatment*time interaction) resulted in a χ^2 of 4.24 ($p < .05$). This indicates that the inclusion of the interaction term significantly improved the model.

I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. For the student empowerment measure, the likelihood ratio test comparing model 4 to model 6 (a random coefficient model with the same variables) resulted in a χ^2 of 0.0 (n.s.). This indicates that the random coefficient (ie, allowing the slopes to vary) does not significantly improve the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 4 is the model with the best fit. Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained.

See Table 9 for all model building results for youth empowerment.

Table 9: Model Building for Youth Empowerment

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	3.16*** (.03)	3.17*** (.05)	3.28*** (.07)	3.25*** (0.05)	3.28*** (.07)	3.25*** (0.07)
B ₁ =Treatment	-	-0.02 (.07)	-0.03 (.07)	0.02 (0.07)	-0.03 (.07)	0.02 (0.07)
B ₂ =Time	-	-	-0.18*** (.02)	-0.12*** (0.03)	-0.18*** (0.02)	-0.12*** (0.03)
B ₃ =Treatment*Time	-	-	-	-0.10* (0.05)	-	-0.10* (0.07)
Gender	-	-	-0.08* (.04)	-0.08* (0.04)	-0.08* (0.04)	-0.08* (0.04)
Grade	-	-	0.04 (.07)	0.04 (0.07)	0.04 (0.07)	0.04 (0.07)
Random Effects						
Sd (_cons) class:id	.254 (.028)	.254 (.028)	.253 (.028)	.253 (.028)	.253 (.028)	.253 (.028)
Sd (time) id	-	-	-	-	.641 (14.10)	.639 (10.79)
Sd (_cons) id	.380 (.020)	.380 (.020)	.387 (.020)	.388 (.020)	.597 (7.56)	.597 (5.78)
Sd (time, _cons) id	-	-	-	-	-.539 (4.93)	-.538 (3.80)
Sd (residual)	.546 (.012)	.546 (.012)	.533 (.012)	.532 (.012)	.281 (16.09)	.280 (12.29)
ICC ID	.412	.412	.430	.432	.842	.842
ICC Classroom	.127	.127	.129	.129	.129	.129
Log Likelihood	-1980.56	-1980.50	-1927.25	-1925.13	-1927.25	-1925.13
-2LL	3961.12	3961.00	3854.50	3850.26	3854.50	3850.26
AIC	3969.12	3970.99	3870.50	3868.26	3874.50	3872.26
BIC	3991.45	3998.91	3915.05	3918.38	3930.18	3933.51
LR Test	Null vs. linear model: 291.42***	2 vs. 1: 0.13	-	4 vs. 3: 4.24*	5 vs. 3: 0.0	6 vs. 5: 4.24* 6 vs. 4: 0.0

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 10. *Summary of multilevel models used*

Measure	Random Intercept	Random Coefficient	Grouping variables
Voice - confidence		✓	Time & Individual
Voice – civic participation skills	✓		Time & Individual
Voice – value of group work		✓	Time & Individual
Voice – communication skills		✓	Time & Individual
Empowerment	✓		Time & Individual & Classroom
My Voice		✓	Time & Individual
School connectedness		✓	Time & Individual
Teacher academic support		✓	Time & Individual
Teacher personal support		✓	Time & Individual & Classroom
Self-efficacy in enlisting social resources	✓		Time & Individual
Self-efficacy in self-regulated learning		✓	Time & Individual
Teamwork		✓	Time & Individual
Perseverance	✓		Time & Individual

Multilevel Modeling Results

Multilevel modeling results are presented in Table 11. Table 11 indicates that there were significant differences ($p < .05$) on 9 of the measures administered between students at the *Leader in Me* schools as compared to students attending the matched comparison schools. Eight of these measures showed a significant, negative treatment by time interaction, indicating that *Leader in Me* students were actually showing steeper declines in scores. These eight measures are voice-communication, voice-civic participation skills, voice-value of group work, student empowerment, school connectedness, teacher personal support, self-efficacy in enlisting social resources, and self-efficacy in self-regulated learning. One measure, teamwork, showed just a

significant, negative treatment effect, indicating that students at *Leader in Me* schools had lower Teamwork scores, regardless of time. It is also noteworthy that there was a significant negative effect for time on 11 of the 13 measures. The remaining two measures (school connectedness and self-efficacy in enlisting social resources) had negative slopes for time as well, but p-values greater than .05 (.054 and .097, respectively). These results are described in more detail in the sections below.

Table 11. *Multilevel Modeling Results*

	Voice: Confidence				Voice: Civic				Voice: Group			
	B	SE	z	p	B	SE	z	p	B	SE	z	p
Intercept	4.60	0.04	130.56	0.000	4.40	0.05	94.65	0.000	4.30	0.05	85.44	0.000
Gender	-0.02	0.03	-0.71	0.479	-.22	0.04	-5.26	0.000	-0.07	0.05	-1.58	0.114
Grade	0.02	0.03	0.73	0.465	-0.02	0.04	-0.39	0.698	-0.01	0.05	-0.24	0.814
Time	-0.11	0.02	-4.52	0.000	-0.13	0.04	-3.21	0.001	-0.10	0.05	-2.11	0.035
Treatment	0.02	0.03	0.72	0.472	0.02	0.05	0.48	0.634	0.02	0.05	0.38	0.703
Treatment* Time	-	-	-	-	-0.13	0.06	-2.28	0.023	-0.14	0.06	-2.26	0.024
Sd (_cons) class:id	-				-				-			
Sd (time) id	.626 (7.28)				-				0.838 (13.85)			
Sd (_cons) id	.514 (4.40)				0.471 (0.021)				0.735 (7.890)			
Corr (time, _cons) id	-.335 (7.38)				-				-0.436 (6.947)			
Sd (residual)	.255 (8.94)				0.606 (0.014)				0.352 (16.470)			
ICC ID	.802				.376				.813			
ICC Classroom	-				-				-			
Log Likelihood	-1802.42				-2161.57				-2388.90			
-2LL	3604.84				4323.14				4777.80			
AIC	3622.83				4339.13				4797.80			
BIC	3672.95				4383.68				4853.49			

	Voice: Communication				Voice: Empowerment				Voice: Quaglia			
	B	SE	z	p	B	SE	z	p	B	SE	z	p
Intercept	4.23	0.05	83.77	0.000	3.25	0.07	48.65	0.000	4.07	0.04	91.76	0.000
Gender	-0.18	0.05	-4.03	0.000	-.08	0.04	-2.27	0.023	-0.08	0.04	-1.81	0.070
Grade	-0.04	0.05	-0.86	0.389	0.04	0.07	0.63	0.526	-0.11	0.04	-2.53	0.012
Time	-0.11	0.04	-2.53	0.011	-0.12	0.03	-3.58	0.000	-0.31	0.03	-10.52	0.000
Treatment	-0.02	0.05	-0.47	0.640	0.02	0.07	0.27	0.785	-0.03	0.04	-0.76	0.449
Treatment* Time	-0.15	0.06	-2.42	0.015	-0.10	0.05	-2.06	0.039	-	-	-	-
Sd (_cons) class:id	-				.253 (.028)				-			
Sd (time) id	0.819 (12.414)				-				0.787 (11.299)			
Sd (_cons) id	0.744 (6.838)				.388 (.020)				0.671 (6.629)			
Corr (time, _cons) id	-0.461 (5.460)				-				-0.436 (6.277)			
Sd (residual)	0.350 (14.526)				.532 (.012)				0.327 (13.61)			
ICC ID	.819				.432				.808			
ICC Classroom	-				.129				-			
Log Likelihood	-2367.17				-1925.13				-2237.61			
-2LL	4734.34				3850.26				4475.22			
AIC	4754.34				3868.26				4493.23			
BIC	4810.02				3918.38				4543.34			

	Support: School Connect				Support: Teacher Academic				Support: Teacher Personal			
	B	SE	z	p	B	SE	z	p	B	SE	z	p
Intercept	4.15	0.05	77.58	0.000	4.85	0.02	199.70	0.000	4.53	0.07	67.66	0.000
Gender	-0.13	0.05	-2.57	0.010	-0.06	0.02	-2.63	0.008	-0.09	0.04	-2.12	0.034
Grade	-0.04	0.05	-0.74	0.457	-0.01	0.02	-0.31	0.754	-0.03	0.07	-0.38	0.703
Time	-0.08	0.04	-1.93	0.054	-0.08	0.02	-4.40	0.000	-0.14	0.04	-3.44	0.001
Treatment	-0.04	0.05	-0.70	0.482	-0.04	0.02	-1.82	0.069	-0.06	0.07	-0.82	0.415
Treatment* Time	-0.14	0.06	-2.28	0.023	-	-	-	-	-0.17	0.06	-2.88	0.004
Sd (_cons) class:id	-				-				.243	(.030)		
Sd (time) id	.790	(14.913)			.479	(6.977)			.782	(7.918)		
Sd (_cons) id	.770	(7.643)			.357	(4.678)			.596	(5.197)		
Corr (time, _cons) id	-0.320	(10.137)			-0.390	(8.754)			-0.322	(7.222)		
Sd (residual)	.354	(16.632)			.185	(9.022)			.310	(9.986)		
ICC ID	.826				.788				.811			
ICC Classroom	-				-				.116			
Log Likelihood	-2436.04				-1163.79				-2202.99			
-2LL	4872.08				2327.58				4405.98			
AIC	4892.09				2345.59				4427.97			
BIC	4947.77				2395.70				4489.20			

	Self Efficacy Resources				Self Efficacy Learning				Teamwork			
	B	SE	z	p	B	SE	z	p	B	SE	z	p
Intercept	4.23	0.05	88.48	0.000	4.17	0.04	95.92	0.000	4.00	0.04	100.74	0.000
Gender	-0.15	0.04	-3.58	0.000	-0.19	0.04	-4.80	0.000	-0.15	0.04	-3.95	0.000
Grade	0.00	0.04	0.11	0.914	0.01	0.04	0.22	0.824	-0.00	0.04	-0.08	0.939
Time	-0.07	0.04	-1.66	0.097	-0.19	0.04	-5.05	0.000	-0.06	0.02	-2.54	0.011
Treatment	0.09	0.05	0.05	0.075	-0.02	0.04	-0.48	0.634	-0.10	0.04	-2.63	0.009
Treatment* Time	-0.13	0.06	0.06	0.027	-0.16	0.05	-3.04	0.002	-	-	-	-
Sd (_cons) class:id	-				-				-			
Sd (time) id	-				.677 (7.928)				.600 (11.227)			
Sd (_cons) id	.481 (.022)				.633 (4.240)				.595 (5.655)			
Corr (time, _cons) id	-				-0.394 (5.276)				-0.384 (8.017)			
Sd (residual)	.627 (.014)				.295 (9.106)				.271 (12.439)			
ICC ID	.371				.822				.829			
ICC Classroom	-				-				-			
Log Likelihood	-2219.10				-2057.56				-1893.28			
-2LL	4438.20				4115.12				3786.56			
AIC	4454.20				4135.12				3804.55			
BIC	4498.74				4190.79				3854.65			

	Perseverance			
	B	SE	z	p
Intercept	4.28	0.04	109.26	0.000
Gender	-0.13	0.04	-3.52	0.000
Grade	-0.03	0.04	-0.70	0.481
Time	-0.12	0.02	-4.90	0.000
Treatment	-0.06	0.04	-1.58	0.115
Treatment* Time	-	-	-	-
Sd (_cons) class:id	-			
Sd (time) id	-			
Sd (_cons) id	.432 (.018)			
Corr (time, _cons) id	-			
Sd (residual)	.517 (.012)			
ICC ID	.412			
ICC Classroom	-			
Log Likelihood	-1889.03			
-2LL	3778.06			
AIC	3792.07			
BIC	3831.03			

Social and Emotional Learning

Three measures related to social and emotional learning reveal participating *Leader in Me* students showing sharper declines or lower scores than their peers at matched control schools: self-efficacy in enlisting social resources (aligned with social awareness), self-efficacy in self-regulated learning (aligned with self management), and teamwork (aligned with relationship skills).

Self-Efficacy in enlisting social resources

Recall that the measure of self-efficacy in enlisting social resources measures students' beliefs in their ability to access resources around them and includes questions such as, "I can get teachers to help me when I get stuck on schoolwork" and "I can get a friend to help me when I have a problem." On a five-point Likert scale, students attending *Leader in Me* schools began the 2014-2015 school year with a mean score of 4.26 (SD=.77) on the self-efficacy in enlisting social resources measure, and concluded the academic year with mean score of 4.06 (SD=.86). In comparison, students attending matched comparison schools began the 2014-2015 school year with a mean score of 4.16 (SD=.76) on the self-efficacy in enlisting social resources measure and concluded the year with a mean score of 4.09 (SD=.78).

A series of likelihood ratio tests determined that the best model for this measure was a random intercept model, with time (level one) and student (level two) as grouping variables. The student ICC was .362, meaning that 36.2% of the variation in students' feelings of school connectedness can be attributed to individual student differences.

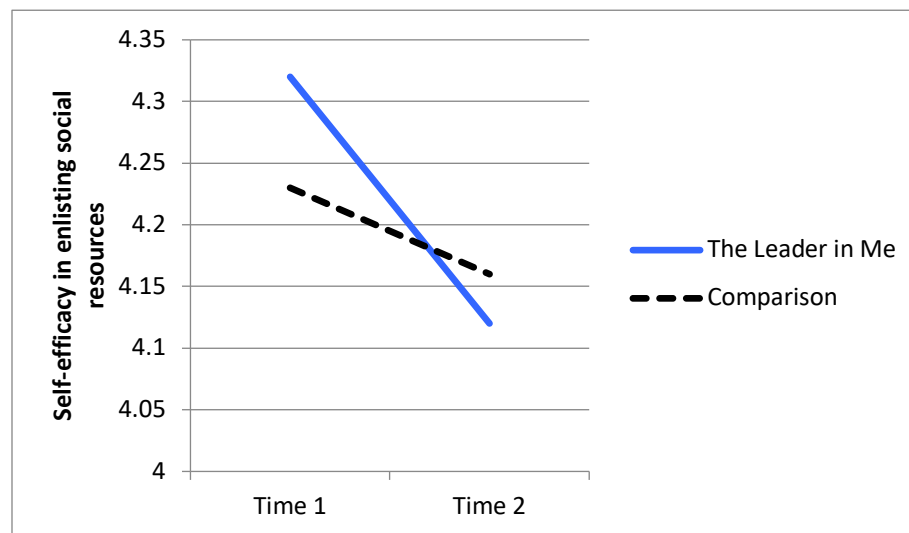
Multilevel modeling results indicate a significant interaction between treatment and time on this measure. This coefficient of -0.13 ($p = .027$) represents the difference in average rates of change of students attending *Leader in Me* and comparison schools, controlling for all other variables in the model. Put another way, a one unit increase in time (moving from the beginning of the year to the end of the year) is associated with a .13 unit decrease in self-efficacy in enlisting social resources for students attending *Leader in Me* schools, controlling for everything else. More simply, *Leader in Me* students showed more rapid decline in their beliefs in their ability to enlist support from others than students attending non-*Leader in Me* schools.

Gender had a significant, negative fixed effect on the model (-0.15, $p = .000$), while grade did not have a significant fixed effect. This indicates that the mean self-efficacy in enlisting social resources score for boys was 0.15 points lower than for girls (controlling for all else), but that there was no notable difference between 4th and 5th graders. Time did not have a significant, random effect on the model ($p = .097$), which means that there were no significant differences between mean self-efficacy in enlisting social resources scores from the beginning to the end of the school year as a result only of time.

There was a lower between-group variation (random intercept of the Level 2 variable, student) for this measure ($sd = .481$) than the between-student within group (Level 1) variation ($sd = .627$). The prediction interval for the intercept is $4.23 \pm (1.96 \times 0.481) = [3.29, 5.17]$. From this calculation, we would expect that 95% of students would have an intercept between 3.29 and 5 (since the highest possible score is a 5).

This model predicts that the mean self-efficacy in enlisting social resources score for a female in 4th grade at a *Leader in Me* school at Time 1 is 4.32 and at Time 2 is 4.12. In contrast, the mean Voice-communication skills score for a female in 4th grade at a comparison school at Time 1 is 4.23 and at Time 2 is 4.16 (see Figure 3).

Finally, the coefficient of determination, or R^2 for self-efficacy in enlisting social resources is .0225, meaning that the variables in the model explain 2.65% of the variance in this measure.



$$Y = \beta_0 + \beta_1 Treatment_j + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Treatment_j * Time_i + \mu_j + \varepsilon_{ij}$$

Figure 3. Self-efficacy in enlisting social resources results

Self-Efficacy in self-regulated learning

Recall that the self-efficacy for self-regulated learning subscale (Bandura, 1990) measures students' perceptions of their own ability to regulate their learning practices and includes questions such as, "I always concentrate on school subjects during class" and "I

can finish my homework assignments on time.” On a five-point Likert scale, students attending *Leader in Me* schools began the 2014-2015 school year with a mean score of 4.07 (SD=.72) on the self-efficacy in self-regulated learning measure, and concluded the academic year with mean score of 3.72 (SD=.82). In comparison, students attending matched comparison schools began the 2014-2015 school year with a mean score of 4.09 (SD=.68) on the self-efficacy in self-regulated learning measure and concluded the year with a mean score of 3.90 (SD=.76).

A series of likelihood ratio tests determined that the best model for this measure was a random coefficient model, with time (level one) and student (level two) as grouping variables. The student ICC was .385, meaning that 38.5% of the variation in students' feelings of school connectedness can be attributed to individual student differences.

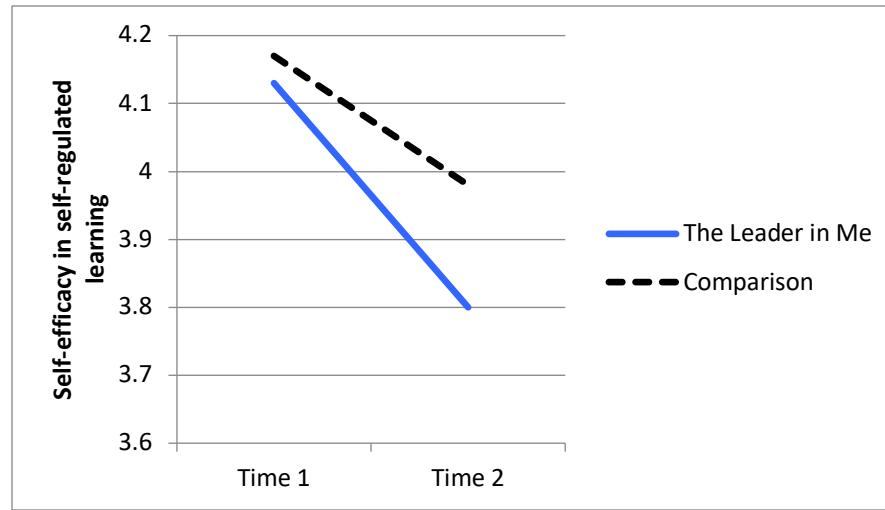
Multilevel modeling results indicate a significant interaction between treatment and time on this measure. This coefficient of -0.16 ($p = .002$) represents the difference in average rates of change of students attending *Leader in Me* and comparison schools, controlling for all other variables in the model. Put another way, a one unit increase in time (moving from the beginning of the year to the end of the year) is associated with a .16 unit decrease in self-efficacy in self-regulated learning for students attending *Leader in Me* schools, controlling for everything else. More simply, *Leader in Me* students showed more rapid decline in their beliefs about their ability to regulate their own learning than students attending non-*Leader in Me* schools.

Gender had a significant, negative fixed effect on the model (-0.19, $p=.000$), while grade did not have a significant fixed effect. This indicates that the mean self-efficacy in self-regulated learning score for boys was 0.19 points lower than for girls (controlling for all else), but that there was no notable difference between 4th and 5th graders. Time had a significant, random effect on the model (-0.19, $p=.000$), which means that controlling for all other variables, mean scores for self-efficacy in self-regulated learning are expected to be .19 points lower at the end of the school year than at the beginning of the school year.

There was a higher between-group variation (random intercept of the Level 2 variable, student) for this measure ($sd=.633$) than the between-student within group (Level 1) variation ($sd=.295$). The prediction interval for time is $-0.19 \pm (1.96 \times 0.677) = [-1.51, 1.13]$. From this calculation, we would expect that 95% of students would have a coefficient of time between -1.51 and 1.13. This is important to note, especially since this interval includes a range of negative to positive slopes.

This model predicts that the mean self-efficacy in self-regulated learning score for a female in 4th grade at a *Leader in Me* school at Time 1 is 4.13 and at Time 2 is 3.80. In contrast, the mean self-efficacy in self-regulated learning score for a female in 4th grade at a comparison school at Time 1 is 4.17 and at Time 2 is 3.98 (see Figure 4).

Finally, the coefficient of determination, or R^2 for self-efficacy in self-regulated learning is .0585, meaning that the variables in the model explain 5.85% of the variance in this measure.



$$Y = \beta_0 + \beta_1 \text{Treatment}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Treatment}_j * \text{Time}_i + \mu_{1j} + \mu_{2j} \text{Time}_{ij} + \varepsilon_{ij}$$

Figure 4. Self-efficacy in self-regulated learning results

Teamwork

Recall that the teamwork and group loyalty subscale measures the extent to which youth work well in groups and value the experience and includes 7 questions such as “If it is helpful I am always willing to do more work for our team” and “Even if I do not agree, I respect the ideas of others in my team.” On a five-point Likert scale, students attending *Leader in Me* schools began the 2014-2015 school year with a mean score of 3.84 (SD=.69) on the teamwork measure, and concluded the academic year with mean score of 3.76 (SD=.75). In comparison, students attending matched comparison schools began the 2014-2015 school year with a mean score of 3.92 (SD=.62) on the teamwork measure and concluded the year with a mean score of 3.88 (SD=.69).

A series of likelihood ratio tests determined that the best model for this measure was a random coefficient model, with time (level one) and student (level two) as grouping variables. The student ICC was .469, meaning that 46.9% of the variation in

students' feelings of school connectedness can be attributed to individual student differences.

Multilevel modeling results indicate that there was no significant interaction between treatment and time on this measure, but there was a significant treatment effect. This coefficient of -0.10 ($p = .009$) represents the average difference on this measure between students attending *Leader in Me* and comparison schools, controlling for all other variables in the model. Put another way, a one unit increase in treatment (moving from comparison schools to *Leader in Me* schools) is associated with a .10 unit decrease in teamwork, controlling for everything else. More simply, *Leader in Me* students had lower scores on the teamwork measure than students attending non-*Leader in Me* schools.

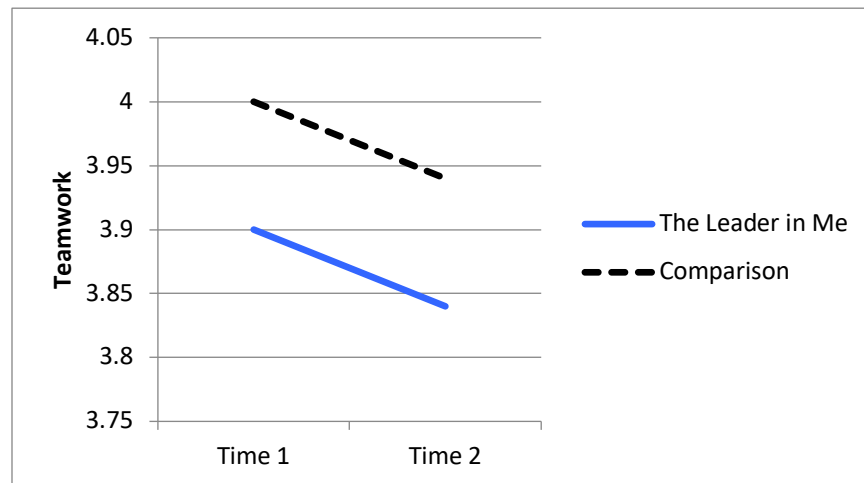
Gender had a significant, negative fixed effect on the model (-0.15, $p = .000$), while grade did not have a significant fixed effect. This indicates that the mean teamwork score for boys was 0.15 points lower than for girls (controlling for all else), but that there was no notable difference between 4th and 5th graders. Time had a significant, random effect on the model (-0.06, $p = .011$), which means that controlling for all other variables, mean scores for teamwork are expected to be .06 points lower at the end of the school year than at the beginning of the school year.

There was a higher between-group variation (random intercept of the Level 2 variable, student) for this measure ($sd = .595$) than the between-student within group (Level 1) variation ($sd = .271$). The prediction interval for time is $-0.04 \pm (1.96 \times 0.600) = [-1.22, 1.14]$. From this calculation, we would expect that 95% of students would have a

coefficient of time between -1.22 and 1.14. This is important to note, especially since this interval includes a range of negative to positive slopes.

This model predicts that the mean teamwork score for a female in 4th grade at a *Leader in Me* school at Time 1 is 3.9 and at Time 2 is 3.84. In contrast, the mean teamwork score for a female in 4th grade at a comparison school at Time 1 is 4.0 and at Time 2 is 3.94 (see Figure 5).

Finally, the coefficient of determination, or R^2 for teamwork is .0167, meaning that the variables in the model explain 1.67% of the variance in this measure.



$$Y = \beta_0 + \beta_1 Treatment_j + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Treatment_j * Time_i + \mu_{1j} + \mu_{2j} Time_{ij} + \varepsilon_{ij}$$

Figure 5. Teamwork Results

Student Voice Measures

Four measures related to youth voice show participating *Leader in Me* students faring worse than their peers at matched control schools: voice-communication, voice-civic participation skills, voice-value of group work, and student empowerment.

Voice-Communication Skills

Recall that the Youth Voice- Communication Skills subscale measures communication skills and their connection to youth voice. It includes questions such as “I try to watch other people’s faces and body language to understand what they are trying to say” and “I summarize what another person said to make sure I understand.” On a five-point Likert scale, students attending *Leader in Me* schools began the 2014-2015 school year with a mean score of 4.11 (SD=.84) on the voice-communication measure, and concluded the academic year with mean score of 3.84 (SD=.91). In comparison, students attending matched comparison schools began the 2014-2015 school year with a mean score of 4.12 (SD=.81) on the voice-communication measure and concluded the year with a mean score of 4.00 (SD=.87).

A series of likelihood ratio tests determined that the best model for this measure was a random coefficient model, with time (level one) and student (level two) as grouping variables. The student ICC was .359, meaning that 35.9% of the variation in the voice-communication skills scores can be attributed to individual student differences.

Multilevel modeling results indicate a significant interaction between treatment and time on this measure. This coefficient of -0.15 ($p = .015$) represents the difference in average rates of change of students attending *Leader in Me* and comparison schools, controlling for all other variables in the model. Put another way, a one unit increase in time (moving from the beginning of the year to the end of the year) is associated with a .15 unit decrease in voice-communication for students attending *Leader in Me* schools, controlling for everything else. More simply, *Leader in Me* students showed more rapid

decline in their perception of their own communication skills than students attending non-*Leader in Me* schools.

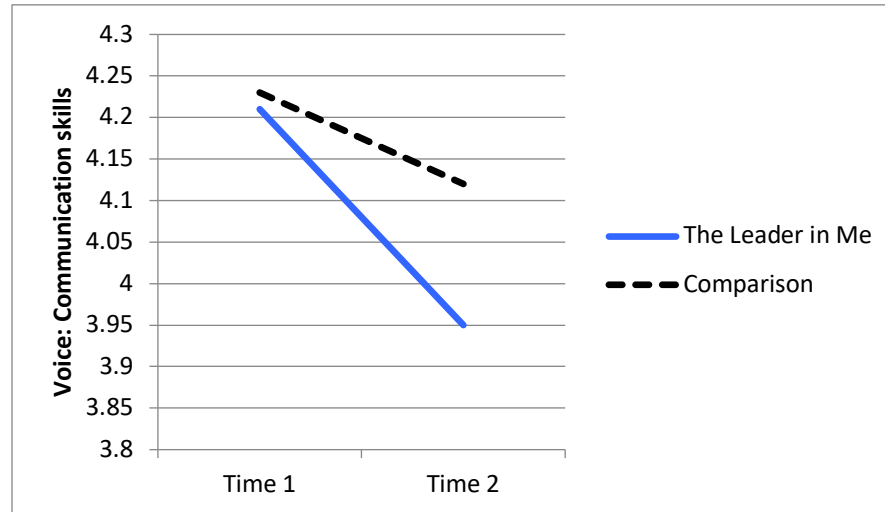
Gender had a significant, negative fixed effect on the model (-0.18, $p=.000$), while grade did not have a significant fixed effect. This indicates that the mean voice-communication score for boys was 0.18 points lower than for girls (controlling for all else), but that there was no notable difference between 4th and 5th graders. Time had a significant, random effect on the model (-0.11, $p=.011$), which means that controlling for all other variables, mean scores for voice-communication are expected to be .11 points lower at the end of the school year than at the beginning of the school year.

There was a higher between-group variation (random intercept of the Level 2 variable, student) for this measure ($sd=.744$) than the between-student within group (Level 1) variation ($sd=.350$). The prediction interval for time is $-0.11 \pm (1.96 \times 0.819) = [-1.72, 1.5]$. From this calculation, we would expect that 95% of students would have a coefficient of time between -1.72 and 1.5. This is important to note, especially since this interval includes a range of negative to positive slopes.

This model predicts that the mean voice-communication skills score for a female in 4th grade (i.e., when $gender=0$ and $grade=0$) at a *Leader in Me* school at Time 1 is 4.21 and at Time 2 is 3.95. In contrast, the mean Voice-communication skills score for a female in 4th grade at a comparison school at Time 1 is 4.23 and at Time 2 is 4.12 (see Figure 6).

Finally, the coefficient of determination, or R^2 for voice-communication skills is .0279, meaning that the variables in the model explain 2.79% of the variance in this

measure.



$$Y = \beta_0 + \beta_1 \text{Treatment}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Treatment}_j * \text{Time}_i + \mu_{1j} + \mu_{2j} \text{Time}_{ij} + \varepsilon_{ij}$$

Figure 6. Voice: Communication Skills results

Voice- civic participation skills

The Youth Voice- Civic Participation subscale measures civic participation skills in the context of youth voice and includes questions such as “I make sure I understand what another person is saying before I respond” and “I make sure I understand what another person is saying before I respond.” On a five-point Likert scale, students attending *Leader in Me* schools began the 2014-2015 school year with a mean score of 4.32 (SD=.73) on the voice-civic participation skills measure, and concluded the academic year with mean score of 4.06 (SD=.80). In comparison, students attending matched comparison schools began the 2014-2015 school year with a mean score of 4.28 (SD=.78) on the voice-civic participation skills measure and concluded the year with a mean score of 4.15 (SD=.82).

A series of likelihood ratio tests determined that the best model for this measure

was a random intercept model, with time (level one) and student (level two) as grouping variables. The student ICC was .365, meaning that 36.5% of the variation in the voice-civic participation skills scores can be attributed to individual student differences.

Multilevel modeling results indicate a significant interaction between treatment and time on this measure. This coefficient of -0.13 ($p = .023$) represents the difference in average rates of change of students attending *Leader in Me* and comparison schools, controlling for all other variables in the model. Put another way, a one unit increase in time (moving from the beginning of the year to the end of the year) is associated with a .13 unit decrease in voice-civic participation skills for students attending *Leader in Me* schools, controlling for everything else. More simply, *Leader in Me* students showed more rapid decline in their perception of their own civic participation skills than students attending non-*Leader in Me* schools.

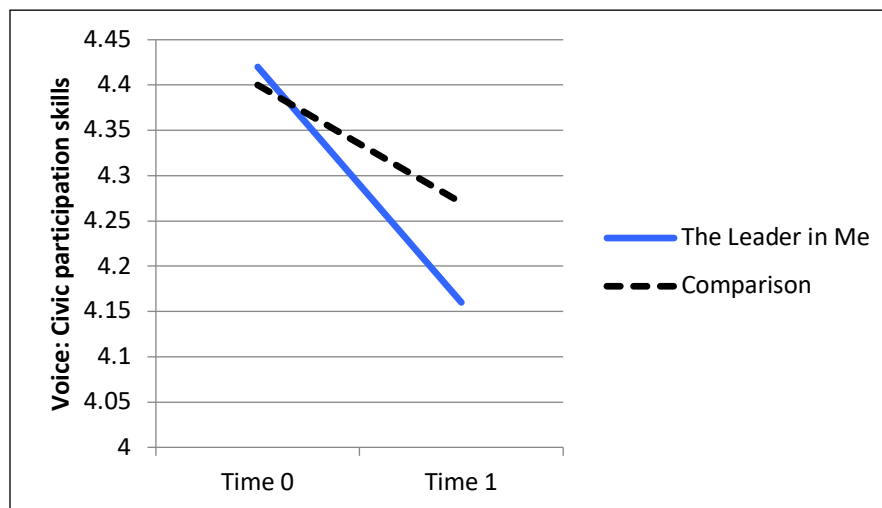
Gender had a significant, negative fixed effect on the model (-0.22, $p = .000$), while grade did not have a significant fixed effect. This indicates that the mean voice-civic participation skills score for boys was 0.22 points lower than for girls (controlling for all else), but that there was no notable difference between 4th and 5th graders. Time had a significant, random effect on the model (-0.13, $p = .001$), which means that controlling for all other variables, mean scores for voice-civic participation skills are expected to be .13 points lower at the end of the school year than at the beginning of the school year.

There was a lower between-group variation (random intercept of the Level 2 variable, student) for this measure ($sd = .471$) than the between-student within group (Level 1) variation ($sd = .606$). The prediction interval for the intercept is $4.40 \pm$

$(1.96 \times 0.471) = [3.48, 5.32]$. From this calculation, we would expect that 95% of students would have an intercept between 3.48 and 5 (given that 5 is the highest possible score).

This model predicts that the mean voice-civic participation skills score for a female in 4th grade at a *Leader in Me* school at Time 1 is 4.42 and at Time 2 is 4.16. In contrast, the mean voice-civic participation skills score for a female in 4th grade at a comparison school at Time 1 is 4.4 and at Time 2 is 4.27 (see Figure 7).

Finally, the coefficient of determination, or R^2 for voice-civic participation skills is .0485, meaning that the variables in the model explain 4.85% of the variance in this measure.



$$Y = \beta_0 + \beta_1 \text{Treatment}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Treatment}_j * \text{Time}_i + \mu_j + \varepsilon_{ij}$$

Figure 7. Voice: Civic Participation Skills results

Voice- value of group work

The Youth Voice- Value of Group Work subscale measures the extent to which students value working in groups and how that connects to youth voice and includes

questions such as “I can learn more from working on group projects than from working alone” and “I like working with other people on group projects.” On a five-point Likert scale, students attending *Leader in Me* schools began the 2014-2015 school year with a mean score of 4.28 (SD=.80) on the voice-value of group work measure, and concluded the academic year with mean score of 4.04 (SD=.95). In comparison, students attending matched comparison schools began the 2014-2015 school year with a mean score of 4.25 (SD=.83) on the voice-value of group work measure and concluded the year with a mean score of 4.16 (SD=.87).

A series of likelihood ratio tests determined that the best model for this measure was a random coefficient model, with time (level one) and student (level two) as grouping variables. The student ICC was .355, meaning that 35.5% of the variation in the voice-value of group work skills scores can be attributed to individual student differences.

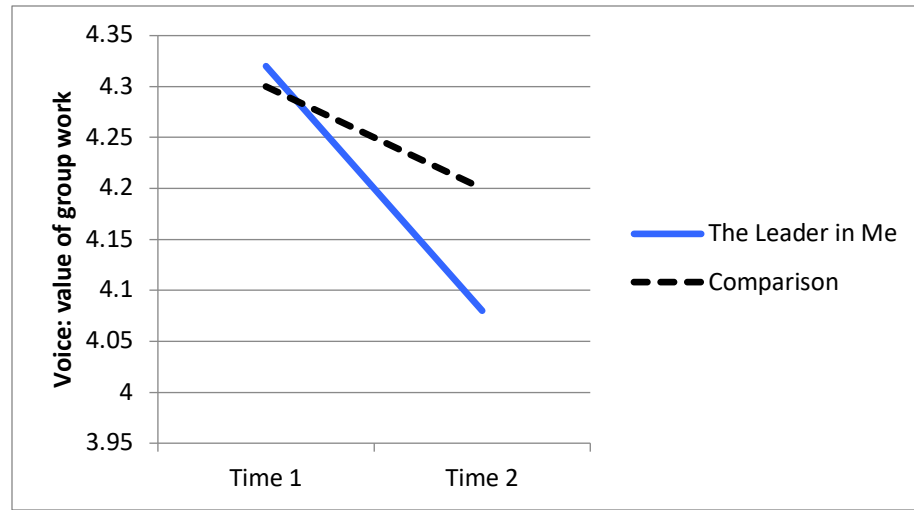
Multilevel modeling results indicate a significant interaction between treatment and time on this measure. This coefficient of -0.14 ($p = .024$) represents the difference in average rates of change of students attending *Leader in Me* and comparison schools, controlling for all other variables in the model. Put another way, a one unit increase in time (moving from the beginning of the year to the end of the year) is associated with a .14 unit decrease in voice-value of group work for students attending *Leader in Me* schools, controlling for everything else. More simply, *Leader in Me* students showed more rapid decline in their beliefs in the value of group work than students attending non-*Leader in Me* schools.

Gender and grade did not have significant fixed effects indicating that there was no notable difference between boys and girls or 4th and 5th graders in their voice-value of group work mean scores. Time had a significant, random effect on the model (-0.10, $p=.035$), which means that controlling for all other variables, mean scores for voice-value of group work are expected to be .10 points lower at the end of the school year than at the beginning of the school year.

There was a higher between-group variation (random intercept of the Level 2 variable, student) for this measure ($sd=.735$) than the between-student within group (Level 1) variation ($sd=.352$). The prediction interval for time is $-0.10 \pm (1.96 \times 0.838) = [-1.74, 1.54]$. From this calculation, we would expect that 95% of students would have a coefficient of time between -1.74 and 1.54. This is important to note, especially since this interval includes a range of negative to positive slopes.

This model predicts that the mean voice-value of group work score for a female in 4th grade at a *Leader in Me* school at Time 1 is 4.32 and at Time 2 is 4.08. In contrast, the mean voice-value of group work score for a female in 4th grade at a comparison school at Time 1 is 4.3 and at Time 2 is 4.2 (see Figure 8).

Finally, the coefficient of determination, or R^2 for voice-value of group work is .0145, meaning that the variables in the model explain 1.45% of the variance in this measure.



$$Y = \beta_0 + \beta_1 \text{Treatment}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Treatment}_j * \text{Time}_i + \mu_{1j} + \mu_{2j} \text{Time}_{ij} + \varepsilon_{ij}$$

Figure 8. Voice: Value of group work results

Student Empowerment

Recall that the student empowerment scale (Frymier, Shulman & Houser, 1996) measures student perceptions of their feelings of empowerment and ability to make an impact. It includes questions such as, “I get to choose what happens in this class.” On a five-point Likert scale, students attending *Leader in Me* schools began the 2014-2015 school year with a mean score of 3.26 (SD=.71) on the student empowerment measure, and concluded the academic year with mean score of 3.03 (SD=.70). In comparison, students attending matched comparison schools began the 2014-2015 school year with a mean score of 3.25 (SD=.72) on the empowerment measure and concluded the year with a mean score of 3.12 (SD=.71).

A series of likelihood ratio tests determined that the best model for this measure was a random intercept model, with time (level one), student (level two), and classroom (level three) as grouping variables. The student ICC was .412, meaning that 41.2% of the

variation in the empowerment scores can be attributed to individual student differences. The classroom ICC was .127, meaning that the inclusion of classroom explains 12.7% of the variation in empowerment scores.

Multilevel modeling results indicate a significant interaction between treatment and time on this measure. This coefficient of -0.10 ($p = .039$) represents the difference in average rates of change of students attending *Leader in Me* and comparison schools, controlling for all other variables in the model. Put another way, a one unit increase in time (moving from the beginning of the year to the end of the year) is associated with a .10 unit decrease in empowerment for students attending *Leader in Me* schools, controlling for everything else. More simply, *Leader in Me* students showed more rapid decline in their feelings of empowerment than students attending non-*Leader in Me* schools. The inclusion of classroom explained 12.7 percent of the variation in students' rates of change on this empowerment measure.

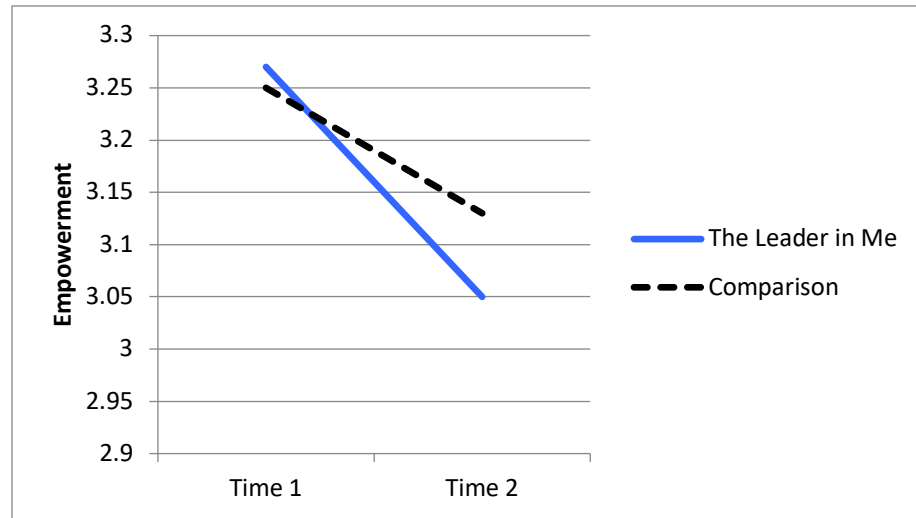
Gender had a significant, negative fixed effect on the model (-0.08, $p = .023$), while grade did not have a significant fixed effect. This indicates that the mean empowerment score for boys was 0.08 points lower than for girls (controlling for all else), but that there was no notable difference between 4th and 5th graders. Time had a significant, random effect on the model (-0.12, $p = .000$), which means that controlling for all other variables, mean scores for empowerment are expected to be .12 points lower at the end of the school year than at the beginning of the school year.

There was a lower between-group variation (random intercept of the Level 2 variable, student) for this measure ($sd = .388$) than the between-student within group

(Level 1) variation ($sd=.532$). The between-group variation at Level 3 (classroom) was lower than either of the other random effects mentioned ($sd= .253$). The prediction interval for the student-level intercept (level 2) is $3.25 \pm (1.96 \times 0.388) = [2.49, 4.01]$. From this calculation, we would expect that 95% of students would have an intercept between 2.49 and 4.01. The prediction interval for the classroom-level intercept (level 3) is $3.25 \pm (1.96 \times 0.253) = [2.75, 3.75]$. From this calculation, we would expect that 95% of classrooms would have an intercept between 2.75 and 3.75. These prediction intervals also demonstrate that there is more variation between students (level 2) than between classrooms (level 3) for the empowerment measure.

This model predicts that the mean empowerment score for a female in 4th grade at a *Leader in Me* school at Time 1 is 3.27 and at Time 2 is 3.05. In contrast, the mean empowerment score for a female in 4th grade at a comparison school at Time 1 is 3.25 and at Time 2 is 3.13 (see Figure 9).

Finally, the coefficient of determination, or R^2 for empowerment is .0203, meaning that the variables in the model explain 2.03% of the variance in this measure.



$$Y = \beta_0 + \beta_1 Treatment_k + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Treatment_k * Time_i + \mu_{jk} + \mu_k + \varepsilon_{ijk}$$

Figure 9. Student empowerment results

Student Support

Two measures related to student support show participating *Leader in Me* students faring worse than their peers at matched control schools: school connectedness and teacher personal support.

School Connectedness

Recall that the school connectedness scale (Tyler & Degoey, 1995), measures how connected and included students feel at school and includes questions such as, “I am happy to be at my school” and “I feel like I personally belong at my school.” On a five-point Likert scale, students attending *Leader in Me* schools began the 2014-2015 school year with a mean score of 4.04 (SD=.86) on the school connectedness measure, and concluded the academic year with mean score of 3.81 (SD=1.01). In comparison, students

attending matched comparison schools began the 2014-2015 school year with a mean score of 4.07 (SD=.85) on the school connectedness measure and concluded the year with a mean score of 3.98 (SD=.95).

A series of likelihood ratio tests determined that the best model for this measure was a random coefficient model, with time (level one) and student (level two) as grouping variables. The student ICC was .463, meaning that 46.3% of the variation in students' feelings of school connectedness can be attributed to individual student differences.

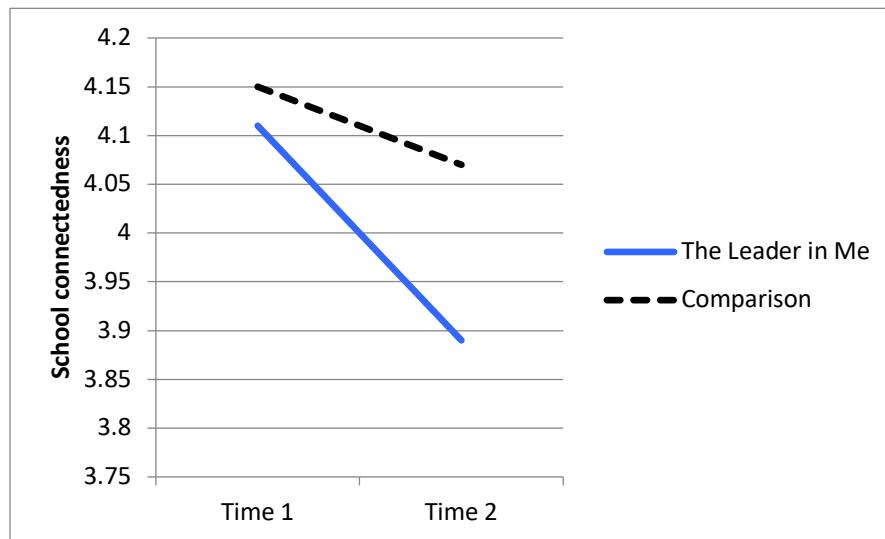
Multilevel modeling results indicate a significant interaction between treatment and time on this measure. This coefficient of -0.14 ($p = .023$) represents the difference in average rates of change of students attending *Leader in Me* and comparison schools, controlling for all other variables in the model. Put another way, a one unit increase in time (moving from the beginning of the year to the end of the year) is associated with a .14 unit decrease in school connectedness for students attending *Leader in Me* schools, controlling for everything else. More simply, *Leader in Me* students showed more rapid decline in their feelings of school connectedness than students attending non-*Leader in Me* schools.

Gender had a significant, negative fixed effect on the model (-0.13, $p = .010$), while grade did not have a significant fixed effect. This indicates that the mean school connectedness score for boys was 0.13 points lower than for girls (controlling for all else), but that there was no notable difference between 4th and 5th graders. Time had a near-significant, random effect on the model (-0.08, $p = .054$).

There was a higher between-group variation (random intercept of the Level 2 variable, student) for this measure (sd=.770) than the between-student within group (Level 1) variation (sd=.354). The prediction interval for time is $-0.08 \pm (1.96 \times 0.790) = [-1.63, 1.47]$. From this calculation, we would expect that 95% of students would have a coefficient of time between -1.63 and 1.47. This is important to note, especially since this interval includes a range of negative to positive slopes.

This model predicts that the mean school connectedness score for a female in 4th grade at a *Leader in Me* school at Time 1 is 4.11 and at Time 2 is 3.89. In contrast, the mean school connectedness score for a female in 4th grade at a comparison school at Time 1 is 4.15 and at Time 2 is 4.07 (see Figure 10).

Finally, the coefficient of determination, or R^2 for school connectedness is .0222, meaning that the variables in the model explain 2.22% of the variance in this measure.



$$Y = \beta_0 + \beta_1 Treatment_j + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Treatment_j * Time_i + \mu_{1j} + \mu_{2j} Time_{ij} + \epsilon_{ij}$$

Figure 10. School connectedness results

Teacher Personal Support

Recall that the teacher personal support scale, (Van Ryzin, Gravely & Roseth, 2009) measures student perceptions of teacher support in personal areas and includes questions such as “My teacher cares about my feelings” and “My teacher likes me as much as he/she likes other students.” On a five-point Likert scale, students attending *Leader in Me* schools began the 2014-2015 school year with a mean score of 4.42 (SD=.72) on the teacher personal support measure, and concluded the academic year with mean score of 4.10 (SD=.99). In comparison, students attending matched comparison schools began the 2014-2015 school year with a mean score of 4.48 (SD=.70) on the teacher personal support measure and concluded the year with a mean score of 4.33 (SD=.86).

A series of likelihood ratio tests determined that the best model for this measure was a random coefficient model, with time (level one), student (level two), and classroom (level three) as grouping variables. The student ICC was .367, meaning that 36.7% of the variation in the perceptions of teacher personal support can be attributed to individual student differences. The classroom ICC was .103, meaning that the inclusion of classroom explains 10.3% of the variation in perceptions of teacher personal support.

Multilevel modeling results indicate a significant interaction between treatment and time on this measure. This coefficient of -0.17 ($p = .004$) represents the difference in average rates of change of students attending *Leader in Me* and comparison schools, controlling for all other variables in the model. Put another way, a one unit increase in time (moving from the beginning of the year to the end of the year) is associated with a

.17 unit decrease in teacher personal support for students attending *Leader in Me* schools, controlling for everything else. More simply, *Leader in Me* students showed more rapid decline in their feelings of how well they are supported by their teachers than students attending non-*Leader in Me* schools. The inclusion of classroom explained 10.3 percent of the variation in students' rates of change on this teacher personal support measure.

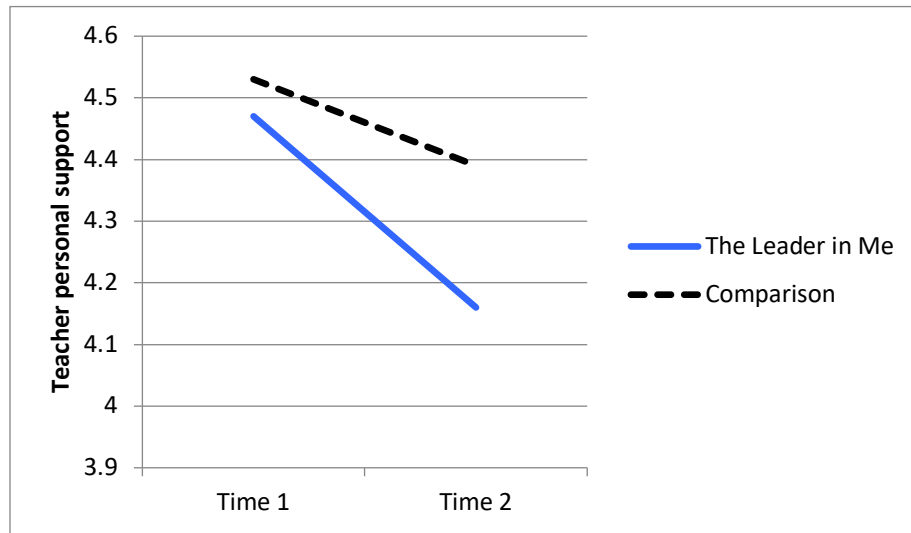
Gender had a significant, negative fixed effect on the model (-0.09, $p=.034$), while grade did not have a significant fixed effect. This indicates that the mean teacher personal support score for boys was 0.09 points lower than for girls (controlling for all else), but that there was no notable difference between 4th and 5th graders. Time had a significant, random effect on the model (-0.14, $p=.001$), which means that controlling for all other variables, mean scores for teacher personal support are expected to be .14 points lower at the end of the school year than at the beginning of the school year.

There was a higher between-group variation (random intercept of the Level 2 variable, student) for this measure ($sd=.596$) than the between-student within group (Level 1) variation ($sd=.310$). The between group variation at the Level 3 variable (classroom) was .243. The prediction interval for time is $-0.14 \pm (1.96 \times 0.782) = [-1.67, 1.39]$. From this calculation, we would expect that 95% of students would have a coefficient of time between -1.67 and 1.39. This is important to note, especially since this interval includes a range of negative to positive slopes.

This model predicts that the mean teacher personal support score for a female in 4th grade at a *Leader in Me* school at Time 1 is 4.47 and at Time 2 is 4.16. In contrast, the mean teacher personal support score for a female in 4th grade at a comparison school at

Time 1 is 4.53 and at Time 2 is 4.39 (see Figure 11).

Finally, the coefficient of determination, or R^2 for teacher personal support is .0446, meaning that the variables in the model explain 4.46% of the variance in this measure.



$$Y = \beta_0 + \beta_1 Treatment_j + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Treatment_j * Time_i + \mu_{1jk} + \mu_{2jk} Time_{ij} + \epsilon_{ijk}$$

Figure 11. Teacher personal support results

Fidelity Results

Recall that fidelity scores were assigned to each school by *The Leader in Me* training staff, based on a rubric that the organization designed. Each school received a score of 1-5 on the following measures: Lighthouse team, leadership environment, integrated instruction and curriculum, staff collaboration, student leadership, parent involvement, leadership events, and goal tracking (see Appendix G for all fidelity scores and the fidelity rubric). These fidelity scores were averaged so as to assign each treatment school with a single fidelity score (see Table 6.1). I then calculated the mean (3.04) and

standard deviation (.73) of all fidelity scores so that I could include low fidelity (one standard deviation below the mean) and high fidelity (one standard deviation above the mean) in the equations (see Table 6.2). The variable Fidelity as well as an interaction term of Fidelity*Time were added to the model as a student-level variable (or classroom-level variable, depending on the model used for each measure).

Also recall that comparison schools were not assigned a fidelity score. In order to accurately calculate the impact of fidelity on outcome results, analyses were run with a new variable, Comparison, where comparison schools=1 and *Leader in Me* schools=0. (This is the reverse code of Treatment, where *Leader in Me* schools were equal to 1 and comparison schools were equal to 0). A fidelity score of zero was entered for all comparison schools to accurately reflect that the program was not present at those schools.

Table 12 below illustrates the final multilevel modeling results for all models with the fidelity variables included.

Table 12. *Multilevel Modeling Results with Fidelity Variables*

	Voice: Confidence				Voice: Civic				Voice: Group			
	B	SE	z	p	B	SE	z	p	B	SE	z	p
Intercept	4.37	0.13	33.62	0.000	3.91	0.19	20.48	0.000	4.32	0.05	90.41	0.000
Gender	-0.03	0.03	-0.77	0.439	-0.22	0.04	-5.35	0.000	-0.07	0.05	-1.58	0.114
Grade	0.02	0.03	0.54	0.592	-0.03	0.04	-0.61	0.539	-0.01	0.05	-0.24	0.814
Time	-0.11	0.02	-4.52	0.000	0.04	0.21	0.18	0.857	-0.24	0.04	-5.43	0.000
Comparison	0.23	0.13	1.76	0.079	0.49	0.19	2.54	0.011	0.02	0.05	-0.38	0.703
Comparison* Time	-	-	-	-	-0.17	0.22	-0.76	0.445	0.14	0.06	2.26	0.024
Fidelity	0.08	0.04	2.01	0.045	0.17	0.06	2.75	0.006	-	-	-	-
Fidelity* Time	-	-	-	-	-0.09	0.07	-1.39	.164	-	-	-	-
Sd (_cons) class:id	-				-				-			
Sd (time) id	0.627 (8.580)				-				0.837 (14.750)			
Sd (_cons) id	0.513 (5.238)				0.469 (.021)				0.735 (8.401)			
Corr (time, _cons) id	-0.337 (8.665)				-				-0.436 (7.406)			
Sd (residual)	0.255 (10.550)				0.606 (.014)				0.353 (17.509)			
ICC ID	.802				.374				.813			
ICC Classroom	-				-				-			
Log Likelihood	-1800.41				-2157.79				-2388.90			
-2LL	3600.82				4315.58				4777.8			
AIC	3620.82				4335.58				4797.80			
BIC	3676.50				4391.26				4853.49			

	Voice: Communication				Voice: Empowerment				Voice: Quaglia			
	B	SE	z	p	B	SE	z	p	B	SE	z	p
Intercept	3.84	0.18	21.69	0.000	3.27	0.06	52.47	0.000	3.70	0.16	22.82	0.000
Gender	-0.19	0.05	-4.10	0.000	-0.08	0.03	-2.27	0.023	-0.08	0.04	-1.88	0.059
Grade	-0.05	0.05	-1.07	0.286	0.04	0.07	0.63	0.526	0.11	0.04	-2.71	0.007
Time	-0.26	0.04	-6.10	0.000	-0.22	0.03	-6.66	0.000	-0.27	0.04	-6.44	0.000
Comparison	0.40	0.18	2.19	0.028	-0.02	0.07	-0.27	0.785	0.35	0.16	2.14	0.032
Comparison* Time	0.15	0.06	2.43	0.015	0.10	0.05	2.06	0.039	-	-	-	-
Fidelity	0.12	0.06	2.15	0.031	-	-	-	-	0.11	0.05	2.20	0.028
Fidelity* Time	-	-	-	-	-	-	-	-	-0.03	0.02	-1.43	0.154
Sd (_cons) class:id	-				0.253 (.028)				-			
Sd (time) id	0.820 (11.992)				-				0.787 (19.257)			
Sd (_cons) id	0.742 (6.625)				0.388 (.020)				0.668 (11.346)			
Corr (time, _cons) id	-0.461 (5.289)				-				-0.433 (10.905)			
Sd (residual)	0.350 (14.058)				0.532 (.012)				0.326 (23.254)			
ICC ID	.818				.432				.808			
ICC Classroom	-				.129				-			
Log Likelihood	-2364.861				-1925.13				-2234.59			
-2LL	4729.722				3850.26				4469.18			
AIC	4751.72				3868.26				4491.17			
BIC	4812.97				3918.38				4552.42			

	Support: School Connect				Support: Teacher Academic				Support: Teacher Personal			
	B	SE	z	p	B	SE	z	p	B	SE	z	p
Intercept	4.12	0.05	81.05	0.000	4.62	0.09	51.87	0.000	3.87	0.24	15.66	0.000
Gender	-0.13	0.05	-2.57	0.010	-0.06	0.02	-2.71	0.007	-0.09	0.04	-2.16	0.031
Grade	-0.04	0.05	-0.74	0.457	-0.01	0.02	-0.51	0.612	-0.40	0.07	-0.59	0.557
Time	-0.22	0.04	-5.27	0.000	-0.08	0.02	-4.40	0.000	-0.31	0.04	-7.69	0.000
Comparison	0.04	0.05	0.70	0.482	0.23	0.09	2.57	0.010	0.67	0.25	2.67	0.008
Comparison* Time	0.14	0.06	2.28	0.023	-	-	-	-	0.17	0.06	2.88	0.004
Fidelity	-	-	-	-	0.06	0.03	2.18	0.029	0.20	0.08	2.54	0.011
Fidelity* Time	-	-	-	-	-	-	-	-	-	-	-	-
Sd (_cons) class:id	-				-				0.228 (.029)			
Sd (time) id	0.790 (14.031)				0.479 (10.137)				0.783 (8.666)			
Sd (_cons) id	0.771 (7.194)				0.355 (6.831)				0.595 (5.702)			
Corr (time, _cons) id	-0.321 (9.522)				-0.386 (12.928)				-0.318 (8.003)			
Sd (residual)	0.353 (15.694)				0.185 (13.129)				0.309 (10.963)			
ICC ID	.826				.787				.809			
ICC Classroom	-				-				.104			
Log Likelihood	-2436.04				-1161.43				-2199.91			
-2LL	4872.08				2322.86				4399.82			
AIC	4892.09				2342.86				4423.81			
BIC	4947.77				2398.55				4490.60			

	Self Efficacy Resources				Self Efficacy Learning				Teamwork			
	B	SE	z	p	B	SE	z	p	B	SE	z	p
Intercept	3.60	0.19	19.06	0.000	4.15	0.04	100.56	0.000	3.90	0.04	103.47	0.000
Gender	-0.15	0.04	-3.63	0.000	-0.19	0.04	-4.80	0.000	-0.15	0.04	-3.95	0.000
Grade	-0.01	0.04	-0.21	0.833	0.01	0.04	0.22	0.824	-0.00	0.04	-0.08	.939
Time	0.34	0.22	1.56	0.118	-0.34	0.04	-9.59	0.000	-0.06	0.02	-2.54	0.011
Comparison	0.635	0.19	3.30	0.001	0.02	0.04	0.48	0.634	0.10	0.04	2.63	0.009
Comparison* Time	-0.41	0.22	-1.84	0.066	0.16	0.05	3.04	0.002	-	-	-	-
Fidelity	0.24	0.06	3.90	0.000	-	-	-	-	-	-	-	-
Fidelity* Time	-0.17	0.07	-2.49	0.013	-	-	-	-	-	-	-	-
Sd (_cons) class:id	-				-				-			
Sd (time) id	0.757 (30.616)				0.676 (13.007)				0.600 (8.300)			
Sd (_cons) id	0.683 (16.973)				0.632 (6.954)				0.596 (4.182)			
Corr (time, _cons) id	-0.458 (14.894)				-0.394 (8.671)				-0.385 (5.917)			
Sd (residual)	0.322 (35.973)				0.295 (14.891)				0.270 (9.222)			
ICC ID	.818				.821				.829			
ICC Classroom	-				-				-			
Log Likelihood	-2208.45				-2057.56				-1893.28			
-2LL	4416.9				4115.12				3786.56			
AIC	4440.89				4135.12				3804.55			
BIC	4507.71				4190.79				3854.65			

	Perseverance			
	B	SE	z	p
Intercept	3.95	0.14	27.82	0.000
Gender	-0.13	0.04	-3.58	0.000
Grade	-0.03	0.04	-0.88	0.377
Time	-0.07	0.03	-2.22	0.027
Comparison	0.31	0.14	2.17	0.030
Comparison* Time	-	-	-	-
Fidelity	0.10	0.05	2.09	0.036
Fidelity* Time	-0.03	0.01	-1.78	0.076
Sd (_cons) class:id	-			
Sd (time) id	-			
Sd (_cons) id	0.431 (.018)			
Corr (time, _cons) id	-			
Sd (residual)	0.516 (.012)			
ICC ID	.411			
ICC Classroom	-			
Log Likelihood	-1885.79			
-2LL	3771.58			
AIC	3789.58			
BIC	3839.68			

There were two common trends in the ways in which fidelity impacted student outcomes. The first is that for five measures, high fidelity was found to be more favorable than low fidelity, but less favorable than comparison schools. That is, students attending *Leader in Me* schools with high fidelity started the year with the highest scores, but then demonstrated steeper declines than students attending comparison schools. These scores were nonetheless still higher overall than students attending *Leader in Me* schools with low fidelity. These measures are: voice-civic participation skills, voice-communication skills, teacher personal support, self-efficacy in enlisting social resources, and perseverance. The second trend is that for three measures, students attending high fidelity *Leader in Me* schools had outcome results that were equal to or more favorable than comparison schools. These measures are: voice- confidence, the Quaglia Institute My Voice Survey, and teacher academic support. I describe each of these trends more explicitly below.

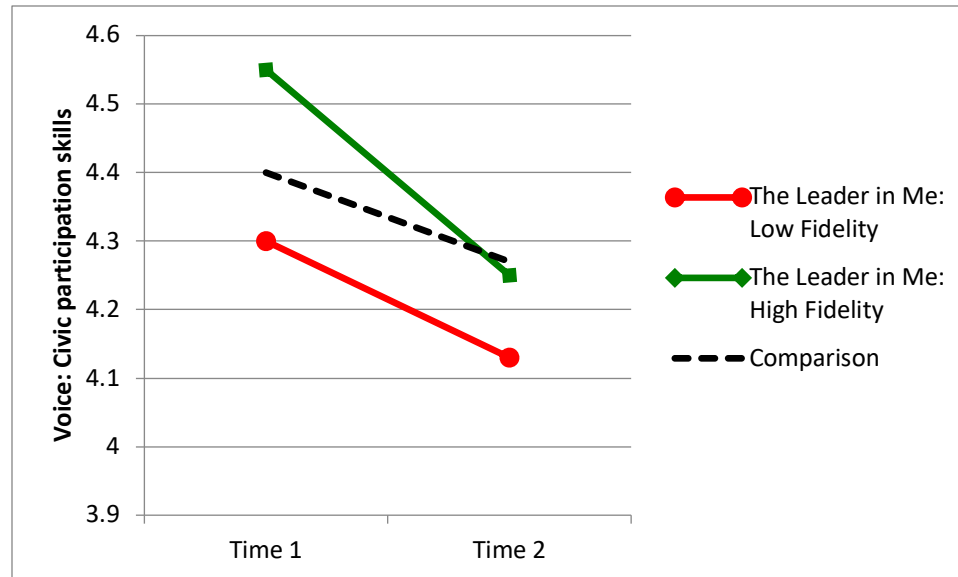
High fidelity more favorable than low fidelity, but less favorable than Comparison schools

For five measures, students attending *Leader in Me* schools with high fidelity had higher overall scores than students attending *Leader in Me* schools with low fidelity. These measures are voice-civic participation skills, voice-communication skills, teacher personal support, self-efficacy in enlisting social resources, and perseverance. However, on these same measures, students at high fidelity *Leader in Me* schools started the year with scores higher than students attending comparison schools, but then demonstrated

steeper declines (see figures 12-16). Each of these five measures is described below.

Voice - Civic participation skills with fidelity

Multilevel modeling results indicate that there was no significant interaction between fidelity and time on the measure of Voice- Civic participation skills, but there was a significant fidelity effect. This coefficient of 0.17 ($p = .006$) represents the average difference on this measure for each one-unit increase in fidelity, controlling for all other variables in the model. Put another way, a one unit increase in fidelity (on a five-point scale) is associated with a .12 unit increase in civic participation skills, controlling for everything else. More simply, students attending *Leader in Me* schools with high fidelity are expected to have higher scores on the voice-civic participation measure than students attending *Leader in Me* schools with low fidelity. Interestingly, even though fidelity*time was not significant, the model that included this variable was found to have the best fit (see Table 22.2 that takes into consideration factors such as log likelihood tests and -2LL). The figure below illustrates the final results, which indicate that even though students attending *Leader in Me* schools with high fidelity begin the year with higher scores on the voice-civic participation scores measure, they are still expected to end the year with lower scores on this measure than students attending comparison schools. Figure 12 illustrates these results for 4th grade females (ie, when gender=0 and grade=0).



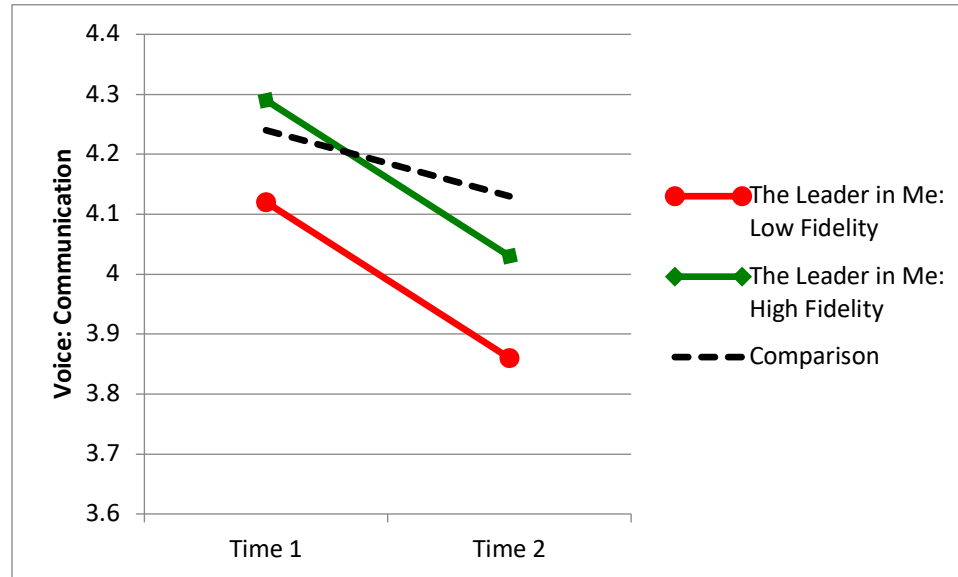
$$Y = \beta_0 + \beta_1 \text{Comparison}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Comparison}_j * \text{Time}_i + \beta_6 \text{Fidelity}_j + \beta_7 \text{Fidelity}_j * \text{Time}_i + \mu_j + \varepsilon_{ij}$$

Figure 12. Voice: civic participation skills (with fidelity variable) Results

Voice – Communication with fidelity

Multilevel modeling results indicate that there was no significant interaction between fidelity and time on the measure of Voice- Civic participation skills, but there was a significant fidelity effect. This coefficient of 0.12 ($p = .031$) represents the average difference on this measure for each one-unit increase in fidelity, controlling for all other variables in the model. Put another way, a one unit increase in fidelity (on a five-point scale) is associated with a .12 unit increase in communication skills, controlling for everything else. More simply, students attending *Leader in Me* schools with high fidelity are expected to have higher scores on the voice-communication measure than students attending *Leader in Me* schools with low fidelity. However, even though students attending *Leader in Me* schools with high fidelity begin the year with higher scores on the voice-communication measure, they still end the year with lower scores on this

measure than students attending comparison schools. Figure 13 illustrates these results for 4th grade females (i.e., when gender=0 and grade=0).



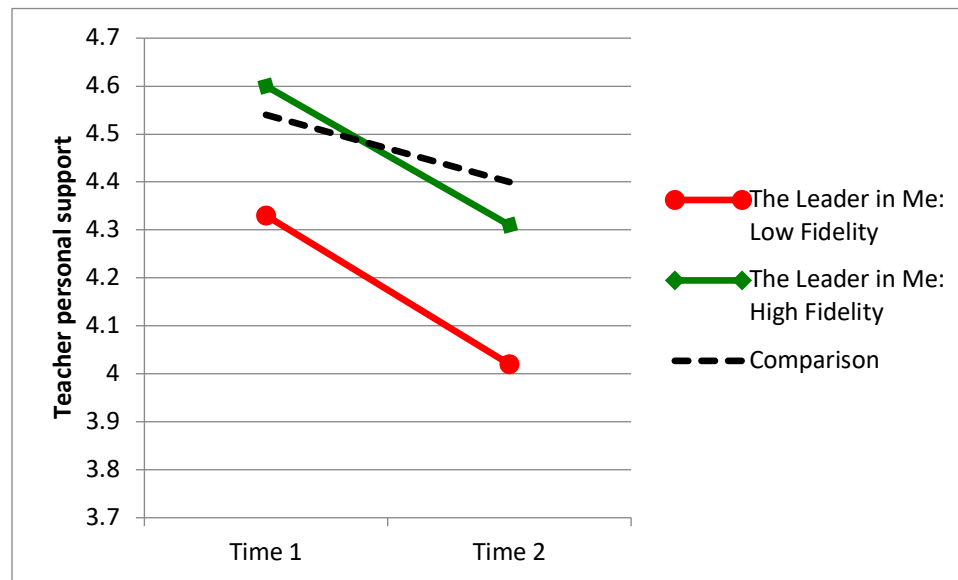
$$Y = \beta_0 + \beta_1 Comparison_j + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Comparison_j * Time_i + B_6 Fidelity_j + \mu_{1j} + \mu_{2j} Time_{ij} + \epsilon_{ij}$$

Figure 13. Voice: communication (with fidelity variable) Results

Teacher personal support with fidelity

Multilevel modeling results indicate that there was no significant interaction between fidelity and time on the measure of Teacher personal support, but there was a significant fidelity effect. This coefficient of 0.20 ($p = .011$) represents the average difference on this measure for each one-unit increase in fidelity, controlling for all other variables in the model. Put another way, a one unit increase in fidelity (on a five-point scale) is associated with a .20 unit increase in perceptions of teacher personal support, controlling for everything else. More simply, students attending *Leader in Me* schools with high fidelity are expected to have more favorable perceptions of teacher personal

support than students attending *Leader in Me* schools with low fidelity. However, even though students attending *Leader in Me* schools with high fidelity begin the year with higher scores on the teacher personal support measure, they still end the year with lower scores on this measure than students attending comparison schools. Figure 14 illustrates these results for 4th grade females (i.e., when gender=0 and grade=0).



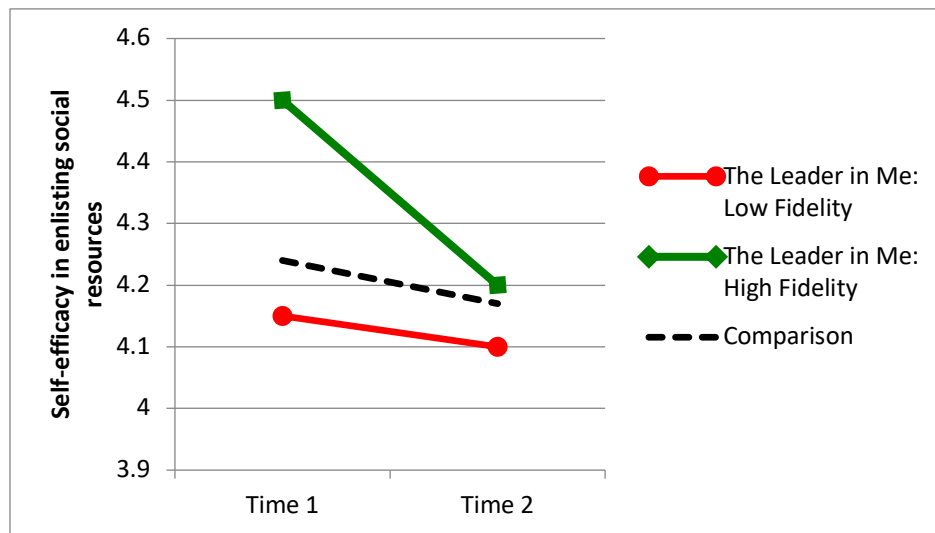
$$Y = \beta_0 + \beta_1 \text{Comparison}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Comparison}_j * \text{Time}_i + \beta_6 \text{Fidelity}_j + \mu_{1jk} + \mu_{2jk} \text{Time}_{ij} + \mu_k + \varepsilon_{ijk}$$

Figure 14. Teacher personal support (with fidelity variable) Results

Self-Efficacy in enlisting social resources with fidelity

Multilevel modeling results indicate a significant interaction between fidelity and time on the measure of self-efficacy in self-regulated learning. This coefficient of -0.17 (p= .013) represents the effect of the fidelity variable on the outcome measure over the course of the school year, controlling for all other variables in the model. Put another way, a one unit increase in fidelity score (on a five-point scale) is associated with a .17

unit decrease in self-efficacy in self-regulated learning for students attending *Leader in Me* schools from the beginning of the year to the end of the year, controlling for everything else. More simply, *Leader in Me* students attending schools with higher fidelity of implementation showed more rapid decline in their beliefs about their ability to regulate their own learning than students attending *Leader in Me* schools with lower fidelity. Even though students attending *Leader in Me* schools with high fidelity begin the year with higher scores on this self-efficacy measure, their decline is so much steeper than students attending low fidelity *Leader in Me* schools and comparison schools that they end the year with only slightly higher scores on this measure than students attending comparison schools. Figure 15 illustrates these results for 4th grade females (ie, when gender=0 and grade=0).

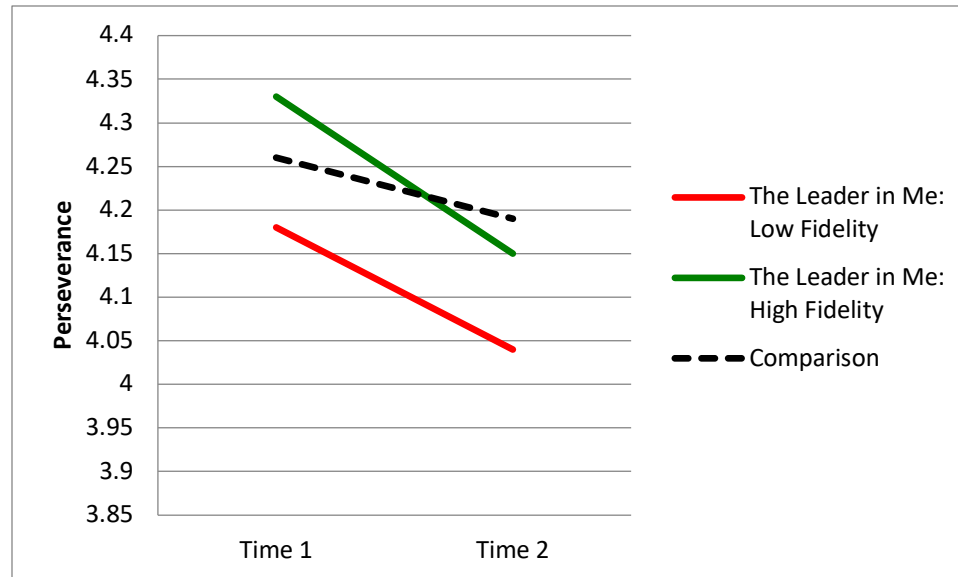


$$Y = \beta_0 + \beta_1 Comparison_j + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + \beta_5 Comparison_j * Time_i + \beta_6 Fidelity_j + \beta_7 Fidelity_j * Time_i + \mu_j + \epsilon_{ij}$$

Figure 15. Self-efficacy in enlisting social resources (with fidelity variable) Results

Perseverance with fidelity

Multilevel modeling results indicate that there was no significant interaction between fidelity and time on the measure of Perseverance, but there was a significant fidelity effect. This coefficient of 0.10 ($p = .036$) represents the average difference on this measure for each one-unit increase in fidelity, controlling for all other variables in the model. Put another way, a one unit increase in fidelity (on a five-point scale) is associated with a .10 unit increase in perseverance, controlling for everything else. More simply, students attending *Leader in Me* schools with high fidelity are expected to have higher scores on the perseverance measure than students attending *Leader in Me* schools with low fidelity. Interestingly, even though fidelity*time was not significant, the model that included this variable was found to have the best fit (see Table 22.13 that takes into consideration factors such as log likelihood tests and -2LL). The figure below illustrates the final results, which indicate that even though students attending *Leader in Me* schools with high fidelity begin the year with higher scores on the perseverance measure, they are still expected to end the year with lower scores on this measure than students attending comparison schools. Figure 16 illustrates these results for 4th grade females (ie, when gender=0 and grade=0).



$$Y = \beta_0 + \beta_1 \text{Comparison}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Fidelity}_j + \beta_6 \text{Fidelity}_j * \text{Time}_i + \mu_j + \varepsilon_{ij}$$

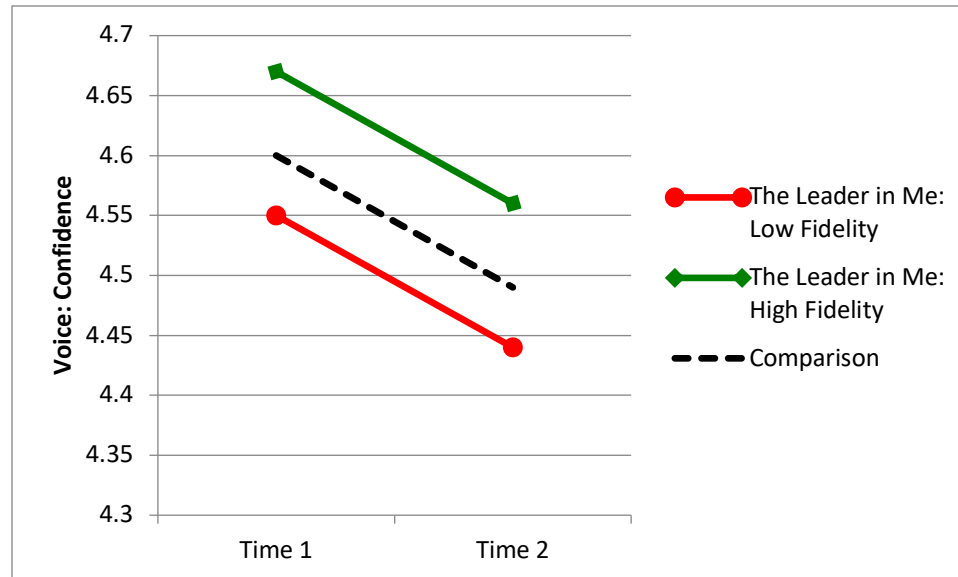
Figure 16. Perseverance (with fidelity variable) Results

High fidelity schools equal to or more favorable than comparison schools

For three measures, students attending schools with high fidelity of *Leader in Me* implementation had student outcomes that were equal to or more favorable than students attending comparison schools. These measures are voice- confidence, the Quaglia Institute My Voice Survey, and teacher academic support. Interestingly, none of these measures was significant in the original models (meaning that there were no significant differences between *Leader in Me* schools and comparison schools on these measures), but with the addition of the fidelity variable, students attending *Leader in Me* schools demonstrated more favorable (or equal) results. The sections below describe these outcomes in more detail.

Voice – Confidence with fidelity

Recall that the voice-confidence survey tool measures students' perceptions of their own confidence and includes questions such as, "I feel like I have a lot to be proud of" and "All in all I like myself." Multilevel modeling results indicate that there was no significant interaction between fidelity and time on the measure of voice- confidence, but there was a significant fidelity effect. This coefficient of 0.08 ($p = .045$) represents the average difference on this measure for each one-unit increase in fidelity, controlling for all other variables in the model. Put another way, a one unit increase in fidelity (on a five-point scale) is associated with a .08 unit increase in confidence, controlling for everything else. More simply, students attending *Leader in Me* schools with high fidelity are expected to have higher scores on the voice-confidence measure than students attending *Leader in Me* schools with low fidelity. These students' confidence scores still decrease over time, as evidenced in Figure 17, but their scores are nonetheless higher than students at comparison schools as well as students attending *Leader in Me* schools with low fidelity. Figure 17 illustrates these results for 4th grade females (ie, when gender=0 and grade=0).



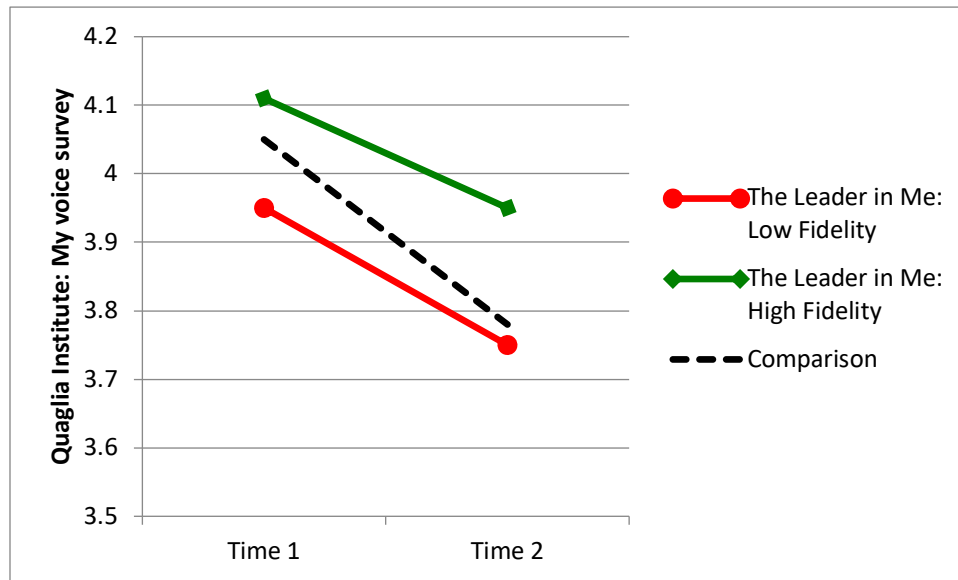
$$Y = \beta_0 + \beta_1 \text{Comparison}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Fidelity}_j + \mu_{1j} + \mu_{2j} \text{Time}_{ij} + \varepsilon_{ij}$$

Figure 17. Voice: confidence (with fidelity variable) Results

Quaglia Institute My Voice survey with fidelity

Recall that the Quaglia Institute My Voice survey measures students' perceptions of voice and school connectedness and includes questions such as "Adults at this school listen to students' ideas" and "Adults and students work together to make our school better." Multilevel modeling results indicate that there was no significant interaction between fidelity and time on this measure, but there was a significant fidelity effect. This coefficient of 0.11 ($p = .028$) represents the average difference on this measure for each one-unit increase in fidelity, controlling for all other variables in the model. Put another way, a one unit increase in fidelity (on a five-point scale) is associated with a .11 unit increase in the Quaglia measure, controlling for everything else. More simply, students attending *Leader in Me* schools with high fidelity are expected to have higher scores on

the Quaglia Institute My Voice survey measure than students attending *Leader in Me* schools with low fidelity. Interestingly, even though fidelity*time was not significant, the model that included this variable was found to have the best fit (see Table 22.6 that takes into consideration factors such as log likelihood tests and -2LL). The figure below illustrates the final results, which indicate that students attending *Leader in Me* schools with high fidelity begin and end the year with higher scores on the Quaglia Voice measure than students attending comparison schools or *Leader in Me* schools with low fidelity. Figure 18 illustrates these results for 4th grade females (ie, when gender=0 and grade=0).

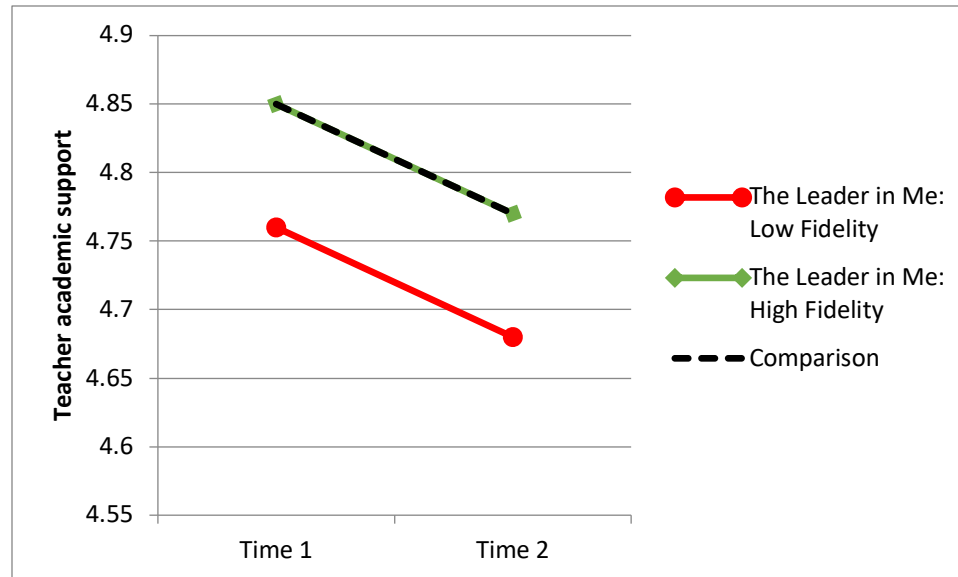


$$Y = \beta_0 + \beta_1 Comparison_j + \beta_2 Time_i + \beta_3 Grade_j + \beta_4 Gender_j + B_5 Fidelity_j + B_6 Fidelity_j * Time_i + \mu_{1j} + \mu_{2j} Time_{ij} + \epsilon_{ij}$$

Figure 18. Quaglia Institute: My voice survey (with fidelity variable) Results

Teacher academic support with fidelity

Recall that the teacher academic support survey tool measures students' perceptions of teacher academic support and includes questions such as, "My teacher wants me to do my best on my homework" and "My teacher likes to help me learn." Multilevel modeling results indicate that there was no significant interaction between fidelity and time on this measure, but there was a significant fidelity effect. This coefficient of 0.06 ($p = .029$) represents the average difference on this measure for each one-unit increase in fidelity, controlling for all other variables in the model. Put another way, a one unit increase in fidelity (on a five-point scale) is associated with a .06 unit increase in perceptions of teacher academic support, controlling for everything else. More simply, students attending *Leader in Me* schools with high fidelity are expected to have higher scores on the teacher academic support measure than students attending *Leader in Me* schools with low fidelity. As evidenced in the figure below, students attending *Leader in Me* schools are expected to have the same scores as students attending comparison schools (but still higher than students attending *Leader in Me* schools with low fidelity). Figure 19 illustrates these results for 4th grade females (i.e., when gender=0 and grade=0).



$$Y = \beta_0 + \beta_1 \text{Comparison}_j + \beta_2 \text{Time}_i + \beta_3 \text{Grade}_j + \beta_4 \text{Gender}_j + \beta_5 \text{Fidelity}_j + \mu_{1j} + \mu_{2j} \text{Time}_{ij} + \varepsilon_{ij}$$

Figure 19. Teacher academic support (with fidelity variable) Results

In sum, these two trends illustrate the different ways that higher levels of program fidelity impact student outcomes. As I will review in the discussion, however, these fidelity results are perhaps most compelling because of the ways in which the fidelity rubric does not actually directly align with *The Leader in Me*'s implementation expectations and framework, suggesting that the implementation framework was not clearly communicated, prioritized or evaluated.

Below I describe the present study's qualitative results that supplement these quantitative findings.

Qualitative Results

In the sections below I report on the qualitative results from this study. Sections I and II relate to student and teachers' perceptions of the influence of *The Leader in Me* on social and emotional learning, and Sections III and IV report on the relationship between *The Leader in Me* and youth voice. In Section I, I describe the ways in which *The Leader in Me* is aligned with the five competencies of social and emotional learning. I review each competency and report on the ways in which students and teachers describe the impact of *The Leader in Me* on their social and emotional learning. In Section II, I show how students have varying degrees of understanding of each of the seven habits, ranging from full comprehension to confusion to complete misunderstanding. In Section III, I report on how students and teachers perceive *The Leader in Me* as influencing their sense of youth voice. I conclude with Section IV where I demonstrate that many students participating in *The Leader in Me* perceive leadership to be synonymous with compliance.

Results Section I: Alignment of *The Leader in Me* with Social and Emotional Learning

Recall that social emotional learning is widely considered to have five interrelated competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015). Recall also that *The Leader in Me* was not designed with the social and emotional

framework in mind, but the competencies are aligned: *self-awareness* encompasses *be proactive* and *sharpen the saw*; *self-management* incorporates *be proactive* and *begin with the end in mind*; *social-awareness* includes *seek first to understand then to be understood*; *relationship skills* can be acquired by *synergizing*, *thinking win-win*, and *seeking first to understand then to be understood*; and *responsible decision-making* is aligned with *put first things first* and *begin with the end in mind*.

Qualitative data supports this connection to a certain extent. That is, qualitative analysis reveals that some students and teachers spoke of the impact of learning the habits and being exposed to *The Leader in Me* in ways that are aligned with the social emotional competencies. However, within these perspectives are also traces of a theme explored later in the youth voice section—that *The Leader in Me* is frequently perceived as a program that makes students behave. In addition, it is also important to note student comments below demonstrate that while certain habits' definitions are aligned with the definitions of certain social and emotional competencies, student definitions of the habits did not always align in the same ways. For example, students describe the habit *be proactive* in numerous ways, and it is therefore present in a number of the social and emotional categories below. This trend is more concretely elucidated in the subsequent section, illustrating the ways in which students are confused about habits' meanings. The results below address each social and emotional competency in turn.

Self-Awareness

Self-awareness is the ability to understand one's own emotions, values and

personal goals, including the capacity to assess one's strengths and areas of growth. Self-awareness also means having a positive mindset, a sense of optimism and self-efficacy, and an awareness of how one's thoughts, feelings, and actions are interconnected (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015).

Self-Awareness: Students

Some students interviewed spoke about the habits and their own facility or difficulty in using these habits in ways that demonstrated this competency – an awareness of their own strengths as well as an awareness of areas where they could improve. For example, Lynda, a fourth grade girl at Venture, was asked if there was a habit that was harder for her to do or to remember to do, and she responded,

The most hardest one for me to probably do is probably think win-win or the one seek first to understand. 'Cause I don't usually listen to people most of the time, I try to take over. And then for think win-win it's kind of hard 'cause I always wanna do something like really bad, but then you know, we have to take turns when we were at this other thing and I had to wait for my turn, I have to all wait and be all bored.

Even though these two habits are more difficult for Lynda, her ability to notice this and articulate it demonstrates a level of awareness of herself. It is also important to note that Lynda also refers to a way in which think win-win helps her to not “do something like really bad.”

Brandi, a fourth grader at Orion, was able to reflect on her own difficulty with the habit seek first to understand, then to be understood:

This one's kind of like a tricky one for me. You listen to someone first, then talk. So you don't wanna like interrupt somebody when they're talking, so like I'm listening to somebody and listening to what they wanna say, and their example of what they want to put it as. And then I say oh, it's very good but this is what my assumption – you don't wanna put it in like a meanish way, otherwise they'll think that you're being mean to them and not agreeing to your idea.

It seems clear that Brandi has thought about this habit, and has been able to reflect on her own ability to listen to and understand others.

Two fifth grade students at Nodes Elementary, Andres and Charles, spoke about their favorite habits in a way that demonstrates an awareness of themselves. When asked if he had a favorite habit or one that he used more often, Andres noted, “Begin with the end in mind. Like before I play on my tablet I always do my homework first and read 30 minutes. I just do my work first.” In response to the same question, Charles noted that his favorite is sharpen the saw: “I used to always make sure everyone else was OK, and I used to never care about myself. I focus on myself a little more than I used to.”

The social and emotional competence of self-awareness was also talked about in ways that suggested that students are reflecting on their own development and behavior. Glen, a fourth grader at Tully, spoke about the ways in which his teacher talked about *The Leader in Me*:

We used to sit down and just kind of talk about how we feel about *The Leader In Me*. What change does it do to you. And it really was nice. We learned more, plus we expressed our feelings. We got to learn more about each other.

This setting aside time to reflect on the ways that the program was changing the students allows them the time to think about themselves in a reflective way and build the social and emotional competence of self-awareness.

Similarly, Julie, a fifth grader at Nodes, commented that since *The Leader in Me* came to her school she has “noticed differences in my friends... They’re doing more homework, they’re being more responsible... paying attention...and they have like different behaviors.” When asked to explain why she thinks students have changed (or if perhaps there is another reason for the change) she responded,

I think it’s *The Leader in Me*. Because they’re starting to notice that, you know, there’s a better them, you know, they can be something better. So I guess they wanna be the best they can be ‘cause you know it’s kind of like you feel guilty ‘cause you’re doing something bad and you feel like you should do something good.

Here, Julie attributes students’ developing self-awareness to *The Leader in Me* program. However, it is again important to note that she specifically talks about being “better” in contrast to the guilt of “doing something bad,” making another connection between *The Leader in Me* and behavior.

Self-Management

Self-management is the ability to regulate behaviors and emotions, including the ability to persevere through challenge, delay gratification, control impulses, and manage stress (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015). Some students

and teachers spoke of the way that *The Leader in Me* positively impacts the students' ability to regulate their emotions and behaviors.

Self Management: Students

Some students spoke about the habit be proactive and the habit put first things first in ways that demonstrate an ability to manage themselves and their emotions. Importantly, a number of these students specifically talk about the way that the habits help them control their behavior as well. For example, when Leigh, a fifth grade girl at Tully Elementary School, was asked to describe what it means to be proactive she responded,

Like, be in charge of yourself. If you have a bad reaction, it's not the other person's fault, it's yours... like if you do something bad and then you blame the other person, it's mostly your fault, because you won't, um, you did the reaction, and the other people didn't tell you like, 'Do it, do it'.

She went on to explain that she tells herself to be proactive "when I get mad. Or too excited." In these examples, Leigh describes what she has learned from the habit be proactive about how to take responsibility for her own actions and to manage her emotions.

Lowell, a fourth grade boy at Tully explained that one of the reasons why he likes *The Leader in Me* is because, "I like it. I like the proactive. My teacher talks about, like if I get angry, or mad, she says be proactive and just calm down if somebody messes with you guys. And I was like, "yeah, ok." Again, we see how Lowell has learned about managing himself and his emotions, skills aligned with the social and emotional

competency of self-management.

Angela, a fourth grader at Orion Elementary School said that she likes *The Leader in Me* “because it helps me get good grades. And it helps me with my behavior.” She went on to explain that she thinks it helps with her grades “because it keeps me on track and it always remind me of being proactive,” and that she feels it helps with her behavior because it helps her “to keep calm, and don’t talk back.” Here, Angela talks about how *The Leader in Me* has helped her to manage her emotions, but she also talks specifically about the program’s impact (and specifically the habit be proactive) on her behavior. Similarly, Eliza, a fifth grade girl at Nodes Elementary School noted that she thinks that *The Leader in Me* positively influences her learning “because instead of messing around we put first things first.” Eliza references a way in which she manages her behavior by thinking of a specific habit.

Finally, Arturo, fourth grader at Nodes, described what being proactive means to him and how it comes up in his own life:

Be proactive to me means like if you see somebody’s doing something, don’t go do it too just because they say, oh brothers do this- you have to like take charge and say, no I’m not gonna do it.... Like if somebody wants me to get into a fight I’m gonna say no.

Here, Arthur talks about how the habit be proactive means to manage his actions and resist potential negative pressure from peers.

In each of these examples, students were able to articulate the ways in which *The Leader in Me* has influenced their self-management skills. Again, though, many of these

examples include ways in which the program teaches them to comply.

Self-Management: Teachers

Some teachers also spoke about ways in which *The Leader in Me* helps students to manage and regulate themselves, their impulses and their behaviors. For example, Ms. Lewis, the K-8 music teacher at Waterberry Elementary School, reflected,

I see kids stop and think. Like even in some of our students with behavioral needs. Like maybe in the moment of crisis, is not the time they're -- but upon reflection, they're like 'No, that wasn't proactive.' You know, like, 'I could have done...' And they process it after. So it's like, how do we get them to do it before? And you know, some of them have contributing circumstances that, you know, are going to impede that. Period. You know, we can't control that. But, you know, they're getting it. They're starting to get it across the board.

Here Ms. Lewis comments that *The Leader in Me* is supporting students in developing the skills to manage their impulses and make better decisions.

Ms. Amber, fourth grade teacher at Nodes, also commented that *The Leader in Me* helps teachers to support their students to regulate themselves and their behaviors in a more productive way:

It's getting them to think about what they're doing. You know 'cause most teachers -- they don't have time to say anything to students, so it's like, 'Get back on task Bobby!' You know what I'm saying? No! It's, 'Bobby, what habits are you not using? What habits are you using? What do you need to [do]?' And then it, like, mentally it like, it helps them think better. ... It's like higher order

questioning you know? And how do you solve the problem?

Ms. Amber also commented that she models the habits for her students so that they can see how she solves problems using the habits. She commented, “I even pick at myself and I say, ‘I’m not using this habit when I should be using this habit.’”

Both Ms. Amber and Ms. Lewis seem to appreciate the ways in which *The Leader in Me* is helping their students to manage and regulate themselves.

Social-Awareness

Social awareness involves perspective-taking (especially with others from diverse backgrounds and cultures), compassion, empathy, understanding social and behavioral norms, and recognizing resources and supports from school, family and communities (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015). Some students and teachers spoke of the way that *The Leader in Me* impacts the students’ ability to consider others’ perspectives and to think more about the feelings of others.

Social-Awareness: Students

Some students spoke about the ways in which *The Leader in Me* emphasizes working together, listening to others, and caring about other people. For example, Angela, a fourth grade girl at Orion, when talking about what she learned from *The Leader in Me*, commented, “Think win-win; like, it’s together is better. And you always work together and share.” When asked why that was important to her she answered, “Because I care about others.”

When asked what the habit seek first to understand and then to be understood

means,

Tim, a fourth grade boy at Orion, said that to him, the habit means “to listen to people so you know – ‘cause you can learn things from them.” Eliza, a fifth grader at Nodes responded that to her it means, “like think about other people not just yourself. Like... when you make new friends ask them questions about themselves, like what they like and then tell them what you like.”

Eliza also commented that her teacher encourages her to be a leader by noticing when classmates don’t have anyone to play with: “At recess there’s like this girl named Zoriah. She doesn’t really have nobody to play with, she’s like really shy, so she tells us if we can go play with her and be proactive.”

Arturo, a fourth grader at Nodes connected a different habit, synergize, to his own life: “Synergize – it means to me like- it’s just like if you’re on a soccer field and you can’t win without your team. You can’t win without working together with your team.”

Edna, a fourth grader at Nodes, spoke about a goal she set for herself in her *Leader in Me* binder:

My goal was to reach my goals for scores and ... be somebody nice and to be respectful to teachers and other students and listen to their point of view that they have. Like help people with problems- like if somebody wants to fight somebody like ... help them to recognize that fighting is not good. Like more better talking about it so they don’t hit each other.

Similarly to the student perspectives above, Edna talks about her own desire to be nice and helpful and also support others in doing the same.

Social-Awareness: Teachers

Some teachers spoke about the ways in which the program has helped them to help their students be more aware of others' perspectives and feelings. For example, Ms. Cummings, a fifth grade teacher at Tully Elementary School, spoke about how *The Leader in Me* has "changed the way I think about the consequences that I give." More specifically, she explained,

It's more than like, 'You're going to miss your recess.' They need to understand why they are getting this consequence. And we're linking that consequence to the behavior. Like, I just did this yesterday. If a child was really rude to another student, I make him write a list of five things that were good about that person, and give it to him. And then he actually did. Our announcements are televised. So I made him do a presentation on the announcements: 'Just as a reminder to everybody in the school, this is how we treat our friends. And this is how we think win-win.' So just thinking that way is just, different than me saying, 'Ok. Well now you've lost your recess. Just go apologize.' Like, they need to learn something from the consequence. Um, and making it relate to what they did."

In this reflection, Ms. Cummings notes that *The Leader in Me* has helped her to alter the consequences she gives in order to help students develop their social awareness and ability to care for others.

Relationship Skills

Relationship skills include the ability to cooperate, resist negative social

pressures, constructively navigate conflict, communicate and listen, and seek help when necessary (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015). Some students and teachers from *Leader in Me* schools reflected on ways that the program has supported students in cooperating and solving conflicts with their peers.

Relationship Skills: Students

Some students spoke about different habits in ways that are consistent with the social and emotional competency of relationship skills. For example, Lynda, a fourth grader at Venture, when asked if there was a habit that she liked the most or found the most useful, responded, “My favorite one is synergize because you get to work together but you still get to have fun at the same time. That’s my favorite one.”

Leigh, a fifth grader at Tully, spoke about what the habit think win-win means to her and what she has learned from it:

Think win-win...like everybody gets what they want. Like if somebody wants to play a game, and you want to play the other thing, you gotta make up a plan so you could both figure out something you both want to do... You want everybody to be happy. Not one person be happy, the other person be sad.

By learning about the habit think win-win, Leigh is thinking about cooperating and compromising. Leigh also spoke about how she synergizes at home with her sister: “I synergize with her when I play. Like when I don’t want to play, or when she wants to play. And then when she has something that I want, like something, so we could be both be happy.”

Lowell, a fourth grader at Tully, talked about how his P.E. teacher encourages

students to work together:

Mr. Ng too, the P.E. teacher, he says, ‘you guys have to synergize to get this job done.’ We play a game called battlefield, and we have to play, work together, synergize to get to the other end. And um, we had to like um help each other. If they’re getting ready to fall, we have to catch them. ‘Cause we have to like get on the super small line without falling down, and we have to make our own path. So we have to synergize to do that, or we just mess up.

Here, Lowell notes that teachers beyond his homeroom are incorporating aspects of *The Leader in Me* into their classes.

Roberta, a fifth grader at Tully, said that one of the goals that she set for herself for the year was to “get along with other people, make new friends, help other people that are in need.” When asked if she was doing anything to work on her goals she responded, “Like if I see someone who’s ... being picked at, I’ll just go there and stand up for them if they can’t speak for themselves.”

Brandi, a fourth grader at Orion, reflected on how she thinks that her classroom is different this year because of *The Leader in Me*:

I think it is kind of because sometimes I don’t cooperate with the kids, sometimes. And um this year ... with the 7 habits they make it like, totally understandable and like, wow, this is really good. Like this is how people put it instead of arguing, and fighting all the time. Because we didn’t have the 7 habits last year and I think it’s really cool we have it now.”

Andrea, a fifth grader at Nodes, spoke about what being proactive means to her by

explaining how she includes kids who are left out:

Being proactive means like, most of the time like we're at recess and be doing something and kids sometimes are left out and they're sitting there. So when this new student Xi, he came, me and my friend Sergio –we became friends with him.... And he's really nice. That's called like being proactive – be proactive at recess and stuff, talk to people who are new or like, are left out of a game, ask them if they want to play or something like that.

Again, we see how a student is interpreting a habit as including others and being kind.

Relationship Skills: Teachers

Some teachers also spoke about the ways in which *The Leader in Me* supports students in developing relationship skills. Ms. Amber in particular, a fourth grade teacher at Nodes, commented on this a number of times. First, when asked if *The Leader in Me* has impacted her teaching, and she answered affirmatively and reflected on how it helps her resolve conflicts in class:

Oh absolutely. 'Cause I can use the habits with my lessons, or if we're having a conflict in class we can talk about the habit and what we should be doing. And I actually use it at home with my daughter too... and her school does it. She's seven. So it's like a language, like an international language.

Ms. Amber also noted that *The Leader in Me* is impacting academics because her students are able to work together more easily:

They're learning to synergize with each other... And they're working together to think win-win as they're doing their work. So if they're doing – you know their

centers or something, 'Are you guys synergizing? Are you thinking win-win? What's the problem, how do we solve it?' And then they get back on task a lot easier.

Finally, Ms. Amber also reflected on the way that the program has been particularly impactful for some of her students in learning how to resolve conflicts and work together, even if the progress may seem slow at times:

There's conflict between two of my students like, constantly. And um when we are able to sit down and talk with each other, they really realize how they should be working together and how they should be treating each other and they've gotten like, so much better since the beginning of the year. I mean things can't happen overnight, you know? ...It's just slower progression. Just like academics would be. Some kids catch on quick and some kids are slower to progress.

From Ms. Amber's perspective, *The Leader in Me* is positively influencing students' relationship skills in numerous ways.

Responsible Decision-Making

Responsible decision-making is the capability to make productive choices about one's behaviors and social interactions in multiple settings. This can involve the consideration of safety concerns, ethical standards, and the ability to accurately assess risky behavior and consequences of different actions (CASEL, 2015; Weissberg, Durlak, Domitrovich, Gullotta, 2015).

Responsible Decision-Making Students

Some students spoke about the ways in which *The Leader in Me* played a role in teaching them to be more responsible with their work and behavior, and others spoke about how it supported them in avoiding bullying and destructive actions.

First, similarly to the social and emotional competence of self-management, some students spoke about how they make the decision to do work before they play or relax. Lance, a fifth grader at Venture, spoke about how he thinks about *The Leader in Me* when he is at home: “Definitely put first things first. That’s the number one thing in my house. Do your homework first before you ... play a video game or do something else.” Ronnisha at Tully said something very similar about making responsible decisions regarding work: “when I get home, I don’t just go out and play. I usually just like, go home, grab a snack, and then do my homework and stuff.” Leigh at Tully spoke about more long-term responsible decision-making when reflecting on the habit begin with the end in mind:

It’s like, you have, like you’re gonna have to have like a plan. Like, you’re thinking like, the present and the future. Like, if you want, like, I’m little. I want to be a doctor when I grow up. So I’m gonna have a plan to study and take notes. So for when, so in the future when I’m going to be a grownup, I could be a doctor.

Carla, a fifth grader at Nodes shared how *The Leader in Me* played a role in helping her to act more responsibly:

My favorite of the 7 habits is probably put first things first.... ‘Cause like to me

my grades matter so much 'cause like I can't be getting D's and F's and stuff like that. 'Cause I put myself to such a high expectation. So I want all A's. Maybe a B. But I like to get home, get my stuff done, get my homework, get my reading and then do stuff.

When asked if *The Leader in Me* helped her or if this attitude (ie, high expectations for herself and working responsibly) was something she already had, she said,

Before, I was getting referrals. I was being bad. But then when I came to this school and I got into the um the student advisory council [The Lighthouse Team], like I felt like it was a wake up call 'cause like in the beginning of the year I was on safety patrol and mentoring so I kind of got kicked off that and it was just like, OK I need to wake up and stop.

In Carla's reflection, there are again references to the ways in which *The Leader in Me* supports a social and emotional competency by reinforcing messages about the importance of good behavior.

Second, other students spoke about how the program has helped some students with responsible decision-making by avoiding destructive behavior and by stopping bullying behavior. For example, Nancy at Orion noted,

I think it helps stop bullying because you know how other people do stuff because their best friends do it? I think it stopped bullying because many boys have their friends and they copy their best friend – and they want to be bigger and badder. But I think that their friends did the right thing I think.... The teacher pressures it more on him which improves it, and then ... the other person starts

following what he does.”

Tom at Orion also noted the impact of students standing up for each other as helping to decrease bullying:

When people start standing up for like, each other, the bullies start just like decreasing. They just start like, going down, because they’re not like as strong anymore. And they – they can’t control other people like they used to. Because people are just like ... sticking up for themselves.

As this first section of the qualitative results demonstrates, some teachers and students talk about *The Leader in Me* and the seven habits in ways that are consistent with the five competencies of social and emotional learning. The quotations above illustrate some ways in which the program seems to be influencing the social and emotional learning of participating students. However, there are also references to the ways in which *The Leader in Me* reinforces some of the social and emotional competencies by emphasizing the importance of good behavior. The section above also begins to demonstrate a theme discussed in more detail below: students do not speak about the habits in consistent ways, reflecting a level of confusion around the habits’ meanings.

Results Section II: Varying Levels of Understanding of Each Habit

Despite students and teachers pointing to numerous ways in which *The Leader in Me* is supporting students in developing the five social and emotional learning competencies, students attending *Leader in Me* schools also spoke about each habit in

ways that demonstrate varying degrees of understanding ranging from full comprehension to confusion to complete misunderstanding. In the sections below I describe the extent of these misunderstandings in the following way. I first referred back to the definitions of each habit provided by *The Leader in Me* (see Table 1). I then broke down each definition into its multiple components. For example, the first habit, be proactive, is defined succinctly as “you’re in charge,” and then more elaborately as, “I am a responsible person. I take initiative. I choose my actions, attitudes, and moods. I do not blame others for my wrong actions. I do the right thing without being asked, even when no one is looking” (*The Leader in Me*, 2016). I considered each sentence of this definition as a separate component of the habit’s definition. I then gathered all of the ways in which students spoke about each habit and compared them to the habit’s actual definition, and reported on the number of times students spoke about each aspect of the habit’s definition.

Students often brought up multiple aspects of each habit. As such, the numbers in the tables below don’t necessarily add up to the number of students total. For example, Wanda at Orion described the first habit, be proactive, in the following way: “Be proactive means that we’re takin’ charge of ourself. Like... when the teacher’s not looking, we still do the right thing... We like stay calm, we do stuff when they’re not telling us to do something, just do it before they talk. So like, it really helps me.” This quotation is divided up into multiple understandings of the habit: you’re in charge; I do the right thing without being asked, even when no one is looking; I choose my actions, attitudes, and moods. I do not blame others for my wrong actions.” Wanda’s definition of

proactive is tallied in each of those three different components of the definition of be proactive.

It is important to note that many of the examples below come from students answering the question, “What does [insert habit] mean to you?” However, any time a student referenced a specific habit, these mentions were examined in these analyses as well. However, the same student was never counted twice for a single component of a definition.

Be Proactive

As mentioned above, the first habit, be proactive, is defined by *The Leader in Me* in kid-friendly terms such as “You’re in charge,” and in more depth as, “I am a responsible person. I take initiative. I choose my actions, attitudes, and moods. I do not blame others for my wrong actions. I do the right thing without being asked, even when no one is looking” (Covey, 2008). When conducting interviews with the 36 student participants, 32 of these students mentioned be proactive in some capacity (for example, some were directly asked what the habit means to them, others spoke about it as a habit they liked, others spoke about it in the context of something they had learned from the program). Some students spoke about multiple dimensions of the habit’s definition, and some included components that aren’t considered part of the habit (i.e., they misunderstood the habit). The analysis below reflects these numbers. Students across the six *Leader in Me* schools spoke about all aspects of the stated definition. Of the 48 times the habit was mentioned by students, the most prominent way (15 different student

mentions) was using it to mean “in charge of yourself” or being able to make your own decisions. Lance, a fifth grader at Venture, for example, reflected, “I really like proactive, you’re in charge of yourself... Because like, you don’t have to follow anybody else, it’s just about you – you control your own self, and your actions.” As Table 13.1 demonstrates, students at *Leader in Me* schools were able to identify all components of the habit’s complex definition. However, as Table 13.2 indicates, many students spoke of be proactive in ways that are not aligned with its intended definition. Students understood it to mean helping others and being nice and behaving, others confused it with another habit, and still others couldn’t define it or spoke of it in a completely different way. Be proactive is the habit that generated the widest range of student understanding and misunderstanding.

Table 13.1. *Be Proactive: understanding*

Part of Definition	Number of Mentions	Example
You're in charge.	15	I really like proactive, you're in charge of yourself... Because like, you don't have to follow anybody else, it's just about you – you control your own self, and your actions. (Lance, 5th grader at Venture)
I am a responsible person.	3	I learned how to be more responsible with my actions. Technically, being proactive. (Frank, 5th grader at Tully)
I take initiative.	4	Be proactive – it means to like – say your teacher said we're gonna do a worksheet. And what you would do is, like say she didn't ask you to take out a pencil but you took out a pencil, you were being proactive because she never asked you to but ... you already know we're gonna do a worksheet and you need a pencil or crayons to do the work. So that's what being proactive means. (Lynda, 4th grader at Venture)
I choose my actions, attitudes, and moods. I do not blame others for my wrong actions.	4	[Be proactive is] like be in charge of yourself.... Like, your reactions. If you have a bad reaction, it's not the other person's fault. It's yours because, I don't know how to explain it... like if you do something bad and then you blame the other person, it's mostly your fault, because ...you did the reaction, and the other people didn't tell you like, "Do it, do it." (Leigh, 5th grader at Tully)
I do the right thing without being asked, even when no one is looking.	3	It's taking charge when no one is looking. So if there's a sub here, like today, we just need to do what we need to do. (Marta, 5th grader at Nodes)

Table 13.2. *Be proactive: misunderstanding*

Other Definitions	Number of Mentions	Example
Help others & be nice	9	Be Proactive – I think it means like, to be helpful and not to, like, be mean. And also to, uh – to be proactive means to help people, and to, uh, be nice. (Wilfred, 4th grader at Hill)
Another habit's definition	2	Like it means to put first things first and you're supposed to do what you're supposed to do first and then you could do all the fun stuff. Like get your work done and then you already have it done. And you could just chill or read a book, but you have to get it out the way first. (Ebony, 4th grader at Venture)
Behave	7	<p>Interviewer: What do you do to be proactive? What does that look like?</p> <p>Angela: [Our teacher] writes stuff on the board that we're supposed to do – yeah sometimes she has to tell us to be quiet. Like on the board it says, um, can you please be quiet today because I'm having a rough day. Yeah she'll put that on the board. And I'll go in, I'll read the board and then I'll go and I'll be quiet and I'll read my book until she's done. And she'll like clip me up. (4th grader at Orion)</p>
Other/ can't define	10	<p>Being proactive – that just tells me, um, like, just to move around more. 'Cause I know proactive means to move. (Ruben, 4th grader at Hill)</p> <p>Be proactive is like putting others first instead of yourself and not being selfish. (Carla, 5th grader at Nodes)</p> <p>When you're proactive...you always have to get your work done, so if you wanna go somewhere you have to finish your classwork, be responsible, honest. And it's like, it's combining to a whole bunch of words. (Eunice, 5th grader at Venture)</p>

Begin with the end in mind

Begin with the end in mind is defined by *The Leader in Me* as: “Have a plan: I plan ahead and set goals. I do things that have meaning and make a difference. I am an important part of my classroom and contribute to my school’s mission and vision. I look for ways to be a good citizen” (Covey, 2008). Of the twenty-two students who spoke about the habit, the most common understanding aligned with the definition “have a plan” and “plan ahead and set goals.” Fifteen mentions of the habit included another habit’s definition or an inability to articulate an accurate description of the habit. Table 14.1 outlines students’ understanding of the second habit, while Table 14.2 details students’ explanations that don’t align with *The Leader in Me* definitions.

Table 14.1. *Begin with the end in mind: understanding*

Part of Definition	Number of Mentions	Example
Have a plan.	6	Make a plan before you do something (Tom, 5th grader at Orion)
I plan ahead and set goals. (also including think ahead, think about the future)	6	Frank: It means to have a goal, and have a plan to go to that goal. Interviewer: And does that come up for you? Do you think about that when you're in school? Or even at home? Frank: Actually yes. I tried to make money to get a toy. And I had to plan to do chores to get the money to afford that toy. When I had enough, I had to reach my goal which was getting the toy. And then I found that goal by getting the toy. (5th grader at Tully)
I do things that have meaning and make a difference.	0	
I am an important part of my classroom and contribute to my school's mission and vision.	0	
I look for ways to be a good citizen.	0	
Gave an example that explains the habit	4	Begin with the end in mind...oh okay I got it. So you know – we have a lot of athletes so – you know how you say you have a big game on Friday. Begin with the end in mind is saying that you need to practice or like study since it's almost SOL time, you study and quiz yourself and stuff so then when the test comes, when the game comes you'll be ready and then you will most likely win. (Shaunda, 4th grader at Venture)

Table 14.2. *Begin with the end in mind: misunderstanding*

Other Definitions	Number of Mentions	Example
Another habit's definition	6	Begin with the end in mind, it means to me, like, to do first work and then play. So if you like have some homework and stuff, you gotta like, do it first. (Glen, 4th grader at Tully)
Other or can't define	9	Be creative. (Casey, 4th grader at Hill) Begin with the end in mind... I believe that begin with the end in mind meant when you were um, begin with the end in mind...I kind of forgot. I kind of forgot what it means. (Lynda, 4th grader at Venture)

Put first things first

Put first things first is defined by *The Leader in Me* as: “Work First, then play: I spend my time on things that are most important. This means I say no to things I know I should not do. I set priorities, make a schedule, and follow my plan. I am disciplined and organized” (Covey, 2008). All 24 students who spoke about this habit were able to speak about it in a way that reflected an understanding of the first two components of the definition—“work first, then play” and “I spend my time on things that are most important.” Most gave an example about doing homework or a chore before going outside to play or doing something fun. Marta from Nodes Elementary and Roberta from Tully Elementary exemplify typical responses. Marta said, “It’s when you work and then play... In the house I do homework first and then I play.” Roberta stated,

Work first, and then you play. Like if you have homework, it’s due by tomorrow. Or like, you have to do, like sign something, and then return it by the next day. You have to do that before you can like play or do anything else. Cause, if you play first, you might forget about it. And then you could get in trouble.

None of the other aspects of the definition (“I spend my time on things that are most important. I say no to things I know I should not do. I set priorities, make a schedule, and follow my plan. I am disciplined and organized.”) were brought up in association with put first things first. Table 15.1 depicts the above explanation. Table 15.2 illustrates that all 24 students who spoke about put first things first demonstrated some level of understanding of the habit, and that there were no notable misunderstandings.

Interestingly, of these 24 students, five stated that they found this third habit harder to do or didn’t like to do it. For example, when asked if there was a habit that was harder to remember to or that he didn’t like as much, Ruben, a fourth grader at Hill Elementary responded with, “Habit number three.” When asked why, he answered,

Because I always – when my mom tells me to do something I don’t really do it right away, so like one time I was readin’ a book and she told me to go get somethin’, and I asked her can I finish this sentence and I end up readin’ the whole page ‘cause I forgot what she told me to do.

Similarly, Shaunda, 4th grader at Venture, affirmed,

The one that I don’t really like is...um...I don’t think I don’t like any of them, I like all of them. Or no – put first things first. It gets on my nerves ‘cause I don’t wanna do my homework first, I just wanna relax. I want to do – I want to sharpen the saw but I have to do it first. So I wouldn’t change it I just don’t like it. But I have to, so I was like I don’t like it! But I gotta do it.

These responses will be revisited in the discussion when considering the possibility of a reference bias, or efficacy bias as contributing to the statistically significant difference

between *Leader in Me* schools and comparison schools, where students in *Leader in Me* schools saw a greater decline in measures related to social and emotional learning.

Table 15.1. *Put first things first: understanding*

Part of Definition	Number of Mentions	Example
Work First, then play	23	It's when you work and then play... In the house I do homework first and then I play. (Marta, 5 th grader at Nodes)
		Work first, and then you play. Like if you have homework, it's due by tomorrow. Or like, you have to do, like sign something, and then return it by the next day. You have to do that before you can like play or do anything else. Cause, if you play first, you might forget about it. And then you could get in trouble. (Roberta, 5 th grader at Tully)
I spend my time on things that are most important.	5	You do the important stuff first so you don't forget to do them, and you get them done. (Tim, 4 th grader at Orion)
This means I say no to things I know I should not do.	0	
I set priorities, make a schedule, and follow my plan.	0	
I am disciplined and organized.	0	

Table 15.2. *Put first things first: misunderstanding*

Other Definitions	Number of Mentions	Example
All 24 students who mentioned put first things first were able to speak about it in a way that demonstrated some level of understanding.		

Think win-win

Think win-win is defined by *The Leader in Me* as: “Everyone can win: I balance courage for getting what I want with consideration for what others want. I make deposits in others’ Emotional Bank Accounts. When conflicts arise, I look for third alternatives” (Covey, 2008). Of the 21 students that spoke about this habit, 15 students described it accurately and 6 students spoke about it in a way that demonstrated a misunderstanding or confusion. Of those who spoke about it accurately, a typical response can be seen in Leigh’s description from Tully Elementary School:

Think win-win... like everybody gets what they want. Like if somebody wants to play a game, and you want to play the other thing, you gotta make up a plan so you could both figure out something you both want to do. So instead, if somebody wants to play the other game, and the other person doesn’t get to play it, so it’s like you want everybody to be happy. Not one person be happy, the other person be sad.

Table 16.1 depicts the above explanation.

In contrast, Ronnisha, a fourth grader at the same school responded to the question, “Are any of the habits more useful to you?” by saying, “I think it’s think win-win. Because like, in almost every school there’s bullying and stuff. So when I get bullied, I just use think-win-win...If they call me something mean, I just say I’m the opposite of that.” Here Ronnisha does describe a way in which the habit seems to be helping her, but it is in a way that is not aligned with the actual meaning of the habit. In another part of the interview Ronnisha speaks about the same habit in a slightly different

way, essentially equating the habit with being optimistic:

“[Think win-win] just means like if you, like yesterday, I was reading Olympics.

And I told my team to think of what if the other team would win. But actually they didn’t win, a different team did. But, I just told them to think win-win. And just think positive.

Again, Ronnisha seems to be leveraging the habit for a beneficial outcome, but similarly to the previous example, it is in a way that does not actually mean think win-win. Table 16.2 below illustrates other misunderstandings.

Table 16.1. *Think win-win: understanding*

Part of Definition	Number of Mentions	Example
Everyone can win	10	Think win-win... like everybody gets what they want. Like if somebody wants to play a game, and you want to play the other thing, you gotta make up a plan so you could both figure out something you both want to do. So instead, if somebody wants to play the other game, and the other person doesn’t get to play it, so it’s like you want everybody to be happy. Not one person be happy, the other person be sad. (Leigh, 5 th grader at Tully)
I balance courage for getting what I want with consideration for what others want.	1	Interviewer: What about think win-win. Like what does that one mean to you? Tim: To like...to not only care about yourself, and care about other people. (Tim, 4 th grader at Orion)
I make deposits in others’ Emotional Bank Accounts.	0	
When conflicts arise, I look for third alternatives	0	

Other: Gave an example that demonstrates understanding of the habit	4	Think win-win – okay. It’s like basically everybody gets to get what they want. So say that my brother – he wanted to go to [a local amusement park], but I wanted to go roller skating. And my dad said that we only have two hours of fun. So we were like, for one hour we’ll go to [the amusement park] and then another hour we’ll go roller skating for me. (Lynda, 4 th grader at Venture)
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Table 16.2. *Think win-win: misunderstanding*

Other Definitions	Number of Mentions	Example
Another habit	2	Um, like, outside, we play four squares with my friends around the swings. And in four squares, um, me and my friends, we’re usually like, “Ok, we gotta work together. I’ll pass the ball to you, then you try to get him out.” And like, ok, like together is better. (Sylvia, 4 th grader at Tully)
Forgot	1	Well, it’s just like, um, seek first. No not seek first. Uh, what was that? Uh, it’s just like “Sharpen the saw,” we haven’t talked about that one yet. So uh, think win-win. You have to, oh man, I forgot. (Lowell, 4 th grader at Tully)
Other	3	It’s like...when...we get a good grade on our test, our teacher fills in, her initials in the gumball machine for the end of the year for a cookout. (Abel, 4 th grader at Venture)

Seek first to understand then to be understood

Seek first to understand then to be understood is defined by *The Leader in Me* as: “Listen before you talk: I listen to other people’s ideas and feelings. I try to see things from their viewpoints. I listen to others without interrupting. I am confident in voicing my ideas. I look people in the eyes when talking” (Covey, 2008). Of the 26 students who spoke about this habit, only 4 were completely unable to describe what it meant or to talk about it in an accurate context (see Table 17.2). The other 22 students spoke about seek

first to understand, then to be understood in some capacity that was consistent with an aspect of the definition (see Table 17.1).

Interestingly, though, three of those students said that they don't think about the habit or put it into practice and three said they found it to be the hardest habit. For example, when asked, "what about seek first to understand then to be understood? What does that mean to you?" Lance, 5th grader at Venture, at first answered,

If you're mad, like if you're in a conflict with somebody...you gotta say something like, I don't like what you're saying about me or something like that. And then they – you want them to understand you and then you'll understand them. And then the conflict will be over.

When then asked if he thinks about that habit during the day he answered, "Um. No." Casey at Hill Elementary was also able to give a clear definition ("listen to someone else and what they're trying to tell you before you answer or say something back"), but when asked if he ever thinks about that one, he also answered that he did not.

Three students commented that seek first to understand, then to be understood is difficult. When asked if there was one that was harder to remember to do or just hard to do in general, Tim at Orion answered, "Uh, seek first to understand 'cause sometimes you really got something to say but you need to wait." In response to the same question, Eliza also cited this habit simply because "I just forget it." Finally, when asked, "Is there anything else you feel like I should know as somebody that's trying to learn about *The Leader in Me*?" Guadalupe at Hill responded, "Um, it's not easy. Especially number five... seek first."

See Table 17.1. *Seek first to understand, then to be understood: understanding*

Part of Definition	Number of Mentions	Example
Listen before you talk	8	Seek first to understand then to be understood. That means like listen and then talk. (Yasmin, 5th grader at Orion)
I listen to other people's ideas and feelings.	13	My favorite seven habit is the seek first to be understood, and then to be understanding... because people get to listen to another person, and then the person that was speaking gets to listen to the other person, like in case they get in a fight. (Steve, 4 th grader at Tully)
I try to see things from their viewpoints.	10	Listen to someone else before you say something. So like, if you accuse someone of something make sure you hear their story. (Guadalupe, 5 th grader at Hill)
I listen to others without interrupting.	1	This one's kind of like a tricky one for me. Sometimes like, you listen to someone first, then talk. So you don't wanna like interrupt somebody when they're talking. (Brandi, 4 th grader at Orion)
I am confident in voicing my ideas.	0	
I look people in the eyes when talking.	0	

See Table 17.2. *Seek first to understand, then to be understood: misunderstanding*

Part of Definition	Number of Mentions	Example
Doesn't know or can't explain	4	First you have to think, and then if you like, like it doesn't sound right. So first, keep thinking 'til it sounds right, and then you can say it out loud do the other person.... Like, say um, let's say I was gonna go to a fair. And I said like, "Ok, I'm gonna go to the Washington House." And like, ok, that doesn't sound right, maybe I should just say it so it could sound right. "I'm going to the fair." (Sylvia, 4 th grader at Tully)

Synergize

Synergize is defined by *The Leader in Me* as: “Together is better: I value other people’s strengths and learn from them. I get along well with others, even people who are different than me. I work well in groups. I seek out other people’s ideas to solve problems because I know that by teaming with others we can create better solutions than anyone of us can alone. I am humble” (Covey, 2008). Of the thirty students who spoke about this sixth habit, 20 of them spoke about it in terms of working together, 3 spoke about it as getting along, 3 specifically used the phrase, “together is better,” and 11 gave an example of what synergizing actually looks like (see Table 18.1.) Interestingly, only one of the students specifically spoke about valuing others’ strengths or seeking out others’ ideas (see Glen’s response in Table 18.1 below).

Seven students had difficulty speaking about Synergize in a way that embodied the idea, and three spoke about it by confusing it with another habit. Table 18.2 details the extent of these misunderstandings.

Notably, while eight students spoke about synergize fondly as their favorite habit, four students cited it as the one they found hardest to do. Yasmin at Orion stated that she liked the habit be proactive, but did not like synergize:

I don’t like – I hate working with other people. It’s just like not me because usually I get good grades without working with other people because I just like – if I say something I just go with it and I don’t have to, like, listen to other people. Which is good to listen, and when we work together I have to listen, and I do listen – at the end we all get a good grade. But I just like doing what I like.

Also at Orion, Nancy had a different feeling about synergizing, citing it as her favorite “because, um, I’m a really friendly person. I’m really outgoing. ...If I work alone, I go to another group and start working with them. I’m not that person that works alone. I concentrate with other people.” These conflicting feelings about this habit are also addressed in the discussion when considering the possibility of a reference bias in responding to survey questions.

Table 18.1. *Synergize: understanding*

Part of Definition	Number of Mentions	Example
Together is better.	3	Well, synergize – like together is better. Like you cooperate with each other without arguing. (Brandi, 4 th grader at Orion)
I value other people’s strengths and learn from them.	1	Work together. It comes up in groups. You can’t like, if there’s a question on the table, you’re not the only one supposed to do and get the answer. Because you have to make your partner also useful. So you gotta both work out the problem, and you both will learn something from it. (Glen, 4 th grader at Tully)
I get along well with others, even people who are different than me.	3	Synergize to me just means like get along with people and like ... when we do group projects and it’s not my favorite person to be working with, just like think like-- synergize means to be like, just to be neutral and just be nice to people. (Carla, 5 th grader at Nodes)
I work well in groups.	20	Like to work together...work in a team, um, like have more ideas for something. (Wilfred, 4 th grader at Hill) Synergize means to like uh work well- like to work good with other students. Like you should always be like on the same page. Like not someone else doing this and then you’re doing that. You should always stick together. (Edward, 5 th grader at Nodes)

Synergize, it means to me like, it's just like if you're on a soccer field and you can't win without your team. You can't win without working together with your team. (Arturo, 4th grader at Nodes)

I seek out other people's ideas to solve problems because I know that by teaming with others we can create better solutions than anyone of us can alone. 0

I am humble. 0

Other: Gives an example 11

Ebony: We talk about that with our school counselor. It's like getting along and compromising... That's what synergize is.

Interviewer: Do you think about that one a lot?

Ebony: Yeah when we work together, like my dad says to my sister like we need to work together to like, get through and clean up and stuff. Yeah so, that's what synergize is mostly about, like working together. (4th grader at Venture)

I really like synergize... 'cause I have to synergize with everyone – my brothers, my club, my class, with teachers. And that – that's helped me a lot and, uh, I get to also have fun when I'm doing that habit. Like with my clubs like, when I work together with my, um, members, it's super fun, and I know I can't do the job without them. (Julie, 5th grader at Nodes)

Table 18.2. *Synergize: misunderstanding*

Other Definitions	Number of Mentions	Example
Another habit's definition	3	Oh, synergize. It's kind of like the same thing as "Think, win-win." Like, um, if you're on a different team. Like let's say for football, if you're in a different team. And you want to be in the other team, we could switch off. One person from my team could switch into his team, and one person from his team could come to my team. That's like, kind of synergize. (Steve, 4 th grader at Tully)
Other or can't define	7	Interviewer: Synergize, like what does that one mean to you? Angela: I don't really know. Interviewer: Okay. Is that the one where you like work together or something like that? Angela: Um, no. (4 th grader at Orion)

Sharpen the saw

Sharpen the saw is defined by *The Leader in Me* as: "Balance feels best: I take care of my body by eating right, exercising and getting sleep. I spend time with family and friends. I learn in lots of ways and lots of places, not just at school. I find meaningful ways to help others" (Covey, 2008). Twenty-six students spoke about the seventh habit, sharpen the saw. Five of these students spoke about it as balance, and 11 spoke about the importance of resting, exercising and taking care of yourself. Notably, only one student spoke about spending time with friends, and no one spoke about "finding meaningful ways to help others" (See Table 19.1). Nine students could not identify that habit or spoke about it in a way that did not reflect the ideas behind sharpen the saw (see Table 19.2).

While four students spoke of this habit as their favorite, four cited it as especially hard. For example, Guadalupe at Hill reflected that she didn't like it "because it gets boring" and Wilfred (also at Hill) said it was hard

because that one you have to remember to have peace, to be smart and um, to have exercise.... it's kind of hard to have peace... because sometimes you always have to work. You can't have rest or nothing. You can't really have good rest.

On the other hand, Shaunda at Venture was especially enthusiastic about sharpen the saw:

I love that one. Just get to relax – that's all I'm doing right now! I'm relaxing. Or taking care of yourself when you get sick. How I sharpen the saw is just talking – like what I'm doing right now. I love to talk. My mom says I have a chattermouth,

I don't wanna stop... I like sharpen the saw the most 'cause you get to relax!

Later in the interview, after reflecting that she didn't prefer the habit put first things first because it "gets on my nerves 'cause I don't wanna do my homework first, I just wanna relax," she revisited her favorite habit by saying excitedly, "The one I love the best – I said it a bunch of times – is sharpen the saw. Yay!"

Table 19.1. *Sharpen the saw: understanding*

Part of Definition	Number of Mentions	Example
Balance feels best.	5	Sharpen the saw – that’s like your mind, your body, um, what you do basically. You gotta make sure you keep them all in balance. You know how you get a headache? That’s not keeping your mind in balance. So you gotta think about some good things, or just keep your mind on something. Think about some good things later, just keep your mind on what you’re doing. If you think of more than one thing and it just goes and goes and goes and goes and goes, and then you start to – your brain starts to go like, this is too many things. (Alejandra, 4 th grader at Venture)
I take care of my body by eating right, exercising and getting sleep.	11	That one’s like to do exercise, not like you’re squished in the couch and watching TV and stuffing your mouth with junk food. (Leigh, 5 th grader at Tully)
I spend time with family and friends.	1	The one I think about the most is sharpen the saw... because it helps you with your body, mind, heart, and soul. And it gets you prepared for a lot of things. You can sharpen the saw when you’re actually taking a test ‘cause when we take long tests we take breaks, so you sharpen the saw – you stand up for a little bit, talk to your friends and stretch and all that, and then we get back to the test. (Eunice, 5 th grader at Venture)
I learn in lots of ways and lots of places, not just at school.	0	
I find meaningful ways to help others.	0	

Table 19.2. *Sharpen the saw: misunderstanding*

Other Definitions	Number of Mentions	Example
Other or can't define	9	<p>The sharpen the saw. Um, I don't really understand it that much. I just try to do, I just try to see what it means. I've been doing a little bit of research of it. And I think it means that, sharpen the saw, um, I think it means like, uh, I don't know, like, I think those are like all the habits put together. (Sylvia, 4th grader at Tully)</p> <p>The first time I heard it, I didn't understand it, but now I understand it. Sharpen the saw means like ...not like synergize, like do it all by yourself and be confident. Like, it's kind of hard ... like, and then, but I don't really understand that that much. (Edna, 4th grader at Nodes)</p>

Based on the results reported above, students have a range of understandings of the seven habits. Some students are very clear on certain habits, while others express partial understanding, and still others either aren't able to speak about specific habits or describe something completely unaligned. The implications of this wide range of understanding are explored in the discussion.

Results Section III: Youth Voice

Recall that drawing on the work of other scholars, I define youth voice as young people feeling authentically empowered to express themselves and take action at the individual, group, and/or community level (Lensmire, 1998, 2000; Mitra, 2008, 2016; Mitra & Serriere, 2014; Mitra, Serriere & Kirshner, 2015; Quaglia, 2014; Quaglia & Corso, 2014). The first section that follows first outlines some of the ways in which participating students spoke about *The Leader in Me* positively impacting aspects of their sense of voice. The second section describes how teachers also spoke about the program

as having influenced them to give their students more responsibility, power and input into their classrooms. Finally, in the third section, I demonstrate that despite some efforts to foster student voice and to empower students to be leaders, *The Leader in Me* is in fact often being leveraged *not* in this way, but rather as a way to maintain compliance—a very different outcome than that of the program’s goal.

Student Voice: Student Perspectives

Some students spoke about how *The Leader in Me* is influencing different components of youth voice (young people feeling authentically empowered to express themselves and take action at the individual, group, and/or community level). This section describes how students spoke about how the program is empowering, how the program encourages them to express themselves, and how the program has allowed them to take action at the individual level, group level, and community level.

Youth voice: empowerment

Some students spoke about the ways in which *The Leader in Me* had an empowering effect on them. For example, when asked if he felt that the program impacted how the school or the classroom feels, Tim at Orion answered, “Yes. It feels like, like you’re more mature. And, and like you are more grown up.” Ronnisha at Tully Elementary said that she thinks the program is beneficial to students because it helps them to be leaders: “I think it helped quite some students a lot. Because it tells you how to step up and be the leader.” Lowell, also at Tully, noted that he has felt empowered to be a leader because of the positive attention he received from being kind to others:

Everybody's been saying, 'Lowell, you're great. You're awesome at caring about people.' So that started me ... to be a leader. Since this past year, I've been doing stuff good for the classroom. Every time we make a test, I make a flower. And it says 'Power Flower.' And I say, 'Everybody touch it, and you're going to do good on your test.'

Lowell's comments suggest that the praise he has been receiving from his school has empowered him to be a leader in his classroom.

Youth voice: individual expression

The program also seems to be influencing students' feelings about expressing themselves. Julie at Nodes Elementary spoke about the way in which the eighth habit (find your voice) inspired her to write and deliver a speech at her upcoming fifth grade graduation:

In my club we have to do speeches. And leadership day I and a few members of my team, we had to do speeches in front of, like 20 people or so. So I get nervous ... so that [the 8th habit] was helpin' me. And I'm gonna do a speech on graduation day too, and it's super scary because I'm like the only one that's gonna do a speech because everyone else was scared. And when people were volunteering no one raised their hand, and I remember the eighth habit that I could find my voice and that I can speak so um, I raised my hand and I said I will write a speech. So now I'm doing the speech. I wrote it, I gave it to Ms. Crawford...I'm gonna read it on graduation day, which is the whole fifth grade, in front of the whole school. I practiced in front of my team - I was pretty nervous

... but I tried and I found my voice.

Carla, also at Nodes, described the 8th habit in this way: “it’s supposed to mean like get up in front of a crowd and you be confident and talk.”

Youth voice: taking action at the individual level by speaking up for others

Some students spoke about the way *The Leader in Me* has helped them speak up for other individuals. When asked if he liked one of the 7 habits the most, Arturo at Nodes responded, “There is actually 8! Um, find your voice.... Find your voice is, well like for you to speak up if somebody is being bullied- speak up. Find your voice so you can say, oh no. That’s not right.” Edna at Nodes also spoke about the 8th habit in terms of speaking up for others: “The 8th habit is find your voice. Find a voice. ...That means that to find my, like the same thing as *The Leader in Me*, to find the voice that you have inside yourself.” When asked what that means to her, to find her voice, she responded, “Like find a voice means like to help you find a voice ... you have inside. Helping people. Like if you see somebody, they having trouble ... then you help them.”

Youth voice: taking action at the group level

The student Lighthouse team, the student-government meetings that are a component of *The Leader in Me* program, is one way that students are given the opportunity to take action at the group level. Frank at Tully Elementary spoke about the student-led work he does as a member of the Lighthouse team: “We meet once each month.... We plan the Wacky Wednesdays, and we plan most of the events...I made pajama day. I had footsies on.... and we plan other special events.” Eliza at Nodes Elementary, who is not on the Lighthouse team, was still able to speak about the ways in

which she benefited from the student leadership: “We have three people in our classroom that are in the [Lighthouse team]. They will tell us like what they’re doing. And how they are doing the seven habits in there.”

Youth voice: taking action at the community level

Finally, there were some (though limited) examples of students taking action for the larger community as a part of *The Leader in Me*. Marta, the head of the lighthouse team at Nodes Elementary who said that she helps run the meetings, spoke about a food drive she helped organize:

I’m in charge of like, activities that we do. Like right now we’re doing a canned food drive.... First the teachers and students collect cans, they put – they keep all those cans inside their classroom and then on Fridays we collect cans....We’re gonna give it to a shelter.

Arturo also spoke about this project at Nodes:

Have you heard about the lighthouse team? Well I’m in the lighthouse team.... It makes stuff for the school to do to give back to the community or anything. And it’s just- we wanna see kids grow in The Leader in Me.... We come and talk about – and just now we have a can program. We’re giving cans to a donation and we help. And we have a lot. 3rd grade has like 116.

It is important to note, though, that Nodes Elementary school was the only *Leader in Me* school that mentioned having this kind of donation program in place.

Student Voice: Teacher Perspectives

Teachers spoke about a number of different ways that they felt that *The Leader in Me* empowers students. For example, Ms. Lewis, the K-8 music teacher at Waterberry Elementary School, stated that one of the things she specifically likes about the program is the way that it empowers students:

My favorite thing is seeing the kids like, rise to the occasion, and working with adults in sort of a peer to peer relationship that removes the, 'I'm above you' sort of thing. And letting kids feel comfortable talking to adults, saying 'Hey, I don't know if I really agree with you. What if we tried—' And empowering them to have that voice, and the confidence to be like, 'I know you're the adult but I don't agree with you' in a respectful manner. Because I think that their input is so important.

Ms. Lewis also described how she delegated work to students when planning the school's leadership day and how empowering that was for her students:

I delegated my entire job. It was the first time that I was able to sit and watch in a way that was really cool. Because I had my eighth grade sound person training a third and fourth grade music person. The eighth grade girls did all of the technology stuff, and they MC'ed the assembly. They coordinated the performance. The kids coordinated what those performances were going to be. So you know, for them, that was a really cool experience. And I think for the adults it was neat to see like, they can handle it. You know, given parameters.

This example includes her work with the upper-grade students, but it is nonetheless

illustrative of the ways in which all students, including the third and fourth grades students, were included in leading the special event.

Ms. Amber, a fourth grade teacher at Nodes Elementary, reflected on the ways in which the program encourages leadership and makes students feel as though they belong:

I just think --it just helps students become leaders and that they are somebody.

And they all have a role and they're not not important. Because I remember growin' up in school and I'm like, I'm just back in the classroom, I'm the shy one, I don't talk, I don't do anything. If we had this, I would have been part of the community, you know? And I would have probably had more friends because you know those ones that were, like, bonding with each other, they're coming out of their shells.

Ms. Becker, the counselor at Tully Elementary School described how her school had incorporated the seven habits into their RTI (response to intervention) system and how she felt that this combination was empowering to students, especially at the second tier of RTI:

I do a lot of work with behavior and students. So a tier 2 initiative would be "check-in check-out." So that's ... a research based practice and intervention where students, um, they begin with the end in mind. So there's a habit. They set their goals for the day. We check in every morning, we talk about what our day's going to look like... Some do a mid-day check in, but all do morning and afternoon. So they check in with me every morning. And so we have a really structured kind of behavior system that they're on, working for incentives and

rewards for themselves, for their class, um, daily. And we chart and graph their progress every single day. So they chart and graph their progress every single day. So it allows them to take ownership of their behavior, and feel really proud about what they can control. So it's really empowering. And so we integrate the seven habits into that constantly. We're beginning with the end in mind, we're synergizing because we have to work together. You know, everyone's goal. And we think win-win constantly. And just by coming in every morning, it's incredibly proactive for them. Because they're taking charge and coming in without their teacher having them come in, or me go get them. So yeah, it's just integrates really beautifully with anything that you're already doing." From Ms. Becker's perspective, *The Leader in Me* supports their RTI work by empowering students to take control of their behaviors.

Ms. Becker also explained how a primary reason why she advocated for the program was to empower students:

I worked with the principal to read *Leader In Me*, and kind of brought it on and applied for the grant and did the whole kind of initiative to bring it to Tully. After reading *Leader In Me*, I mean, it instantly spoke to me. So, it was exactly the reason why I became a school counselor. So I definitely connected with it, and got really excited about the opportunity for students. It's just so empowering for them, and that's exactly what they need.

She went on to explain more about why the program resonates with her and why she feels that it is so empowering for students:

It's just the simple idea that every single student is gifted. And that it's kind of our job as professional educators to reach in there and pull that out, and then hold it up in front of them. So they're forced to recognize their gift and to use it. And so it's just an empowering thought for our students who often, especially here with this demographic, often don't have a lot of control. There are a lot of factors in their lives that they can't control. So it's so empowering for them to take control of their learning, and their behavior, and it's, you know, it's just a really powerful program for them.

Ms. Becker at Tully Elementary also spoke about the way in which the Lighthouse Team has allowed students to take action at their school.

I run the student lighthouse team...they make a lot of really good decisions. They've done the seven habits of happy diners for our cafeteria rules. And they've done that completely on their own. And they did a survey, and they figured out what the kids wanted, and those will be our happy diners seven habits. And so yeah, they've really taken it and run with it, which has been awesome to watch.

Youth voice: Teachers' changing attitudes toward students

Seven teachers and administrators (out of twelve total) spoke about the ways in which they felt that *The Leader in Me* encouraged them and others to think differently about students.

Ms. Cummings, a fifth grade teacher at Tully spoke about how the program encouraged her to give her students more responsibility:

It definitely has changed the way I think about the consequences that I give... I'm a very like, controlling person. So I made it different, it's like, "You guys work it out." [Before] I wasn't before giving them enough credit. I was like, they're ten and eleven, they can't do this. And that's not true. They have way more social skills than we think.

Ms. Becker at Tully Elementary spoke about the way in which the school culture had shifted from the year before, specifically in the ways in which she felt that teachers were giving students more control:

I would say there has definitely been kind of a paradigm shift in culture in regards to students being leaders. And in regards to ... letting them have that control um over their learning and letting them have that control, it's definitely a different shift in mindset.

She did concede, though, that this was a difficult transformation for teachers:

I think that might be one of the most difficult concepts for faculty. Because in order for a student to take control, you have to give them that control, and be ok with the result of whatever that looks like.

Ms. Becker also spoke about the way she felt that the way that *The Leader in Me* frames classroom jobs is empowering:

I think a lot of times, our nature is to assign someone a role. Or assign someone, and then decide whether or not they're meeting that expectation. But I think with The Leader In Me, you're shifting that mindset to look at each child, to help them figure out what they're good at, and then to create a role in which they can

succeed in. Based on what they're good at... It's just a definite mindshift. Instead of just saying, 'Ok, you're going to pass out papers. And you're going to do this, and you're going to do that.' It's really looking at each student individually and figuring out what they're good at. And then creating a role for that student. For example, even thinking of some things that some folks might see as negatives, are really positives. It's just hard to be seen in a positive light in the structure of an education K-5. So, there are gifts that are underappreciated in the public education system. So if we can give them a reason to use that gift. For example, if you have a student that's let's say, really attention seeking from their peers. And always making jokes and doing things and laughing out loud and trying to get everybody's attention, it's great if they're like the czar of fun. And so maybe they get like a five minute set at the end of the day to do their joke-telling. And then they can really think about it, and then they get that attention that they're craving. But it's structured and it's managed. And it's not throughout the day, because you know, 'You gotta save it for your five minutes. Save it for your five minutes,' and you know, 'Write that down, you've gotta save it for your five minutes.' ... It's the looking at the student. We'll have a student that hops up every time an adult comes in the room.... he wants to talk to you, wants to acknowledge you, wants to say hi. So what an awesome greeter. He's already there, that's what he likes to do. So let's have that student do what he's good at. And let's show him that that's a gift. And it's really about those underappreciated gifts for students.

Ms. Becker then went on to explain what this mindset shift looked like for her. She

described a local food bank project that delivered backpacks to the school and how she enlisted students to become the leaders of the backpack program, something she says she might not have done before *The Leader in Me*:

Instead of me distributing those backpacks every week, ...I have a team of feeder leaders. And they've been doing it all year. And they love it. They know who the backpacks go to, they know who the teachers are. And then the teachers know who they get. So every Friday morning, after announcements, they come down. I have someone who's the key master, he unlocks the door. They know exactly what to do, they get them, they deliver them. Then I have someone who does the computer and sets the order for the next week. And it's totally hands off. Totally student run. So it's great, and they feel so good about it. And it's awesome to give them that opportunity. ...I picked some students who may be have difficulty getting here in the morning. Or maybe weren't excited about coming to school in the morning. Because we do it first thing Friday mornings. So they get excited to come down and to do it and to have a role and to know that they're helping other students.

She then went on to talk more about how *The Leader in Me* had played a role in her desire to empower her students:

I think had I not been thinking with that mindset, I maybe would have said, 'Well, I don't want to pull kids from class, so I'll just deliver the backpacks. I'll just deliver them or have some faculty help me.' Or if there happens to be a kid in the office, I'll grab them. Or I'll just run down and grab a couple of fifth graders. But

it made it like an actual, meaningful leadership experience for these students, by just shifting that and giving them the control and saying, ‘What do you want this to look like? How do you think we should do this?’ And they’re the ones that designed when they should deliver it, how they should do it, how many bags per student ... you know, they really took it and kind of ran with it.

Recall that *The Leader in Me* speaks of a “paradigm shift” in the way that teachers think and schools are run. The principal at Waterberry spoke about what this paradigm shift means to her:

For me it really is about um, looking at kids not from the defensive stance, but you know, what strengths do they have? How can we build on what they bring? And that begins with you know, an appreciation of, an awareness of the child in front of you. So and you know, it also, paradigm shift also ... flies in the face of the system that we are in, specifically. You know, public school. And then more broadly, a society that still does punishment as the form of correction.

Ms. Lewis described more concretely what part of this paradigm shift looked like at Waterberry Elementary School by explaining the process in which the teachers rewrote the school’s mission statement to align with *The Leader in Me*. Even though this is the only example of its kind, it illustrates the way that one school has taken on this approach:

The first [school vision] was written in a vacuum. We were told there was input from staff, but the input was minimal.... There was really very little buy-in. You know, we heard it. But what did it mean. The kids couldn’t really tell you. So we decided that because ... we’re definitely going in a different direction, that if

we're going to make a change, that now would be the time.... And the staff participation in that brainstorm process was literally moving. Every single staff member from paraprofessional to teacher, the dean was in there. [The principal] didn't want to sit in because she was afraid that her presence might impede the process. It was incredible. The whole library was wallpapered in word lists and circles.... We did it with the kids, so there's student voice in it. Um, that was another thing that the lighthouse team really wanted. They wanted to have the kids have a part. Like, what do they think? We're not the only people here. Um, so that took, a couple weeks. Probably two to three weeks from brainstorm to action team meeting and coming up with options. And then, we voted ... and it is "inspiring learners, empowering leaders." That's going to be our new mission statement. ... It's something the kids can own. It's easy for them to understand. What we had previously was very long and cumbersome. You know, even the morale in the building the two weeks after we did that was really impacted. Because it was such an interactive, really working together on stuff that people liked to talk about, not testing data. Not, you know, it was something that we all have a vested interest in.

Again, from all 12 teacher and principal interviews, it appears that this is the only school that embarked on this kind of all-school collaboration, but it is an example of a way in which the teachers and students were empowered and given a voice.

From the teacher and student perspectives reported on above, it appears that some teachers made efforts to empower their students and that *The Leader in Me* is positively

influencing youth voice along a number of dimensions. However, the quantitative results along with the data reported in the section below lie in contrast to these reports. This conflicting data is instructive and is addressed in the discussion, specifically in addressing how teachers and schools might learn from this study to improve student outcomes.

Results Section IV: What Does it Mean to You to Be a Leader?

Recall that Covey (2008) defined leadership as a combination of independence (comprised of the first three habits: be proactive, begin with the end in mind, put first things first), interdependence (comprised of the next three habits: think win-win, seek first to understand, then to be understood, synergize), and renewal (achieved by the final habit, sharpen the saw).

Of the 36 students interviewed, I asked 32 of them the question, “What does it mean to you to be a leader?” All but five of these 32 students gave multidimensional responses. For example, the conversation with 5th grader Lance at Venture Elementary School proceeded as follows:

Interviewer: Thinking about *The Leader in Me*, what does it mean to you to be a leader? Like what does that mean?

Lance: A leader means to be somebody that doesn't follow anybody else. You're the leader, you're the person that people follow. And don't be a follower, be a leader.

Interviewer: So what does a leader do? Like what's something a leader does?

Lance: A leader – they stick out for people that are being bullied and stuff, like they’re the um, person who helps the bystanders and stuff.

Interviewer: What are some things that you do to like, be a leader at school, in your class, or at home?

Lance: Um, I lead um a lot of things – like I lead my test scores and stuff like that. And I just jump – like whenever somebody’s like, like somebody’s being mean to somebody else I just help – I help that person out.

Here Lance talks about being a leader as someone who doesn’t follow others but rather is followed himself, as someone who advocates for others, and someone who is strong in certain areas (in his case academics). Indeed, Lance’s response exemplifies two notable themes among student responses: not following others (mentioned by 9 students), and helping others (mentioned by 6 students).

Another prominent theme in student responses included comments equating leadership to being a role model or setting an example for others (mentioned by 9 students). Andres at Nodes, for example said that to him, being a leader means to “set an example for other kids.” (See table 20.1 for summary of student responses that are aligned with *The Leader in Me* definition of leadership.)

The most prominent theme, though, is that 17 students spoke about leadership in terms of compliance or good behavior. For example, when Abel, a 4th grader at Venture, was asked, “What does it mean to you to be a leader?” The conversation progressed as follows:

Abel: They be proactive. They don’t be a follower.

Interviewer: Are there ways that you try to be a leader in your class?

Abel: Yes.

Interviewer: Yeah? Like what do you do?

Abel: To uh, like be quiet.

Similarly, when Leigh, a 5th grader at Tully is asked about what is something a leader does? She responded, “Like, help people. Be in charge of yourself. And um, not to be disrespectful to adults.” Eliza at Nodes said that to her, being a leader “means like getting good grades and not being bad. Listening to teachers.” Angela at Orion Elementary answered the same question by saying, “Like when we’re not doing good in, um, our lines, we help keep people quiet. So we could get a good report or something. Like when we have a substitute.” Guadalupe at Hill spoke a bit about the social-emotional components of leadership, but then gave an example of leadership related to compliance:

Interviewer: So, this idea of *The Leader in Me* – what does it mean to you to be a leader? Like what is something a leader does?

Guadalupe: Uh, nice? Um, don’t get angered as easily, and patient?

Interviewer: Okay, cool. And like, are there ways that you try to be a leader in your class?

Guadalupe: Um, I’m always telling everybody to be quiet.

As evidenced in some of the responses above (specifically Guadalupe and Leigh’s responses), many students gave multidimensional responses to the question “What does it mean to you to be a leader?” They have an understanding of leadership that includes both actual leadership qualities as well as beliefs about compliance. Leigh, for example,

believes that being a leader means to help others and be in charge of one’s self, but also to not be disrespectful to adults. Only ten students spoke of leadership in a way that was fully aligned with *The Leader in Me’s* conceptualization of leadership (2 from Venture, 1 from Tully, 1 from Orion, 4 from Nodes, and 2 from Hill). See Table 20.2 for a summary of student responses that are related to behavior and compliance.

Table 20.1. *Student responses to the question, “What does it mean to you to be a leader?” Aligned with The Leader in Me definition of leadership*

Definition	Number of Mentions	Example	Notes
Don’t follow others	9	For me it means like you’re a leader, you’re a leader of yourself. Like – like you don’t follow anybody else, you just stand out and be you. (Eunice, 5 th grader at Venture)	21 students spoke of leadership in one of these three ways. Of these 21 students, 12 also talked compliance as a component of leadership. As a result, only 9 students in total spoke about leadership in a way that is completely aligned with <i>The Leader in Me’s</i> definition.
Be a role model	9	I have to be a role model for the little kids. For my little sister. (Sylvia, 4 th grader at Tully)	
Help others/stand up for others	6	A leader – they stick out for people that are being bullied and stuff, like they’re the um, person who helps the bystanders and stuff. (Lance, 5 th grader at Venture)	

Table 20.2. *Student responses to the question, “What does it mean to you to be a leader?”*

Aligned with definitions of behavior and compliance

Definition	Number of Mentions	Example	Notes
Behave	10	Like, help people. Be in charge of yourself. And um, not to be disrespectful to adults. (Leigh, 5 th grader at Tully)	17 students responded to this question by talking about the importance of behaving, being quiet, doing the right thing, being good and being respectful. As mentioned in Table 20.1, 12 of these students also articulated aspects of leadership related to being a role model and helping others (definitions aligned with <i>The Leader in Me</i>).
Do the right thing/ help others do the right thing	6	Being a leader means to read and write- do the right stuff. Don't follow other- don't follow like other people's education that they have. Like if they're bad don't follow that.... and be respectful to others and do the right thing every day. (Edna, 4 th grader at Nodes)	
Make good choices & be good and not bad	7	Uh...it means like...getting good grades and...not being bad...listening to teachers. (Eliza, 5 th grader at Nodes)	

In addition to these 17 students who viewed leadership through a lens of compliance, other students (5 unique students in addition to the 17 already mentioned) spoke about other aspects of *The Leader in Me* in behavioral terms. For example, Roberta at Tully commented, “[*The Leader in Me*] changed the school a lot. Before the seven habits, people used to be bad and stuff. And then, when they put the seven habits, like it changed everything. They stopped doing that.” Steve at Tully spoke about leadership roles at the school as well as his own leadership role in the classroom in this way:

Interviewer: Do you guys have like leadership roles in your classroom? Like jobs in your classroom?

Steve: Yeah... the fifth graders, they have ... jobs like hall monitors, like safety. They have safeties for like, just in case the kids are standing up, and if kids are running up in the hallways. So the safeties just tell them to stop, and if they see them one more time, they tell [the principal], and they get in trouble.

Interviewer: And then do you have jobs in your classroom?

Steve: I'm the entrance leader. ...Before the kids go up in the hallway, I stand by the door and tell them like, if they're talking, like to be quiet. Cause we're gonna be in the hallways. Cause the fifth graders are sometimes testing... I have that one and voice monitor. Like when it's like independent work, like people like, without partners, like and we're supposed to whisper. I write the people down that are talking, and I give them a warning. And if they start talking again, I like, um tell them that they have ten minutes of silent lunch. If they talk again, they get the whole lunch. And if they talk again, they get no recess.

It is important to note that attending school with clear expectations and where students follow safety norms and school rules is of course an important foundation for learning to occur. However, if *The Leader in Me*'s purpose is to bring out each student's "primary greatness" and to promote leadership skills, then this outcome of compelling students to behave and to be quiet presents a vastly different outcome. The results and implications are further addressed in the discussion section below.

Chapter 5: Discussion

Recall that social and emotional learning is defined as “the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (CASEL, 2015), and that it is comprised of five main competencies: self-awareness, self-management, social awareness, relationship skills and responsible decision-making. Social and emotional learning is associated with prosocial behaviors, improved academic performance, increased levels of self-esteem, reduced emotional distress such as anxiety and depression, and fewer behavioral incidents (Durlak et al., 2011). Social and emotional skills are considered critical to being a productive student, citizen, and worker (CASEL, 2015), and when these skills are implemented effectively and long-term, they can reduce and prevent risky behaviors such as bullying, violence, drug use and dropping out of school (CASEL, 2015).

Also recall that youth voice is defined in this dissertation as young people feeling authentically empowered to express themselves and take action at the individual, group, and/or community level (Lensmire, 1998, 2000; Mitra, 2008, 2016; Mitra & Serriere, 2014; Mitra, Serriere & Kirshner, 2015; Quaglia, 2014; Quaglia & Corso, 2014). Fostering youth voice in schools can play a key role in increasing students’ civic engagement and civic efficacy, including promoting the belief that young people can affect change on an individual and community level (Mitra & Serriere, 2012). Youth voice can enhance youth attachment to institutions (Mitra, 2008), increase student

confidence and leadership (Mitra, 2008), and engage and motivate young people by giving them a sense of ownership in their classrooms and schools (deCharms, 1977; Mitra, 2008). In addition, nurturing student voice can help youth recognize the strengths of their own capabilities (Oldfather, 1995), improve students' understanding of how they learn (Johnston & Nicholls, 1995), and increase awareness of their ability to affect change in their schools (Oldfather, 1995).

The Leader in Me asserts itself as a “whole-school transformation process” (Covey, 2008) impacting a range of positive student outcomes (from promoting thoughtful students, to an intrinsic motivation to learn, to compassion, to peer collaboration, to leadership skills – to name only a few) that can be categorized under the umbrellas of social and emotional learning and youth voice. Despite these outcome claims, the results of the present study suggest that the program is having an inconsistent impact on students.

Recall from the results that there was a significant, negative interaction effect of treatment*time on eight of thirteen measures for students attending *Leader in Me* schools as compared to students attending matched comparison schools, and that there was also a significant, negative treatment effect for one additional measure (teamwork) for *Leader in Me* students. Of these nine measures, three are aligned with social and emotional competencies: self-efficacy in self-regulated learning (aligned with self management), self-efficacy in enlisting social resources (aligned with social awareness), and teamwork (aligned with relationship skills). Four of these measures are related to youth voice: voice-civic participation skills, voice-value of group work, voice-communication, and

youth empowerment. The final two measures, school connectedness and teacher personal support, are both connected to school culture, and are considered necessary preconditions for social-emotional learning and youth voice development (Brackett, Elbertson, & Rivers, 2017; Campbell, 2008; Carter, 2011; Deci & Ryan, 1985; Levinson, 2012a; Quaglia & Corso, 2014; Tough, 2016).

Also recall that while some students spoke of the seven habits in ways that demonstrate awareness and application of the social and emotional competencies, the students' levels of understanding of the habits themselves were varied and inconsistent. Similarly, while some students and teachers spoke of the ways that *The Leader in Me* fosters youth voice and empowerment, other qualitative data demonstrate that the program was having the opposite effect, and that students were defining youth leadership as primarily being quiet and behaving and monitoring other students to do the same.

The sections below consider the quantitative and qualitative findings together by first addressing the program's influence on social and emotional learning, and then discussing its influence on youth voice. I close this chapter with implications and conclusions.

Social and Emotional Learning

As noted in the results, participating *Leader in Me* students exhibited less favorable outcomes than students attending comparison schools on three measures related to social and emotional learning: self-efficacy in enlisting social resources (aligned with social awareness), self-efficacy in self-regulated learning (aligned with self

management), and teamwork (aligned with relationship skills). Interestingly, *Leader in Me* students spoke of the seven habits in ways that demonstrated awareness of and application of the social and emotional competencies, despite their varying levels of understanding of the habits themselves. Below I detail three possible explanations for these quantitative and qualitative results. I first draw on student comments that note the program's difficulty to support the possibility of reference bias. I next consider the likelihood that students' confusion about the habits' definitions may be a contributing factor to the negative quantitative results because time spent on the program could potentially have been used for more authentic social and emotional learning. Finally, I discuss the argument that *The Leader in Me's* implementation framework was perhaps not effectively communicated, prioritized, or evaluated which could explain the variation in results.

Reference Bias

Reference bias refers to the idea that self-report surveys are completed within respondents' contextual frames of reference, potentially skewing results (Duckworth & Yeager, 2015). For example, students in rigorous schools with high expectations have been found to rate themselves lower on questions about class preparedness than students at less intensive schools, presumably because they are setting higher standards for themselves (Duckworth & Yeager, 2015).

Recall that students at *Leader in Me* schools spoke about four of the habits as harder to incorporate into their lives or as a habit they didn't like. Five students referenced put first things first as falling into those categories; three students spoke about

seek first to understand, then to be understood as difficult; four students cited synergize as the one they found hardest to do (though 8 spoke about it as their favorite); and four students mentioned sharpen the saw as a habit they found difficult to do (though four also spoke about it as their favorite). Recall the following four responses from students talking about why they found certain habits difficult. Shaunda at Venture said that she didn't like put first things first because "it gets on my nerves 'cause I don't wanna do my homework first, I just wanna relax." Tim at Orion said that seek first to understand, then to be understood is hard because "sometimes you really got something to say but you need to wait." Yasmin at Orion spoke openly about why she didn't like synergize: "I hate working with other people. It's just like not me because usually I get good grades without working with other people." Wilfred at Hill found sharpen the saw to be particularly difficult: "That one you have to remember to have peace, to be smart and um, to have exercise... it's kind of hard to have peace... because sometimes you always have to work. You can't have rest or nothing. You can't really have good rest."

Given that students were able to speak about why certain habits were so difficult, one possible explanation for the sharper declines for *Leader in Me* students on the measures relating to social and emotional learning could be attributed to reference bias. It is possible, for example, that *The Leader in Me*, having exposed students to the idea of putting first things first, made them realize that they could be working harder to do their homework before relaxing or playing with their friends, which may in turn have influenced their decision to rate themselves lower on the measure of self-efficacy in self-regulated learning. Similarly, it is possible that *The Leader in Me* exposed more students

to the importance of teamwork and working together (and possibly encouraged teachers to implement more opportunities for working together), which then made students realize that working in groups can be difficult because of the cooperation and negotiation and conflict-resolution involved. This in turn may have influenced the way they responded to the questions on the teamwork scale.

These findings suggest that future research in social and emotional learning should strongly consider the use of vignettes (e.g. Duckworth & Yeager, 2015). Vignettes provide a sample scenario for students to respond to, which creates a baseline frame of reference, allowing researchers to adjust data accordingly. Vignettes allow researchers to determine if declines such as the ones seen in this study can indeed be attributed to reference bias or if something else may be the cause.

The findings also point to the importance of studying a program like this over a longer period of time and collecting data at multiple check points. It is possible, for example, that the quantitative results demonstrate students' initial struggle with new and difficult concepts, but that over time these same students may demonstrate stronger gains. Employing data analysis such as structural equation modeling would allow for testing growth along different trajectories (i.e., a quadratic curve) to see if student self-perceptions change over time (Acock, 2013).

Confusion

Leader in Me students' inconsistent grasp of the seven habits ranged from complex comprehension to partial understanding to confusion to complete lack of knowledge. While some students did seem to be internalizing the messages from the

program, others struggled to explain the habits or were unable to describe them at all. In addition, some aspects of the habits' definitions were never recalled or mentioned. As discussed below, this lack of consistency is another possible explanation for the negative outcomes for students attending *Leader in Me* schools.

As stated in the literature review, scholars in the field of social and emotional learning and character education have reported on the importance of consistency and a common language (Seider, 2012; Simonsen et al., 2003; Weissberg, Durlak, Domitrovich, Gullotta, 2015). Even though *The Leader in Me* claims that a common language and a unifying school culture are defining features of the program (Covey, 2008), the qualitative data from this study suggest that there is a level of confusion and misunderstanding among students at the participating schools.

If this study were to consider *Leader in Me* schools in isolation (i.e., not in relation to matched comparison schools), then it might make sense to say that student confusion alone could be a singular contributing factor to the quantitative decline in students' perceptions of their social and emotional skills. However, the quantitative results show that students at *Leader in Me* schools are ending the year *worse* off than their non-*Leader in Me* peers. Another possible explanation for these results then, is that students were learning about the program in a way that was not only confusing, but that it was also preventing more authentic social and emotional learning from taking place. Recall that CASEL itself was formed partially in response to the wide range of well-intentioned programs that were being irregularly implemented in schools (Weissberg, Durlak, Domitrovich, Gullotta, 2015). Even though some students and teachers spoke of

ways in which the program was influencing their social and emotional growth, the extent to which students misunderstood the program is notable. Perhaps the amount of time spent on a program that is not internalized or even well understood by the students further contributed to the decline in scores and student perceptions.

Clearly Communicated Implementation Framework & Aligned Assessment

An important question raised by the results is how to explain the discrepancy between students and teachers often speaking positively about *The Leader in Me* with the overwhelmingly negative quantitative results. How can some participating students speak highly of the program's influence on their social and emotional learning, but also demonstrate such notable statistical declines in comparison to students at matched comparison schools? One possibility is that there is a gap between the description of the habits themselves and the program's plan for implementation. That is, while the concept of *The Leader in Me* and the seven habits do seem to resonate with some students and teachers, the framework for implementation is not sufficiently articulated or communicated to school staff.

Recall that *The Leader in Me* framework (see Figure 2) outlines a plan for how teachers need to first change their mindset, and then subsequently change their practices in order to achieve the desired outcomes of leadership, culture, and academics. More specifically, the change in mindset refers to *The Leader in Me*'s emphasis on helping schools to initiate five kinds of paradigm shifts that emphasize leadership and success for all, personal responsibility, empowering education, and a focus on the whole child (Covey, 2008). These paradigm shifts are seen as an essential foundation for

implementing “highly effective practices” that include “direct lessons, integrated approaches, and modeling” (*The Leader in Me*, 2017). These practices are purported to result in “leadership, culture and academics” (*The Leader in Me*, 2017).

While some teachers indirectly mentioned elements of this framework at various points throughout the interview, none mentioned it explicitly. For example, recall that the principal at Waterberry Elementary spoke of how the program influenced a paradigm shift in the ways that schools think about children. Similarly, some teachers answered affirmatively when asked if they model the habits for their students. For example, recall that Ms. Amber at Nodes Elementary spoke about how she actively models the ways in which she uses the habits with her students. However, other teachers specifically commented that they do not employ some of these practices (for example, Ms. Cummings at Tully responded to a question about modeling the habits by admitting, “the only way I model it is like by throwing in the vocab”), and none of the teachers or principals interviewed explicitly mentioned this framework or an aligned unified plan for implementation at their schools. Perhaps, then, the way that the program was introduced and rolled out gave a certain level of exposure to students and teachers (which had some positive effects), but the framework itself was not sufficiently emphasized, or the pathway to implementation was not clearly articulated.

It is also possible that the lack of alignment between *The Leader in Me* implementation framework (figure 2) and *The Leader in Me* fidelity of implementation rubric (Table 23.2) contributed to unclear programmatic priorities and implementation guidelines. Recall that Durlak (2016) outlined eight distinct implementation components

for social and emotional programs: fidelity (the extent to which key components have been delivered), dosage (how much and how often), quality of delivery (how well a program has been conducted), adaptation (changes made), participant responsiveness (the extent to which participants are actively engaged), program differentiation (ways in which the program is different from other comparable programs), monitoring control conditions (the extent to which the treatment and comparison conditions overlap), and program reach (how much of the population participated).

Also, recall that *Leader in Me* training staff assessed each school's fidelity of implementation using a rubric with the following measures: Lighthouse team, leadership environment, integrated instruction and curriculum, staff collaboration, student leadership, parent involvement, leadership events, and goal tracking (see Table 23.2 in Appendix G). The rubric used by *The Leader in Me* to assess program implementation primarily considered Durlak's definition of fidelity (e.g. the presence of certain programmatic elements), while *The Leader in Me* framework of implementation is more concerned with Durlak's definition of quality of delivery. While the categories used by *The Leader in Me* to assess program fidelity are somewhat useful in assessing the presence of certain programmatic elements, they are ultimately not as helpful in determining the degree to which teachers are implementing the practices recommended by *The Leader in Me* in their implementation framework.

Recall from the results that the statistical models that include the fidelity variable suggest that higher levels of programmatic fidelity did not improve student perceptions of their social and emotional learning or sense of voice (with the exception of three

measures: voice- confidence, teacher academic support, and the Voice Quaglia survey). Since this fidelity measure only really measures the presence of certain programmatic elements and is not aligned with the program's own implementation guidelines, the fidelity data is initially not useful for measuring the extent to which fidelity of implementation impacts programmatic success. However, these fidelity results are illuminating for two other reasons. First, a program's assessment is an important part of how priorities of content and implementation are communicated. If the outcome measures were not clearly aligned with implementation expectations, then participating schools and teachers may have been unclear on what the program prioritized and how to achieve success. Second, these findings suggest that perhaps a program with potential for fostering social and emotional learning and student voice, that ultimately falls short of this goal due to inadequate implementation, may contribute to some positive results (e.g. some students and teachers speaking of the positive impact of the program on areas related to social-emotional development), but also student disillusionment.

Interestingly, after this study's conclusion, *The Leader in Me* adopted an assessment rubric that *is* directly aligned with their framework. That is, they are readjusting their evaluation approach to consider quality of delivery rather than focusing primarily on fidelity (e.g., the presence of certain programmatic elements) alone. This move, along with the recent work the program has done to empirically investigate its effectiveness (including the request for the present study) demonstrates a recognition of the importance of grounding *The Leader in Me* in empirical research and aligning assessments with expectations.

Voice

Recall from the results that there was a significant, negative interaction effect of treatment*time on four of the six youth voice measures for students attending *Leader in Me* schools as compared to students attending matched comparison schools: voice-civic participation skills, voice-value of group work, voice-communication, and youth empowerment. Also recall that while students and teachers did speak of some ways in which *The Leader in Me* was empowering to students, other qualitative data suggested otherwise, with 17 of 32 students equating leadership with good behavior and compliance. Below I outline two possible explanations for these quantitative and qualitative results. The first is that students' equating leadership with compliance is negatively influencing their perceptions of their own voice and empowerment. The second is that the pervasive culture of schools as places primarily to behave and to follow the rules is deeply entrenched and is a difficult mold to break. In such a climate, teachers – despite their efforts and beliefs – may be consciously or unconsciously resistant to changing their practices.

Disillusionment: Leadership as Compliance

As stated above, 17 of the 36 *Leader in Me* students defined leadership as aligned with good behavior and compliance. Five additional students also spoke of the program as an agenda to make students behave. In sum, 22 of 36 students spoke of *The Leader in Me* in terms of compliance at some point in their interview. While *The Leader in Me* does claim to have a positive impact on student behavior (e.g. reducing office referrals; Covey, 2008), and while clear and consistent rules and expectations are baseline needs for safe

and effective schools (e.g., Jones, 2008; Simonson et al., 2008; Wentzel, 1993), these students' definitions of leadership are surprising given the program's goals. Unlike the qualitative data regarding social and emotional learning that supports the possibility of a reference bias to explain the negative quantitative SEL results, a more likely explanation for the negative quantitative voice results is student disillusionment. That is, when students seem to view leadership and compliance as synonymous, they do not perceive themselves to be actually empowered at their schools.

The Leader in Me's definition of leadership as "primary greatness" attainable by everyone (Covey, 2008, p. 9) lies in stark contrast to many student definitions. Recall that student descriptions of ways that they show leadership in their classes include responses such as, "Getting good grades and not being bad. Listening to teachers" (Eliza at Nodes Elementary); "To uh, like be quiet" (Abel at Venture Elementary); "Like, help people. Be in charge of yourself. And um, not to be disrespectful to adults" (Leigh at Tully Elementary); "Uh, nice? Um, don't get angered as easily, and patient? ... Um, I'm always telling everybody to be quiet" (Guadalupe at Hill Elementary).

These responses are particularly surprising given the goals of *The Leader in Me* program. However, they also resonate with the scholarship on the importance of authentic student voice efforts. Recall from the literature review that well-intentioned youth voice efforts can fail if not implemented authentically and without regular self-reflection (e.g. Levinson, 2012b; Quaglia, 2014; Quaglia & Corso, 2014; Quiroz, 2001; Silva, 2003; Silva & Rubin, 2003). When students are encouraged to speak up but are ignored, or when schools and teachers listen disingenuously, youth can be left feeling disillusioned

and disempowered (e.g. Levinson, 2012b; Quaglia, 2014; Quaglia & Corso, 2014; Quiroz, 2001; Silva, 2003; Silva & Rubin, 2003).

Striking a balance between expectations for a controlled classroom and students who are empowered to speak up and express their opinions can be difficult for teachers, especially given the dominant disciplinary structures in schools (Ashley & Burke, 2010; Jones, 2007; Weinstein, Curran, Tomlinson-Clarke, 2003). However, *The Leader in Me* platform suggests that this balance should not be difficult at all, and that empowering students is in fact a *pathway* to well-run classrooms (not an impediment). Nonetheless, the students' perceptions of leadership in this study lie in direct opposition to *The Leader in Me*'s programmatic goals, further emphasizing the surprising nature of the findings, and reinforcing the likelihood of student disillusionment to explain the negative quantitative results of 4 out of 6 measures related to youth voice and empowerment.

Entrenched Cultures of Schools & Teacher Resistance to Change

Efforts to authentically foster student leadership and youth voice often lie in deep conflict with the foundational nature of schools. Traditional schooling is designed so that a teacher delivers information and students listen and receive that information (Duncan-Andrade & Morrell, 2008; Freire, 1970; Rubin & Silva, 2003; Shor, 1992; Silva, 2003). Efforts to dismantle this system are not easily achieved, especially in a single year of program implementation. To authentically empower students –giving them responsibilities, voice, and agency – requires a substantive rethinking of how schooling can work. Teachers and schools must deliberately plan for how to avoid pitfalls such as

student voices being easily dismissed and the prioritization of certain privileged voices above others (Silva, 2003). It is important to note, however, that *The Leader in Me* does not claim to make foundational restructuring in the schools in which they are adopted. Indeed, many youth voice measures do not purport to make such changes either, but rather aim to foster empowerment within the existing structure (e.g., Quaglia & Corso, 2014; Weissberg, Durlak, Domitrovich & Gullotta, 2017). This conflict between youth empowerment and highly regulated school structures poses a critical tension for youth voice initiatives and the teachers attempting to implement them.

A second explanation for the negative results related to youth voice is that teachers may be (intentionally or unintentionally) resistant to change. Recall that Evans (1996) described various ways that teachers react to reform, including fitting new techniques into old ways of doing things or managing only surface level changes that result in a “false clarity” (Evans, 1996; Fullan, 1991, p. 70). This notion of “false clarity” (Evans, 1996; Fullan, 1991, p. 70) could explain why teachers state that they are making authentic changes, but survey responses indicate that student perceptions of their own ability to speak up and be heard are actually declining more sharply over time than students at comparison schools.

Recall, for example, Ms. Becker at Tully Elementary, who spoke about the way in which *The Leader in Me* had shifted her thinking about how teachers can manage classroom jobs. She gave the example of assigning a student who loves telling jokes the title of “czar of fun” and allotting that student five minutes at the end of class to tell jokes in order to avoid allowing the student to be telling jokes all class long. While this is not

an unusual strategy, it reflects Ms. Becker's emphasis on prioritizing classroom management.

In sum, while following the rules is considered an important aspect of social responsibility in schools (e.g., Wentzel, 1993), this study's results relating to youth voice lie in conflict with the definition of leadership put forth by not only *The Leader in Me*, but other literature on leadership and youth voice as well (Goleman, 2004; Mitra, 2008; Mitra & Serriere, 2012; Mitra, Serriere & Kirshner, 2015; Quaglia & Corso, 2014). Despite students and teachers speaking to some of the ways in which *The Leader in Me* empowers and gives agency to students, the stark finding that so many young people perceive leadership as synonymous with compliance is a critical consideration not only for *The Leader in Me* program itself, but for other youth voice efforts to learn from as well.

Implications and Conclusions

Below I consider implications of this study's key findings for *The Leader in Me* itself, and for social and emotional and youth voice programs more broadly (as well as for the teachers implementing these kinds of reforms). In each of these areas I make recommendations related to empirical research, implementation (at the classroom and school level), and reflection. I conclude with implications for the educational system at large as well as recommendations for future research.

Implications for The Leader in Me

Research

The first recommendation for *The Leader in Me* is to continue its move toward empirically researching the program's impact. Over 3000 schools have brought the *Leader in Me* on board (paying for the service) without clear research pointing to its effectiveness. It is critical that programs such as these, with such a wide influence, be held to rigorous empirical testing. Longer-term studies would be particularly useful to see if effects such as those seen in this study persist, or if the results will change over multiple years of program implementation.

Implementation

At the classroom level, *The Leader in Me* must re-examine how they expect teachers to explain the language of the habits and how they plan to assess that. The seven habits are at the heart of everything that *The Leader in Me* claims to achieve in terms of student and school success, making the finding that students demonstrated varying levels of understanding of the habits especially compelling. If, as the program claims, internalizing the seven habits are instrumental for individual leadership and greatness, then *The Leader in Me* should examine their expectations as to how the habits should be taught, explained, and enacted. More specifically, consider the fact that while each habit is defined with a short catch phrase (e.g., synergize means "together is better"), each habit also has a longer, more complex definition (e.g., synergize means, "I value other people's strengths and learn from them. I get along well with others, even people who are different than me. I work well in groups. I seek out other people's ideas to solve problems

because I know that by teaming with others we can create better solutions than anyone of us can alone. I am humble.”) While this longer explanation gives important insight into what *The Leader in Me* means by the term synergize, it is important to take this complex definition into account when teaching students about this. For example, each habit might be broken down into components, and individual parts taught explicitly. Or the components might be authentically highlighted in conjunction with their aligning habit. For example, during group work, a teacher might acknowledge specifically when students are recognizing and honoring each other’s strengths and gaining insight from others, and link that action explicitly to the habit (as opposed to simply noting that the students are synergizing). In addition, teachers could be coached on the pieces of each habit that aren’t as obviously aligned with the habit’s catch-phrase definition. For example, the component of synergize, “I am humble” is not as obviously a part of synergizing and might need some additional explanation for both teachers and students alike. Teachers must also regularly check in with students to assess their understanding of the habits so that they can make adjustments or additions to the students’ understanding.

Another important possibility to consider, though, is that the habits themselves have definitions that are too lengthy and confusing. This could be a reason why there are so many misunderstandings. Keeping track of seven habits alone is not a straightforward task, but given that each one has approximately five sub-definitions makes it even more difficult. In addition, some of the habits sub-definitions aren’t intuitively aligned. In addition to the example given above (“I am humble” is a sub-definition of the habit synergize), the habit sharpen the saw has a similarly confusing definition. The first three

definitions, “balance feels best” and “I take care of my body by eating right, exercising and getting sleep” and “I spend time with family and friends,” are arguably aligned with one another and reinforce the idea of finding balance in one’s life. The next two sub-definitions are more perplexing, though: “I learn in lots of ways and lots of places, not just at school” and “I find meaningful ways to help others” are not clearly connected. Other habits have similar definitions that are not entirely clear. For example, the first two sub-definitions of begin with the end in mind seem aligned (“Have a plan; I plan ahead and set goals”), the second is understandable, but seems less clear (“I do things that have meaning and make a difference”) and the last two seem unrelated (“I am an important part of my classroom and contribute to my school’s mission and vision; I look for ways to be a good citizen”). *The Leader in Me* might consider prioritizing and emphasizing the more significant aspects of each habit in order to communicate them more clearly to students.

At the school level, *The Leader in Me* must consider the manner in which its own implementation framework is communicated and assessed. Recall that Durlak (2016) defines implementation in terms of eight dimensions: fidelity, dosage, quality of delivery, adaptation, participant responsiveness, program differentiation, monitoring control conditions, and program reach. *The Leader in Me* might consider these areas in order to emphasize (and potentially revise) their own implementation framework and rubric. This final implementation framework should then be directly aligned with the implementation rubric. If, as their framework suggests, *The Leader in Me* expects to see teachers modeling the habits, explicitly teaching the habits in lessons, and integrating the habits

into their pedagogical approaches, then teachers and schools should be explicitly evaluated on these areas. The fact that none of the teachers spoke of the implementation framework suggests that they did not see it as a significant component of the program. As noted earlier, the program has in fact recently moved to an implementation rubric that is aligned with their framework. This adjustment could help bring implementation expectations into clearer focus, thereby positively influencing future overall program outcomes.

Moving forward, *The Leader in Me* might consider explicitly evaluating their program along Durlak's (2016) other implementation dimensions such as adaptations, dosage, program reach, and participant responsiveness. In terms of assessing programmatic adaptations, for example, recall that *The Leader in Me* encourages schools to adapt their program in a way that fits with their individual school cultures by establishing common behaviors, language, artifacts (programmatic elements displayed throughout the school), traditions (school-wide events), and folklore (success stories passed along from year to year), (Covey, 2008). In order to assess the extent to which schools are making adaptations, *The Leader in Me* might create a rubric related specifically to these areas, and the extent to which these school-specific adaptations affect student outcomes.

Reflection

A final implication for *The Leader in Me* is to closely consider this study's findings on youth voice and to engage in action-reflection cycles to more authentically empower students. More specifically, the disparity between the program's intent and the

program's results in regards to youth voice and empowerment must be carefully examined, prepared for, and guarded against. During program trainings *The Leader in Me* could specifically point out that students have been found to interpret *The Leader in Me* as a classroom management tool rather than as a leadership program, and to work against that trend.

A recommendation for more effective and sustained change is to implement a clear action-reflection cycle such as one put forth by Dobbs, Ippolito and Charner-Laird (2017). Recall that Dobbs, Ippolito and Charner-Laird (2017) advocate for the use of inquiry cycles to be used by teacher leaders and professional learning communities in order to engage in ongoing, authentic teacher learning and effective, sustained school-wide change. They especially emphasize these practices for schools trying to make adaptive changes (changes whose outcomes are not necessarily clearly defined, nor the solutions to reach those outcomes; Heifetz, Grashow & Linsky, 2009), such as those targeted by *The Leader in Me* and other similar SEL and youth voice initiatives. These inquiry steps include “defining an inquiry question or topic; building background knowledge and drawing on experts; collaborative idea generation; individual “idea testing”; shared reflection and idea revision” (Dobbs, Ippolito & Charner-Laird, 2017, p. 35). Faculty and students (both on the Lighthouse team and in grade-level meetings) could engage in formalized inquiry cycles to address questions such as, “Are students being authentically empowered?” and “Are teachers really extending leadership opportunities to all students?” and “Are empowerment efforts just surface level?” and “How is leadership really defined at our school?” and other questions that arise based on

specific classroom and teacher needs. It is important to note that while Dobbs, Ippolito & Charner-Laird (2017) work with teachers and teacher leaders, this study recommends building on this approach to include student voice and feedback as well.

Implications for social and emotional & youth voice programs and participating teachers

Research

Implications for social and emotional and youth voice programming more broadly build on the ones stated above for *The Leader in Me* program itself. The first is recognizing the critical importance of continuing rigorous empirical studies for social and emotional and youth voice initiatives using both quantitative and qualitative data collection procedures. It is important to evaluate the extent to which these kinds of programs are effective, where there might be shortcomings, and where efforts might even be causing negative outcomes. Empirical evaluations are important for all programs, but especially one like *The Leader in Me* that reaches so many students and is being financed by a substantial number of schools. In addition, as evidenced from this study's data, the quantitative data alone provided some information on the program's impact on participating students, but it did not provide insight into *why* students were showing such marked declines in contrast to the matched comparison schools. The qualitative data gave important insight into *how* the program was influencing participating students. As such, mixed methods studies are recommended for future research into social and emotional and youth voice initiatives. Finally, as mentioned earlier, when possible, programs should

be evaluated longitudinally in order to get a sense of how student outcomes change over time.

Implementation

At the classroom and teacher level, educators must be well informed on best practices for implementing social and emotional learning and youth voice initiatives. While there is no universally accepted set of best practices, some widely endorsed empirically-backed approaches include modeling social-emotional competencies (Baehr, 2015; Berkowitz, 2011; Jubilee Centre, 2015; Lapsley, Holter & Narvaez, 2013; Wray-Lake & Syvertsen, 2012), explicit teaching (Baehr, 2015; Berkowitz, 2011; Jubilee Centre, 2015), and creating a safe classroom climate where social and emotional learning is integrated throughout the day (Carter, 2011; Tough, 2016). In addition, if SEL and youth voice programs seek to bring a common language to schools, they should have a clear plan for defining terms, explaining and integrating vocabulary, and assessing student understanding. Finally, for teachers to be truly on board with a program, they often need to be willing to make substantial changes to their own practices. Programs must take explicit steps to include not only the students, but also the teachers and school community in the process.

At the school and program level, an implementation framework with empirically-backed pedagogical practices should be explicitly communicated, emphasized and assessed. Ideally, an implementation framework would take into account Durlak's (2016) components of program implementation (fidelity, dosage, quality of delivery, adaptation, participant responsiveness, program differentiation, monitoring control conditions, and

program reach) when both planning for programmatic work and evaluating it as well. In addition, this implementation framework and assessment must be clearly and regularly communicated to teachers.

Reflection

A final implication for SEL and youth voice efforts is directly aligned with the recommendation for *The Leader in Me* itself. Programs and schools must engage in regular cycles of action and reflection related to programmatic outcomes, student perceptions, and teacher authenticity. The disparity between *The Leader in Me*'s intended leadership outcomes for students lies in sharp contrast to the ways in which the students describe their understanding of leadership, and serve as a cautionary lesson for programs and teachers. As mentioned above, inquiry cycles such as those advocated for by scholars such as Dobbs, Ippolito and Charner-Laird (2017) are particularly recommended. Teachers and students alike must be given time to actively reflect on questions such as "Are certain voices being privileged above others?" and "Do students themselves feel empowered?" and "Do *all* students feel an increased sense of agency, or only a select few?" Teachers must use the information gathered during these reflections to make adjustments to their practice in order to actively work toward authentic change. Initiatives should also put systems in place for teachers to self-assess their own consistency and authenticity, as well as student interpretations of the programs' effectiveness.

Implications for the educational system

Many scholars have written about ways in which they support a massive overhaul of the structure of schooling – some of them advocating for a complete disruption of the inherent power structures in schools. From Freire (1970) who advocated for an egalitarian, problem-posing approach to education, to Haberman (1991) who spoke against a “pedagogy of poverty” (p. 290) where an all-knowing teacher educates students on how to behave appropriately, to Kohn (1993) who promotes the idea of eliminating all external rewards and punishments including grades, to others who have called specifically for a renewed focus on civic and character goals in school (e.g. Berkowitz, 2014; Berman, 1997; Hess & Zola, 2012; Johaneck, 2012), many of these educator-scholars believe in changing the entrenched ways in which schools are structured and run.

Perhaps to truly foster youth voice, and to truly empower students, a completely different purpose and structure of schooling must be considered for schools. Schools may champion a vision such as leadership for all, but if their actual goal (e.g. the goal they are held accountable for) is more aligned with raising test scores and complying with district expectations and regulations, then it may be much more difficult to achieve such a vision.

Reform efforts operating in traditional schooling structures should recognize the inherent roadblocks entrenched in the power dynamics of schools and should either make explicit plans to navigate and challenge these obstacles, or advocate for a complete overhaul of how schools are structured and oriented. This kind of awareness and preparation are crucial for authentic change to occur.

Implications for future research

This study's findings point to numerous next-steps for future research. First, as an immediate next step, an additional year of quantitative data has been collected (but not yet examined), which I will analyze to see if initial trends continue into the second year of program implementation. It would be informative to continue to study school-based social-emotional and youth voice initiatives both quantitatively and qualitatively across a number of years of implementation in order to analyze how student perceptions change (or not) over time. This study did not include classroom observations, but incorporating such field data could contribute substantially to understanding how SEL programs are effectively (or not effectively) implemented at the classroom level.

Next, future research should also include more in-depth analysis as to how teachers learn about, interpret, and ultimately implement social and emotional learning and youth voice initiatives. Adding questions that target teacher attitudes and resistance to change, coupled with classroom observations could lead to more pointed questions in order to address perceived and actual classroom practices. It would be especially useful to empirically test the effectiveness of action-reflection cycles for this purpose as well.

This dissertation did not closely examine the different ways in which *The Leader in Me* impacted boys and girls. However, the quantitative data suggests that the program had more positive effects on the girls than the boys on ten measures (see tables 21.1-21.13). Future analysis might explore this further to see why this might be the case and how the program might adjust its practices accordingly.

This dissertation also did not closely examine the ways in which *The Leader in*

Me impacted students at varying grade levels. There were no significant differences between fourth and fifth grade students on any of the measures except one related to youth voice (see table 21.6), but future research might consider survey data for multiple grade levels, examining the ways in which different age groups respond to the program. The larger data set for the present study did include both quantitative and qualitative data for grades six, seven and eight. Future research should include analysis of this data to consider the various ways that these students and teachers may perceive *The Leader in Me*.

Finally, future research should conduct more targeted studies to investigate differences in the ways that social and emotional learning and youth voice is fostered in elementary schools, and the equity implications of these disparities. Furthermore, even though this study examined schools in three distinct districts (one urban, one suburban, and one rural), data was not collected on student race. Given the extant research illustrating the varying levels of trust, school connectedness, and sense of belonging along racial lines (Levinson, 2012a; Noguera, 2008; Strayhorn, 2008; Yeager et al., 2013), it is critical that studies of social-emotional learning and youth voice examine some of the different ways that students might perceive their own levels of social-emotional learning, youth voice and school connectedness.

Conclusion

Nonacademic factors such as social and emotional learning and youth voice have the potential to support students in becoming thoughtful, democratic, and skilled citizens

(CASEL, 2015; Durlak et al., 2011; Mitra, 2008; Mitra & Serriere, 2012). This dissertation found that *The Leader in Me* program, aimed at fostering social and emotional learning and youth voice and empowerment through teaching seven habits to elementary school students, influenced participating students in both positive and negative ways. Quantitative results indicate that *Leader in Me* students demonstrated a significant, negative treatment*time effect for two measures related to social and emotional learning and a negative treatment effect for an additional social and emotional measure in comparison to students at the matched comparison schools. Quantitative results also revealed that *Leader in Me* students demonstrated a significant, negative treatment*time effect for four measures related to youth voice in comparison to students at matched comparison schools. Qualitative results show that while some students spoke of the seven habits in ways that demonstrate awareness and application of social and emotional competencies, they also were confused about the habits' meanings. Similarly, while some students and teachers spoke of the ways that *The Leader in Me* fosters youth voice and empowerment, qualitative data also suggest that the program is having the opposite of its intended effect, and that students are defining youth leadership as compliance.

This dissertation suggests that initiatives aimed at fostering these social and emotional learning and youth voice must clearly communicate an empirically-backed implementation framework for classroom practices and school-wide dissemination. In addition, it is recommended that teachers and schools engage in action-reflection cycles aimed at gauging student perceptions, evaluating outcomes, assessing the effectiveness of

teacher practices, and making subsequent adjustments for authentic reform. Finally, it is crucial that social and emotional and youth voice programming seek out longitudinal, rigorous empirical studies to evaluate program impact on multiple dimension.

Importantly, this study's findings bring into focus some of the power structures inherent in many schools that may be selectively limiting which students have access to authentic youth voice initiatives. If programs are operating within traditionally structured schools, these programs must plan strategically for how to work around and against entrenched systems that may place inherent roadblocks to programmatic success.

Appendix A: Student Interview Protocol

Protocol:

- Introduce self: Not a teacher or affiliated with school in any way
- Introduce study: We are trying to learn more about how *The Leader in Me* approach impacts leadership skills, character development, and student success, and how students, teachers, and schools describe and understand the impact of the program.
- Outline time frame: About 20 minutes
- Ask for permission to tape record
- Confidentiality: Note that subject's name will be kept confidential.
- Other: Note that subject can feel free to stop the interview at any time and that there are no right or wrong answers. Ask participant to be completely honest.
- Ask if there are any additional questions

Questions:

1. Tell me what grade you are in

Impact of Habits (Overview)

2. Tell me something you have learned about the 7 Habits this year?
3. Tell me about one way one of the 7 Habits has come up recently during your school day (Can you give me a second example?)
4. Tell me which habit comes to mind the most when you're not at school.
5. Tell me which habit has been the most useful to you? Why?
6. Tell me which habit is the most challenging to remember to do? Why?
7. Do your parents know about the 7 Habits? What have you told them about them?

Individual Habits

8. *What does 'Habit 1: Be proactive' mean to you? How does it come up in your life?*
9. *What does 'Habit 2: Begin with the end in mind' mean to you? How does it come up in your life?*
10. *What does 'Habit 3: Put first things first' mean to you? How does it come up in your life?*
11. *What does 'Habit 4: Think win-win' mean to you? How does it come up in your life?*
12. *What does 'Habit 5: Seek first to understand, then to be understood' mean to you? How does it come up in your life?*
13. *What does 'Habit 6: Synergize' mean to you? How does it come up in your life?*
14. *What does 'Habit 7: Sharpen the saw' mean to you? How does it come up in your life?*

Leadership

15. What does it mean to you to be a leader?
16. What is something that a leader does?
17. What is one way you try to be a leader in your class? (Is there a specific leadership position you have taken on this year in your class or school?)
18. Tell me about a way in which your teacher encourages you and your classmates to be leaders. (Are there rewards or recognition for students who demonstrate strong leadership?)
19. What is something that you feel like you've learned about leadership this year?
20. Has your teacher showed your stories about famous leaders? Is there one that you thought was particularly interesting?
21. Do you feel like you've become a better leader this year? Why?

Goals and Academics

22. What is a personal goal you have set for yourself this year?
23. Does your class have a mission statement? What is it?
24. Do you keep a date notebook? What do you put in your data notebook? Does the data notebook help you be a better student? How?
25. Do you sometimes do force field analyses, lotus diagrams, or fishbone diagrams? Tell me about one of those. How does it help you to learn?

Appendix B: Teacher Interview Protocol

Teacher Protocol:

- Introduce self: Not a teacher or affiliated with school in any way
- Introduce study: We are trying to learn more about how *The Leader in Me* approach impacts leadership skills, character development, and student success, and how students, teachers, and schools describe and understand the impact of the program.
- Outline timeframe: About 45 minutes
- Ask for permission to tape record
- Confidentiality: Note that subject's name will be kept confidential.
- Other: Note that subject can feel free to stop the interview at any time and that there are no right or wrong answers. Ask participant to be completely honest
- Ask if there are any additional questions

Questions:

1. Please tell me a little bit about yourself (grade taught, number of years working at school, number of years as a teacher)

Teaching

2. How do you feel like TLiM has impacted your teaching?
3. How would your classroom/teaching look different this year to someone who had been in your classroom for the past few years? (Classroom codes of cooperation? Class mission statement? Focus on the positive?)
4. Tell me about a way in which you have infused examples of the 7 Habits into your lessons?
5. Has TLiM impacted the way you think about your students? Interact with your students?
6. Are there ways you are consciously trying to model the 7 Habits for your students?

Management

7. How has *The Leader in Me* affected discipline in your classroom? In the school as a whole? How has your approach to behavior management changed? What was your approach before and what is your approach now?
8. Do you feel like you are equipped with a common language with which to talk about character? If so, what has been the impact of that on your teaching and management?

School and Classroom Culture

9. Tell me about the impact *The Leader in Me* approach has had on the culture of your school? (To what extent do things feel different? To what extent would a

- visitor to the school see differences between last year and this year? To what extent does it feel like TLiM serves as a foundation for your school culture?)
10. What do you feel is the biggest difference in your classroom culture since you implemented *The Leader in Me*? The school culture?
 11. Does your classroom *look* different in any way this year?

Impact on Students

12. Do you feel like your students act differently this year in comparison to previous years?
13. Without telling me a name, can you tell me about a specific student and the impact that *The Leader in Me* has had on him/her?
14. Tell me which habit has seemed to have the largest impact on your students? Which other habits have had an effect on your students? Can you give a specific example (without giving me a name)?
15. Which of the habits has felt most useful to you to teach to your students? To think about for your own self?

Leadership

16. Are there ways in your classroom or the broader school in which students are rewarded (or recognized) for effectively using the habits or demonstrating leadership?
17. Are there way you are consciously trying to give students opportunities to practice being leaders?
18. Tell me about the leadership opportunities that have been made available to students.

Academics

19. How do you feel that the academics at your school has been impacted by TLiM?

Training

20. Tell me about the TLiM training at the very start of the school year. How was it introduced in the first place? What was the training like? (Did it focus more on your own use of the 7 Habits, or how to teach them to your students?) What did you get out of it? Personally? Professionally?

Other

21. Is there anything else that you would like to add about *The Leader in Me* or the 7 Habits?

Appendix C: Codebook

Code	Sub-Code	Definition
Framework		When an interviewee states that TLIM provides structure to what they are already doing. TLIM helps them be more intentional about it and gives them language to describe it.
Nicer/Friendships		When an interviewee states that TLIM helps them/others be nicer to others.
Bullying		Any mention of bullying
Overall impression		When an interviewee provides any overall impression of TLIM or the habits.
Overall impression	Fun	When an interviewee provides an overall impression of TLIM, and specifically indicates that it's fun.
Why it works		When students were enthusiastic about the program they were asked why they think the program works.
Bigger Purpose		Connection of TLIM to a larger overall purpose
Behavior		When interviewee discusses how TLIM affects behavior. Use this code for any discussion of behavior.
Implementation	Roadblocks to implementation	Use when interviewees describe a challenge or obstacle the school/students/themselves have faced in the implementation of TLIM.
Implementation	Buy-in (Student)	Use this code when students both are demonstrating/describing student buy-in OR <i>lack</i> of student buy-in.
Implementation	Extra	When an interviewee states TLIM is just more work for them, or adds on more work to what they already have to be doing.
Implementation	Not Extra (integration)	When an interviewee states that incorporating TLIM is something they are able to easily integrate into existing practices.

Implementation	Buy-in (Teacher)	Use this code when teachers are demonstrating/describing their own buy-in OR <i>lack</i> of buy-in.
Teacher Training		Any mention of TLIM teacher training
Teacher Training	Teacher internalization	
Teacher Practices	Consistency	Examples of using the program across disciplines/settings
Teacher Practices	Teacher Mindset	Teachers talking about the ways in which TLIM influenced their way of thinking
Teacher Practices	Teacher Modeling	Teachers talking about modeling the habits
Teacher Practices	Teacher Attitudes to Students	Teachers talking about the ways in which TLIM influenced their attitudes toward students
Teacher Practices	Teacher Messaging	Teachers talking about messages they deliver to students about TLIM
Teacher Practices	External Rewards	When an interviewee describes how the teacher (or his/herself as the teacher) provides external rewards for exhibiting optimal TLIM skills/habits.
Rhetoric		When teachers/students talk about the habits/TLIM in a way that seems rehearsed or rote (i.e., same examples used repeatedly)
Misunderstanding		When an interviewee misunderstands the definition of a habit. Code alongside the habit that is misunderstood (e.g. Misunderstanding & Be Proactive).
Outside School		When an interviewee discusses using the habits or practices of TLIM outside of school. Can also be used when student describes an instance outside of school to elucidate why a habit is most useful/hardest for her (e.g.

		Synergize is hard for me because I don't really get along with my sister).
Most Useful		When an interviewee indicates that they have habit/part of TLIM that is the most useful to them, or when they describe what TLIM is most useful for. Include a memo with this code if the student earlier in the interview misunderstands the habit they claim to be most useful to them.
Most Useful	Hardest	When an interviewee indicates that they have habit/aspect of TLIM that is the hardest to them.
Goals		When interviewee discusses any goals they may have – that they set personally or in the classroom. Usually this specific discussion is elicited from a question asked by the interviewer. Double code this with Academics if goal is an academic goal.
Like vs. Change		Answer to the question “What do you like about the program and what would you change?”
Academics		When interviewee discusses anything related to academics; this doesn't necessarily have to be about grades/academic achievement, but any sort of academic behavior (e.g. taking a test, studying, etc.). Double code this with Goals if the interviewee is discussing an academic goal.

Social and Emotional Learning

Code	Sub-Code	Definition
SEL		“The process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (CASEL, 2015).
SEL	Responsible Decision Making	The knowledge, skills, and attitudes required to make productive choices about one’s own behaviors and social interactions in multiple settings.
SEL	Relationship Skills	Cooperating, resisting negative social pressures, constructively navigating conflict, communicating and listening, and seeking help when necessary.
SEL	Social Awareness	Perspective-taking (especially with others from diverse backgrounds and cultures), compassion, empathy, understanding social and behavioral norms, and recognizing resources and supports from school, family and communities.
SEL	Self-Management	Possessing the skills and attitudes required to regulate behaviors and emotions.
SEL	Self-Awareness	Ability to accurately understand one’s own emotions, values and personal goals, capacity to assess one’s own strengths and areas of growth, positive mindset, sense of optimism and sense of self-efficacy, and ability to see how one’s thoughts, feelings, and actions are interconnected.

Student Voice

Code	Sub-Code	Definition
Student Voice		Young people feeling authentically empowered to express themselves and take action at the individual, group, and/or community level (Lensmire, 1998, 2000; Mitra, 2008, 2016; Mitra & Serriere, 2014; Mitra, Serriere & Kirshner, 2015; Quaglia, 2014; Quaglia & Corso, 2014)
Student Voice	Authentic	Students given authentic opportunities to express their voice
Student Voice	Teacher Voice	Teachers empowered to bring their own voice and ideas
Student Voice	Ownership	Students given control/ownership over the program
Student Voice	Express Self	Students empowered to express themselves
Student Voice	Empowerment	Students empowered; students given leadership experiences
Student Voice	School Involvement	Students contributing to the school community
Student Voice	Speaking Up For Others	This code can be attributed to instances where an interviewee describes how TLIM helps/prompts them either speak up for others or act for others. This can be double coded with Nicer/Friendships on a case by case basis if it appears relevant.
Student Voice	Student Lighthouse	This code should be used when an interviewee substantively describes the student lighthouse team OR the fact that their school <i>lacks</i> a student lighthouse team.

Culture

Code	Sub-Code	Definition
Culture	Community	Impact of TLIM on school community
Culture	Physical Space	Impact of TLIM on the school’s physical environment
Culture	Shared Experience	TLIM contributing to a shared experience between students and/or teachers
Culture	Language	Use this code when interviewee describes how the language of TLIM is being utilized by students and is helping them.
Culture	Common Language	Use this code when interviewee describes how TLIM <i>specifically</i> gives them school-wide, common language to describe leadership, etc. This can be double coded with “Culture: Language” if the interviewee also describes the language of TLIM generally being helpful.

Leader

Code	Sub-Code	Definition
Leader	Leadership Day	Mentions of Leadership Day
Leader	Mission Statements	Mentions of TLIM Mission Statements
Leader	Role Model	Connecting leadership to being a role model
Leader	What does it mean to you to be a leader?	Use code for student responses to this question, and the definition they provide for what it means to them to be a leader.
Leader	Leadership roles	Interviewee describes specific classroom jobs or leadership roles they take on.

Habits

Code	Sub-Code	Definition
Habits		When the interviewee generally discusses the habits.
Habits	7: Sharpen the saw	<p>When the interviewee discusses the “sharpen the saw” habit. Extend this code for an entire conversation/exchange about this specific habit. Use this code whenever a student is discussing this habit in a substantive way. Do not just apply this code if a student offhandedly says “sharpen the saw,” without any following substance or description. Code this habit if a student is asked about it and says they don’t know what it means.</p> <p>Sharpen the saw = balance feels best</p>
Habits	6: Synergize	<p>When the interviewee discusses the “synergize” habit. Extend this code for an entire conversation/exchange about this specific habit. Use this code whenever a student is discussing this habit in a substantive way. Do not just apply this code if a student offhandedly says “synergize,” without any following substance or description. Code this habit if a student is asked about it and says they don’t know what it means.</p> <p>Synergize = together is better</p>

Habits	5: Seek first to understand then to be understood	<p>When the interviewee discusses the “seek first to understand and then to be understood habit.” Extend this code for an entire conversation/exchange about this specific habit. Use this code whenever a student is discussing this habit in a substantive way. Do not just apply this code if a student offhandedly says “seek first to understand, then to be understood,” without any following substance or description. Code this habit if a student is asked about it and says they don’t know what it means.</p> <p>Seek first to understand, then to be understood = listen before you talk</p>
Habits	4: Think win-win	<p>When the interviewee discusses the “think win-win” habit. Extend this code for an entire conversation/exchange about this specific habit. Use this code whenever a student is discussing this habit in a substantive way. Do not just apply this code if a student offhandedly says “think win-win,” without any following substance or description. Code this habit if a student is asked about it and says they don’t know what it means.</p> <p>Think win-win = everybody can win/benefit</p>
Habits	3: Put first things first	<p>When the interviewee discusses the “put first things first” habit. Extend this code for an entire conversation/exchange about this specific habit. Use this code whenever a student is discussing this habit in a substantive way. Do not just apply this code if a student offhandedly says “put first things first” without any following substance or description. Code this habit if a student is asked about it and says they don’t know what it means.</p> <p>Put first things first = work first, then play</p>
Habits	2: Begin with the end in mind	<p>When the interviewee discusses the “begin with the end in mind” habit. Extend this code for an entire conversation/exchange about this specific habit. Use this code whenever a student is discussing this habit in a substantive way. Do not just apply this code if a student offhandedly says “begin with the end in mind,” without any following substance or description. Code this habit if a student is asked about it and says they don’t know what it means.</p> <p>Begin with the end in mind = have a plan</p>

Habits	1: Be proactive	<p>When the interviewee discusses the “be proactive” habit. Extend this code for an entire conversation/exchange about this specific habit.</p> <p>Use this code whenever a student is discussing this habit in a substantive way. Do not just apply this code if a student offhandedly says “be proactive,” without any following substance or description. Code this habit if a student is asked about it and says they don’t know what it means.</p> <p style="text-align: center;">Be proactive = you are in charge, take initiative</p>
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General

Code	Sub-Code	Definition
Highlights		When an interviewee says something that is particularly helpful/useful for later papers, etc.

*Saira Malhotra contributed significantly to the construction of this codebook.

Appendix D: Coding Example

Table 21.1 *Coding Example for Seek first to understand then to be understood: Part 1*

Student	Code	Segment	Brief Summary
Venture S1 Eunice	Habits\Habit 5: seek first to understand then to be understood	<p>I: Oh, that's cool. Um...and then what about like...seek first to understand then to be understood. What does that one mean to you?</p> <p>E: To me it means...you're trying to seek first what somebody's – what somebody's saying, then they can understand you from your point of view.</p> <p>I: Oh okay, and does that come up for you? Like do you think about that when you're like...hanging out with your friends or like...</p> <p>E: I really think about it when I'm with my little sisters 'cause they talk fast so I be trying to understand them.</p>	<p>seek first what somebody is saying then they can understand from your point of view</p> <p>Little sisters talk fast so I try to understand them</p>
Venture S2 Lance	Habits\Habit 5: seek first to understand then to be understood	<p>I: And then what about like, seek first to understand then to be understood? Like what does that mean to you?</p> <p>L: You're gonna tell – you're like – if you're mad like, if you're in a conflict with somebody, you're gonna tell – first you're, it's either you or the other person. You gotta say something like, I don't like what you're saying about me or something like that. And then – they – you want them to understand you and then you'll – then you'll understand them. And then the conflict will be over.</p> <p>I: Cool. Do you think – do you think about that one, like during the day and stuff like that?</p> <p>L: Ummm...no.</p>	<p>if in a conflict, you want them to understand you and then you'll understand them and then the conflict will be over</p> <p>Doesn't think about</p>
Venture S3 Ebony	Habits\Habit 5: seek first to understand then to be understood	<p>I: Yeah, no I think that makes a lot of sense. And then like – so what about like...that one that's like seek first to understand and then to be understood. Like do you think about that one at all, like what that's one mean to you?</p> <p>J: Uh, a little. It means – you can't...like...mmm...it's like...it's hard to explain. Yeah...uh...it's like you need to...know what's going on. Like you have to seek first then to be understood. Like you need to know what really happened and then you'll understand. Somethin' like that.</p> <p>I: I think that makes a lot of sense, that's a good way to put it. So do you...like do you think about that ever like when you're having a conversation with a friend or like –</p> <p>J: Yeah.</p> <p>I: You do?</p> <p>J: Like – ask like why are you doin' that and she tells me why, and then I was like oh now I understand. Somethin' like that</p>	<p>You need to know what really happened and then you'll understand. Something like that.</p> <p>Ex: ask a friend why are you doing that and now I understand</p>

Table 21.2 Coding Example for Seek first to understand then to be understood: Part 2

Student	Brief Summary	listen then talk	listen to what others have to say	perspective-taking/ understand other people	don't interrupt	Confident in voicing ideas	Look others in the eyes	misunderstanding/ don't know	ask questions	doesn't think about	Hard to do
26 students		8	13	9	1	0	0	4 (plus 2 more partial)	2	4	3
Venture S1 Eunice	seek first what somebody is saying then they can understand from your point of view Little sisters talk fast so I try to understand them							partial: example less accurate: sister talks fast so try to understand			
Venture S2 Lance	if in a conflict, you want them to understand you and then you'll understand them and then the conflict will be over Doesn't think about										
Venture S3 Ebony	You need to know what really happened and then you'll understand. Something like that. Ex: ask a friend why are you doing that and now I understand										
Venture S4 Abel	don't think about										
Venture S5 Alejandra	understand what somebody is saying before you get worked up										
Venture S6 Lynda	listen - before you can say stuff let the person talk before you can say something.										
Venture S7 Shaunda	when a person is talking you listen and understand and then tell your part of the story										
Tully Frank	Don't talk- let others talk to see what they are saying- then I can talk Do it more than last year										
Tully Glen	Hear what others have to say Don't get off topic Ex: talk about social studies, not fun things							partial: don't get off topic			
Tully Leigh	A bit jumbled, but kind of says need to hear what others are saying?										
Tully Lowell	you need to know what's their problem before accusing them cause you don't know why they are doing it										

Tully Roberta	listen with your eyes and heart. Try to see what they really mean. Friend had a sore throat and couldn't talk so listened to facial expressions											
Tully Ronnisha	if you are in a fight, listen to what they have to say first and then talk Fights with brother but doesn't do habit bcs what he says doesn't make sense											
Tully Steve	people get to listen to other people and then the person talking gets to listen in case they get in a fight Got into a fight in football, but then each listened and it turned out to be good											
Tully Steve												
Tully Sylvia	think first until it sounds right and then you can say it out loud to the other person											
Orion, SS-7	listen then talk											
Orion Angela	don't really get this one											
Orion Brandi	listen then talk Don't want to interrupt Ask questions of others; don't want to make assumptions											
Orion Tim	listen to people cause you can learn things from them											
Orion Tim	hard bcs sometimes you really have to say something but you need to wait											
Orion Wanda	I listen to you and then I talk Don't just talk about myself bcs you are going to get bored of just me talking Use it a lot bcs I talk about my family but I want to hear about their family											
Nodes S2 Andrea	when I try to talk to somebody I have to understand. They have to understand what I am saying- then they can understand me so they have to listen											
Nodes S3 Eliza	Think about other people not just yourself Ask questions about themselves and then tell them what you like to do											
Nodes S3 Eliza	Harder bcs I forget it											
Nodes S5 Edward	Listen instead of saying whatever you want to say. Understand what they want to say											
Hill Casey	Listen to someone else and what they are trying to tell you before you answer or say something back Don't think about this one											
Hill Guadalupe	listen to someone before you say something If you accuse someone, make sure you hear their story											
Hill Guadalupe	TLIM isn't easy, especially habit 5											
Hill Ruben	to understand someone better before they can understand you											

Appendix E: Building Multilevel Models

Below I describe how I built the model for each measure to ensure that the correct statistical approach and appropriate models were being used to analyze the data.

Voice-confidence

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For voice-confidence, the ICC at level 2 (the individual level) was .365, and at level 3 (the classroom level) was .006. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-confidence measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random coefficient model with treatment, time, gender and

grade emerged as the best model (model 5). More specifically, the likelihood ratio test comparing model 3 (random intercept with treatment, time, gender and grade) to model 5 (a random coefficient model with the same variables) resulted in a χ^2 of 51.56 ($p < .001$). This indicates that the random coefficient (i.e., allowing the slopes to vary) significantly improves the model. In addition, the likelihood ratio test comparing model 5 (random coefficient with treatment, time, gender and grade) to model 6 (also random coefficient including the same variables with the addition of the treatment*time interaction) resulted in a χ^2 of 0.21 (n.s). This indicates that the inclusion of the interaction term did not significantly improve the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 5 is the model with the best fit for the voice-confidence measure.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.1.

Table 22.1. *Model building for Voice- confidence measure*

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	4.56*** (.02)	4.55*** (.03)	4.60*** (.04)	4.60*** (.04)	4.60*** (.04)	4.60*** (.04)
B ₁ =Treatment	-	0.02 (.03)	0.02 (.03)	0.03 (.04)	0.02 (.03)	0.03 (.04)
B ₂ =Time	-	-	-0.11*** (.02)	-0.09** (.03)	-0.11*** (.02)	-0.09** (.03)
B ₃ =Treatment*Time	-	-	-	-0.02 (.05)	-	-0.02 (.05)
Gender	-	-	-0.02 (.03)	-0.02 (.03)	-0.02 (.03)	-0.02 (.03)
Grade	-	-	0.02 (.03)	0.02 (.03)	0.02 (.03)	0.02 (.03)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	.626 (7.28)	.626 (8.05)
Sd (_cons) id	.394 (.018)	.394 (.018)	.395 (.018)	.395 (.018)	.514 (4.40)	.514 (4.90)
Sd (time, _cons) id	-	-	-	-	-.335 (7.38)	-.335 (8.17)
Sd (residual)	.519 (.012)	.519 (.012)	.511 (.012)	.511 (.012)	.255 (8.94)	.256 (9.85)
ICC ID	.365	.365	.374	.374	.802	.801
ICC Classroom	-	-	-	-	-	-
Log Likelihood	-1874.93	-1874.72	-1828.24	-1828.14	-1802.42	-1802.31
-2LL	3749.86	3749.44	3656.48	3656.28	3604.84	3604.62
AIC	3755.87	3757.43	3670.48	3672.27	3622.83	3624.63
BIC	3772.61	3779.76	3709.46	3716.82	3672.95	3680.31
LR Test	Null vs. linear: 140.67***	2 vs. 1: 0.43	-	Model 4 vs. Model 3 0.21	Model 5 vs. Model 3: 51.56***	6 vs. 5: 0.21 6 vs. 4: 51.65***

*p<.05, **p<0.01, ***p<.001

Voice- civic participation skills

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For voice-civic participation skills, the ICC at level 2 (the individual level) was .365, and at level 3 (the classroom level) was .050. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-confidence measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random intercept model with treatment, time, gender, grade, and the interaction term treatment*time emerged as the best model (model 4). More specifically, the likelihood ratio test comparing model 3 (random intercept with

treatment, time, gender and grade) to model 4 (also random intercept including the same variables with the addition of the treatment*time interaction) resulted in a χ^2 of 5.19 ($p < .05$). This indicates that the inclusion of the interaction term significantly improved the model. The likelihood ratio test comparing model 4 to model 6 (a random coefficient model with the same variables) resulted in a χ^2 of 5.09 (n.s.). This indicates that the random coefficient (i.e., allowing the slopes to vary) did not significantly improve the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 4 is the model with the best fit for the measure of voice-civic participation skills.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.2.

Table 22.2. Model building for Voice – civic participation skills measure

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	4.20*** (0.02)	4.22*** (0.03)	4.43*** (0.04)	4.40*** (0.05)	4.42*** (0.04)	4.39*** (0.04)
B ₁ =Treatment	-	-0.03 (0.04)	-0.04 (0.04)	0.02 (0.05)	-0.03 (0.04)	-0.02 (0.05)
B ₂ =Time	-	-	-0.19*** (0.03)	-0.13*** (0.04)	-0.19*** (0.03)	-0.13*** (0.03)
B ₃ =Treatment*Time	-	-	-	-0.13* (0.05)	-	-0.13* (0.06)
Gender	-	-	-0.22*** (0.04)	-0.22*** (0.04)	-0.21*** (0.04)	-0.21*** (0.04)
Grade	-	-	-0.02 (0.04)	-0.02 (0.04)	-0.01 (0.04)	-0.01 (0.04)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	.735 (12.94)	.733 (11.56)
Sd (_cons) id	0.475 (0.022)	0.475 (0.022)	0.470 (0.022)	0.471 (0.021)	0.672 (7.083)	0.671 (6.309)
Sd (time, _cons) id	-	-	-	-	-0.467 (6.136)	-0.465 (5.508)
Sd (residual)	0.627 (0.014)	0.627 (0.015)	0.608 (0.014)	0.606 (0.014)	0.316 (15.065)	0.315 (13.428)
ICC ID	.365	.374	.374	.376	.819	.819
ICC Classroom	-	-	-	-	-	-
Log Likelihood	-2245.86	-2245.53	-2164.16	-2161.57	-2161.62	-2159.02
-2LL	4491.72	4491.06	4328.32	4323.14	4323.24	4318.04
AIC	4497.73	4499.05	4342.32	4339.13	4341.24	4338.04
BIC	4514.48	4521.38	4381.30	4383.68	4391.35	4393.73
LR Test	Null vs. linear: 140.13***	Model 2 vs. Model 1: Chi²= 0.67	-	Model 4 vs. Model 3: Chi²=5.19*	Model 5 vs. Model 3: Chi² = 5.09	6 vs. 5: 5.19* 6 vs. 4: 5.09

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Voice- value of group work

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For voice-value of group work, the ICC at level 2 (the individual level) was .355, and at level 3 (the classroom level) was .057. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-value of group work measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random coefficient model with treatment, time, gender, grade, and the interaction term treatment*time emerged as the best model (model 6). More specifically, the likelihood ratio test comparing model 5 (random coefficient with

treatment, time, gender and grade) to model 6 (also random coefficient including the same variables with the addition of the treatment*time interaction) resulted in a χ^2 of 5.09 ($p < .05$). This indicates that the inclusion of the interaction term significantly improved the model. The likelihood ratio test comparing model 6 to model 4 (a random intercept model with the same variables) resulted in a χ^2 of 13.62 ($p < .01$). This indicates that the random coefficient (i.e., allowing the slopes to vary) significantly improves the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 6 is the model with the best fit for the voice-value of group work measure.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.3.

Table 22.3. Model building for Voice – value of group work measure

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	4.18*** (0.02)	4.21*** (0.03)	4.21*** (0.03)	4.30*** (0.05)	4.33*** (0.05)	4.30*** (0.05)
B ₁ =Treatment	-	-0.05 (0.05)	-0.05 (0.05)	0.02 (0.06)	0.04 (0.05)	0.02 (0.05)
B ₂ =Time	-	-	-0.17*** (0.03)	-0.10* (0.05)	-0.17*** (0.03)	-0.10* (0.05)
B ₃ =Treatment*Time	-	-	-	-0.14* (.06)	-	-0.14* (0.06)
Gender	-	-	-0.08 (.05)	-0.08 (.05)	-0.07 (.05)	-0.07 (.05)
Grade	-	-	-0.01 (.05)	-0.01 (.05)	-0.01 (.05)	-0.01 (.05)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	0.840 (12.327)	0.838 (13.85)
Sd (_cons) id	0.520 (.025)	0.519 (0.025)	0.520 (0.025)	0.521 (0.024)	0.735 (7.039)	0.735 (7.890)
Corr (time, _cons) id	-	-	-	-	-0.437 (6.165)	-0.436 (6.947)
Sd (residual)	0.698 (0.016)	0.698 (0.016)	0.691 (0.016)	0.689 (0.016)	0.353 (14.643)	0.352 (16.470)
ICC ID	.357	.356	.362	.364	.812	.813
ICC Classroom	-	-	-	-	-	-
Log Likelihood	-2447.01	-2446.52	-2398.26	-2395.71	-2391.45	-2388.90
-2LL	4894.02	4893.04	4796.52	4791.42	4782.9	4777.8
AIC	4900.01	4901.03	4810.51	4807.42	4800.89	4797.80
BIC	4916.76	4923.36	4849.49	4851.97	4851.01	4853.49
LR Test	Null vs. linear: 133.57***	2 vs. 1: 0.98	-	4 vs. 3: 5.09*	5 vs. 3: 13.62**	6 vs. 5: 5.09* 6 vs. 4: 13.62**

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Voice- communication

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For voice-communication, the ICC at level 2 (the individual level) was .359, and at level 3 (the classroom level) was .051. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-confidence measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random coefficient model with treatment, time, gender, grade, and the interaction term of treatment*time emerged as the best model (model 6). More specifically, the likelihood ratio test comparing model 5 (random coefficient with treatment, time, gender and grade) to model 6 (also random coefficient including the

same variables with the addition of the treatment*time interaction) resulted in a chi² of 5.85 (p<.05). This indicates that the inclusion of the interaction term significantly improved the model. The likelihood ratio test comparing model 6 to model 4 (a random intercept model with the same variables) resulted in a chi² of 6.29 (p<.05). This indicates that the random coefficient (i.e., allowing the slopes to vary) significantly improves the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 6 is the model with the best fit for the measure voice- communication.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.4.

Table 22.4. Model building for Voice- communication measure

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	4.02*** (0.02)	4.06*** (0.03)	4.27*** (0.05)	4.23*** (0.05)	4.26*** (0.05)	4.23*** (0.05)
B ₁ =Treatment	-	-0.09 (0.05)	-0.09* (0.05)	-0.03 (0.06)	-0.09 (0.05)	-0.02 (0.05)
B ₂ =Time	-	-	-0.19*** (0.03)	-0.11* (0.04)	-0.19*** (0.03)	-0.11*** (0.04)
B ₃ =Treatment*Time	-	-	-	-0.15* (0.06)	-	-
Gender	-	-	-0.19*** (0.05)	-0.19*** (0.05)	-0.18*** (0.05)	-0.18*** (0.05)
Grade	-	-	-0.04 (0.05)	-0.04 (0.05)	-0.04 (0.05)	-0.04 (0.05)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	0.823 (13.344)	0.819 (12.414)
Sd (_cons) id	0.520 (0.025)	0.518 (0.025)	0.521 (0.024)	0.522 (0.024)	0.745 (7.372)	0.744 (6.838)
Corr (time, _cons) id	-	-	-	-	-0.463 (5.836)	-0.461 (5.460)
Sd (residual)	0.694 (0.016)	0.694 (0.016)	0.679 (0.015)	0.677 (0.015)	0.351 (15.647)	0.350 (14.526)
ICC ID	.359	.357	.370	.373	.818	.819
ICC Classroom	-	-	-	-	-	-
Log Likelihood	-2438.44	-2436.62	-2373.24	-2370.31	-2370.09	-2367.17
-2LL	4876.88	4873.24	4746.48	4740.62	4740.18	4734.34
AIC	4882.88	4881.25	4760.48	4756.65	4758.19	4754.34
BIC	4899.62	4903.58	4799.45	4801.17	4808.30	4810.02
LR Test (compared to previous model)	Null vs. linear: 135.46***	2 vs. 1: 3.63	-	4 vs. 3: 5.85*	5 vs. 3: 6.29*	6 vs. 5: 5.85* 6 vs. 4: 6.29*

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Youth empowerment

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For empowerment, the ICC at level 2 (the individual level) was .412, and at level 3 (the classroom level) was .127. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, as well as the classroom to justify using it as a level 3 grouping variable. As such, a three-level multilevel modeling approach was pursued for the empowerment measure (time at level one, nested in students at level two, nested in classrooms at level three).

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. The random intercept model with treatment, time, gender, grade, and treatment*time emerged as the best model (model 4). More specifically, the likelihood ratio test comparing model 3 (random intercept with treatment, time, gender and grade) to model 4 (also random intercept including the same variables with the addition of the treatment*time interaction) resulted in a χ^2 of 4.24 ($p<.05$). This indicates that the inclusion of the interaction term significantly improved the model.

I then followed the same steps using a random coefficient model, and also

comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. For the empowerment measure, the likelihood ratio test comparing model 4 to model 6 (a random coefficient model with the same variables) resulted in a χ^2 of 0.0 (n.s.). This indicates that the random coefficient (ie, allowing the slopes to vary) does not significantly improve the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 4 is the model with the best fit for the youth empowerment measure.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.5.

Table 22.5. Model building for Empowerment measure

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	3.16*** (.03)	3.17*** (.05)	3.28*** (.07)	3.25*** (0.05)	3.28*** (.07)	3.25*** (0.07)
B ₁ =Treatment	-	-0.02 (.07)	-0.03 (.07)	0.02 (0.07)	-0.03 (.07)	0.02 (0.07)
B ₂ =Time	-	-	-0.18*** (.02)	-0.12*** (0.03)	-0.18*** (0.02)	-0.12*** (0.03)
B ₃ =Treatment*Time	-	-	-	-0.10* (0.05)	-	-0.10* (0.07)
Gender	-	-	-0.08* (.04)	-0.08* (0.04)	-0.08* (0.04)	-0.08* (0.04)
Grade	-	-	0.04 (.07)	0.04 (0.07)	0.04 (0.07)	0.04 (0.07)
Random Effects						
Sd (_cons) class:id	.254 (.028)	.254 (.028)	.253 (.028)	.253 (.028)	.253 (.028)	.253 (.028)
Sd (time) id	-	-	-	-	.641 (14.10)	.639 (10.79)
Sd (_cons) id	.380 (.020)	.380 (.020)	.387 (.020)	.388 (.020)	.597 (7.56)	.597 (5.78)
Corr (time, _cons) id	-	-	-	-	-.539 (4.93)	-.538 (3.80)
Sd (residual)	.546 (.012)	.546 (.012)	.533 (.012)	.532 (.012)	.281 (16.09)	.280 (12.29)
ICC ID	.412	.412	.430	.432	.842	.842
ICC Classroom	.127	.127	.129	.129	.129	.129
Log Likelihood	-1980.56	-1980.50	-1927.25	-1925.13	-1927.25	-1925.13
-2LL	3961.12	3961	3854.5	3850.26	3854.5	3850.26
AIC	3969.12	3970.99	3870.50	3868.26	3874.50	3872.26
BIC	3991.45	3998.91	3915.05	3918.38	3930.18	3933.51
LR Test (compared to previous model)	Null vs. linear: 291.42***	2 vs. 1: 0.13	-	4 vs. 3: 4.24*	5 vs. 3: 0.0	6 vs. 5: 4.24* 6 vs. 4: 0.0

*p<.05, **p<0.01, ***p<.001

Voice- Quaglia

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For voice-Quaglia, the ICC at level 2 (the individual level) was .296, and at level 3 (the classroom level) was .075. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-confidence measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random coefficient model with treatment, time, gender and grade emerged as the best model (model 5). More specifically, the likelihood ratio test comparing model 3 (random intercept with treatment, time, gender and grade) to model 5 (a random coefficient model with the same variables) resulted in a χ^2 of 17.29 ($p<.001$).

This indicates that the random coefficient (i.e., allowing the slopes to vary) significantly improves the model. In addition, the likelihood ratio test comparing model 5 (random coefficient with treatment, time, gender and grade) to model 6 (also random coefficient including the same variables with the addition of the treatment*time interaction) resulted in a χ^2 of 0.72 (n.s.). This indicates that the inclusion of the interaction term did not significantly improve the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 5 is the model with the best fit for the Voice-Quaglia measure.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.6.

Table 22.6. *Model building for Voice: Quaglia measure*

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	3.81*** (.02)	3.82*** (.03)	4.08*** (.05)	4.06*** (.05)	4.07*** (.04)	4.06*** (.05)
B ₁ =Treatment	-	-0.02 (.04)	-0.04 (.04)	-0.01 (.05)	-0.03 (.04)	-0.01 (.05)
B ₂ =Time	-	-	-0.31*** (.03)	-0.28*** (.04)	-0.31*** (.03)	-0.28*** (.04)
B ₃ =Treatment*Time	-	-	-	-0.05 (.06)	-	-0.05 (.06)
Gender	-	-	-0.07 (.04)	-0.07 (.04)	-0.08 (.04)	-0.08 (.04)
Grade	-	-	-0.11** (.04)	-0.11** (.04)	-0.11* (.04)	-0.11* (.04)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	0.787 (11.299)	0.787 (15.021)
Sd (_cons) id	0.445 (.025)	0.445 (.025)	0.469 (.023)	0.469 (.023)	0.671 (6.629)	0.671 (8.813)
Corr (time, _cons) id	-	-	-	-	-0.436 (6.277)	-0.436 (8.331)
Sd (residual)	0.684 (.015)	0.684 (.015)	0.645 (.015)	0.645 (.015)	0.327 (13.61)	0.326 (18.167)
ICC ID	.298	.297	.346	.346	.808	.809
ICC Classroom	-	-	-	-	-	-
Log Likelihood	-2339.72	-2339.57	-2246.26	-2245.90	-2237.61	-2237.25
-2LL	4679.44	4679.14	4492.52	4491.8	4475.22	4474.5
AIC	4685.44	4687.14	4506.51	4507.79	4493.23	4494.50
BIC	4702.19	4709.46	4545.49	4552.33	4543.34	4550.18
LR Test	Null vs. linear: 90.49***	2 vs. 1: .31	-	4 vs. 3: .72	5 vs. 3: 17.29***	6 vs. 5: .72 6 vs. 4: 17.29***

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

School Connectedness

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For school connectedness, the ICC at level 2 (the individual level) was .463, and at level 3 (the classroom level) was .067. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-confidence measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random coefficient model with treatment, time, gender grade, and the interaction term of treatment*time emerged as the best model (model 6). More specifically, the likelihood ratio test comparing model 5 (random coefficient with treatment, time, gender and grade) to model 6 (also random coefficient including the

same variables with the addition of the treatment*time interaction) resulted in a chi² of 5.19 (p<.05). This indicates that the inclusion of the interaction term significantly improved the model. The likelihood ratio test comparing model 6 to model 4 (a random intercept model with the same variables) resulted in a chi² of 24.84 (p<.001). This indicates that the random coefficient (ie, allowing the slopes to vary) significantly improves the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 5 is the model with the best fit.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.7.

Table 22.7. Model building for School connectedness measure

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	3.98*** (.03)	4.02*** (.04)	4.19*** (.05)	4.16*** (.06)	4.18*** (.05)	4.15*** (.05)
B ₁ =Treatment	-	-0.09 (.05)	-0.11* (.05)	-0.04* (.06)	-0.09* (.05)	-0.04 (.05)
B ₂ =Time	-	-	-0.15*** (.03)	-0.08 (.04)	-0.15*** (.03)	-0.08 (.04)
B ₃ =Treatment*Time	-	-	-	-0.14* (.06)	-	-0.14 (.06)
Gender	-	-	-0.13* (.05)	-0.13 (.05)	-0.13** (.05)	-0.13** (.05)
Grade	-	-	-0.05 (.05)	-0.05 (.05)	-0.04 (.05)	-0.04 (.05)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	0.793 (26.627)	.790 (14.913)
Sd (_cons) id	0.629 (.024)	0.627 (.024)	0.631 (.024)	0.631 (.024)	0.771 (13.694)	.770 (7.643)
Corr (time, _cons) id	-	-	-	-	-0.322 (18.011)	-0.320 (10.137)
Sd (residual)	0.677 (.015)	0.677 (.015)	0.663 (.015)	0.661 (.015)	0.354 (29.868)	.354 (16.632)
ICC ID	.463	.462	.475	.477	.826	.826
ICC Classroom	.067	-	-	-	-	-
Log Likelihood	-2496.43	-2510.76	-2451.06	-2448.47	-2438.64	-2436.04
-2LL	4992.86	5021.52	4902.12	4896.94	4877.28	4872.08
AIC	5000.85	5029.52	4916.12	4912.93	4895.27	4892.09
BIC	5023.18	5051.85	4955.10	4957.48	4945.39	4947.77
LR Test	Null vs. linear: 237.32***	2 vs. 1: 3.52	-	4 vs. 3: 5.19*	5 vs. 3: 24.84***	6 vs. 5: 5.19* 6 vs. 4: 24.84***

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Teacher academic support

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For teacher academic support, the ICC at level 2 (the individual level) was .275, and at level 3 (the classroom level) was .049. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-confidence measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random coefficient model with treatment, time, gender and grade emerged as the best model (model 5). More specifically, the likelihood ratio test comparing model 5 (random coefficient with treatment, time, gender and grade) to model

6 (also random coefficient including the same variables with the addition of the treatment*time interaction) resulted in a χ^2 of 0.00 (n.s.). This indicates that the inclusion of the interaction term did not significantly improve the model. The likelihood ratio test comparing model 5 to model 3 (a random intercept model with the same variables) resulted in a χ^2 of 56.44 ($p < .001$). This indicates that the random coefficient (i.e., allowing the slopes to vary) significantly improves the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 5 is the model with the best fit.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.8.

Table 22.8. Model building for Teacher academic support measure

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	4.76*** (.01)	4.78*** (.02)	4.86*** (.03)	4.86*** (.03)	4.85*** (.02)	4.85*** (.03)
B ₁ =Treatment	-	-0.04 (.02)	-0.04 (.02)	-0.04 (.03)	-0.04 (.02)	-0.04 (.03)
B ₂ =Time	-	-	-0.08*** (.02)	-0.08** (.03)	-0.08*** (.02)	-0.08** (.03)
B ₃ =Treatment*Time	-	-	-	0.00 (.03)	-	0.00 (.03)
Gender	-	-	-0.06* (.02)	-0.06* (.02)	-0.06** (.02)	-0.06** (.02)
Grade	-	-	-0.02 (.02)	-0.02 (.02)	-0.01 (.02)	-0.01 (.02)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	.479 (6.977)	.479 (5.861)
Sd (_cons) id	0.244 (.015)	0.243 (.015)	0.246 (.014)	0.246 (.014)	.357 (4.678)	.357 (3.930)
Corr (time, _cons) id	-	-	-	-	-0.390 (8.754)	-0.390 (7.358)
Sd (residual)	0.396 (.009)	0.396 (.01)	0.386 (.01)	0.386 (.01)	.185 (9.022)	.185 (7.575)
ICC ID	.275	.274	.290	.290	.788	.788
ICC Classroom	-	-	-	-	-	-
Log Likelihood	-1244.52	-1243.34	-1192.01	-1192.01	-1163.79	-1163.79
-2LL	2489.04	2486.68	2384.02	2384.02	2327.58	2327.58
AIC	2495.04	2494.68	2398.02	2400.02	2345.59	2347.59
BIC	2511.78	2517.01	2437.00	2444.57	2395.70	2403.27
LR Test	Null vs. linear: 77.26***	2 vs. 1: 2.35	-	4 vs. 3: 0.00	5 vs. 3: 56.44***	6 vs. 5: 0.00 6 vs. 4: 56.44***

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Teacher personal support

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For teacher personal support, the ICC at level 2 (the individual level) was .367, and at level 3 (the classroom level) was .103. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, as well as the classroom to justify using it as a level 3 grouping variable. As such, a three-level multilevel modeling approach was pursued for the empowerment measure (time at level one, nested in students at level two, nested in classrooms at level three).

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random coefficient model with treatment, time, gender grade, and the interaction term of treatment*time emerged as the best model (model 6). More specifically, the likelihood ratio test comparing model 5 (random coefficient with treatment, time, gender and grade) to model 6 (also random coefficient including the

same variables with the addition of the treatment*time interaction) resulted in a chi² of 8.27 (p<.01). This indicates that the inclusion of the interaction term significantly improved the model. The likelihood ratio test comparing model 6 to model 4 (a random intercept model with the same variables) resulted in a chi² of 67.82 (p<.001). This indicates that the random coefficient (i.e., allowing the slopes to vary) significantly improves the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 5 is the model with the best fit.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.9.

Table 22.9. Model building for Teacher personal support measure

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	4.33*** (.04)	4.40*** (.05)	4.59*** (.07)	4.54*** (.07)	4.56*** (.07)	4.53*** (.07)
B ₁ =Treatment	-	-0.13 (.07)	-0.14 (.07)	-0.06 (.08)	-0.11 (.07)	-0.06 (.07)
B ₂ =Time	-	-	-0.23*** (.03)	-0.14*** (.04)	-0.23*** (.03)	-0.14*** (.04)
B ₃ =Treatment*Time	-	-	-	-0.17** (.06)	-	-0.17** (.06)
Gender	-	-	-0.10* (.04)	-0.10* (.04)	-0.09* (.04)	-0.09* (.04)
Grade	-	-	-0.04 (.07)	-0.04 (.07)	-0.03 (.07)	-0.03 (.07)
Random Effects						
Sd (_cons) class:id	0.269 (.031)	0.261 (.031)	.0.262 (.031)	.0.262 (.031)	.0.243 (.030)	.243 (.030)
Sd (time) id	-	-	-	-	0.786 (6.756)	.782 (7.918)
Sd (_cons) id	0.430 (.025)	.430 (.025)	0.445 (.024)	0.445 (.024)	0.596 (4.455)	.596 (5.197)
Corr (time, _cons) id	-	-	-	-	-0.324 (6.123)	-0.322 (7.222)
Sd (residual)	0.666 (.015)	0.666 (.015)	0.637 (.014)	0.634 (.014)	0.310 (8.565)	.310 (9.986)
ICC ID	.367	.363	.397	.401	.812	.811
ICC Classroom	.103	.097	.102	.103	.115	.116
Log Likelihood	-2325.51	-2323.91	-2241.03	-2236.89	-2207.12	-2202.99
-2LL	4651.02	4647.82	4482.06	4473.78	4414.24	4405.98
AIC	4659.02	4657.82	4498.07	4491.79	4434.24	4427.97
BIC	4681.34	4685.72	4542.60	4541.88	4489.90	4489.20
LR Test	Null vs. linear: 220.12***	2 vs. 1: 3.20	-	4 vs. 3: 8.28**	5 vs. 3: 67.83***	6 vs. 5: 8.27** 6 vs. 4: 67.82***

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Self-efficacy in enlisting social resources

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For self-efficacy in enlisting social resources, the ICC at level 2 (the individual level) was .362, and at level 3 (the classroom level) was .065. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-confidence measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random intercept model with treatment, time, gender, grade, and the interaction term treatment*time emerged as the best model (model 4). More specifically, the likelihood ratio test comparing model 3 (random intercept with

treatment, time, gender and grade) to model 4 (also random intercept including the same variables with the addition of the treatment*time interaction) resulted in a χ^2 of 4.88 ($p < .05$). This indicates that the inclusion of the interaction term significantly improved the model. The likelihood ratio test comparing model 4 to model 6 (a random coefficient model with the same variables) resulted in a χ^2 of 4.90 (n.s.). This indicates that the random coefficient (i.e., allowing the slopes to vary) did not significantly improve the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 5 is the model with the best fit.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.10.

Table 22.10. *Model building for self-efficacy for enlisting social resources measure*

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	4.14*** (.02)	4.12*** (.03)	4.26*** (.05)	4.23*** (.05)	4.26*** (.04)	4.23*** (.05)
B ₁ =Treatment	-	0.04 (.04)	0.03 (.04)	0.09 (.05)	0.03 (.04)	0.09 (.05)
B ₂ =Time	-	-	-0.13*** (.03)	-0.07 (.04)	-0.13*** (.03)	-0.07 (.04)
B ₃ =Treatment*Time	-	-	-	-0.13* (.06)	-	-0.13* (.06)
Gender	-	-	-0.15*** (.04)	-0.15*** (.04)	-0.15*** (.04)	-0.15*** (.04)
Grade	-	-	0.0 (.04)	0.0 (.04)	0.00 (.04)	0.00 (.04)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	0.761 (23.555)	0.758 (10.860)
Sd (_cons) id	0.482 (.023)	0.481 (.023)	.481 (.022)	.481 (.022)	0.689 (13.002)	0.689 (5.979)
Corr (time, _cons) id	-	-	-	-	-0.465 (10.996)	-0.464 (5.102)
Sd (residual)	0.639 (.014)	0.639 (.014)	.628 (.014)	.627 (.014)	0.325 (27.613)	0.325 (12.674)
ICC ID	.362	.362	.369	.371	.819	.818
ICC Classroom	-	-	-	-	-	-
Log Likelihood	-2278.89	-2278.52	-2221.54	-2219.10	-2218.59	-2216.15
-2LL	4557.78	4557.04	4443.08	4438.2	4437.18	4432.3
AIC	4563.77	4565.03	4457.08	4454.20	4455.18	4452.29
BIC	4580.52	4587.36	4496.05	4498.74	4505.29	4507.97
LR Test	Null vs. linear: 137.94***	2 vs. 1: 0.74	-	4 vs. 3: 4.88*	5 vs. 3: 5.90	6 vs. 5: 4.88* 6 vs. 4: 5.90

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Self-efficacy in self-regulated learning

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For self-efficacy in self-regulated learning, the ICC at level 2 (the individual level) was .385, and at level 3 (the classroom level) was .033. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-confidence measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random coefficient model with treatment, time, gender grade, and the interaction term of treatment*time emerged as the best model (model 6). More specifically, the likelihood ratio test comparing model 5 (random coefficient with

treatment, time, gender and grade) to model 6 (also random coefficient including the same variables with the addition of the treatment*time interaction) resulted in a χ^2 of 9.17 ($p < .01$). This indicates that the inclusion of the interaction term significantly improved the model. The likelihood ratio test comparing model 6 to model 4 (a random intercept model with the same variables) resulted in a χ^2 of 14.31 ($p < .001$). This indicates that the random coefficient (i.e., allowing the slopes to vary) significantly improves the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 5 is the model with the best fit.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.11.

Table 22.11. *Model building for Self-efficacy for self-regulated learning measure*

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	3.94*** (.02)	3.99*** (.03)	4.22*** (.04)	4.18*** (.05)	4.21*** (.04)	4.17*** (.04)
B ₁ =Treatment	-	-0.09 (.04)	-0.10* (.04)	-0.02 (.05)	-0.08* (.04)	-0.02 (.04)
B ₂ =Time	-	-	-0.27*** (.03)	-0.19*** (.04)	-0.27*** (.03)	-0.19*** (.04)
B ₃ =Treatment*Time	-	-	-	-0.16** (.05)	-	-0.16** (.05)
Gender	-	-	-0.20*** (.04)	-0.20*** (.04)	-0.19*** (.04)	-0.19*** (.04)
Grade	-	-	0.00 (.04)	0.00 (.04)	0.01 (.04)	0.01 (.04)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	.680 (9.988)	.677 (7.928)
Sd (_cons) id	0.473 (.021)	0.471 (.021)	0.480 (0.020)	0.481 (0.020)	0.633 (5.367)	.633 (4.240)
Corr (time, _cons) id	-	-	-	-	-0.396 (6.617)	-0.394 (5.276)
Sd (residual)	0.598 (.013)	0.598 (.014)	0.564 (0.013)	0.562 (0.013)	0.296 (11.473)	.295 (9.106)
ICC ID	.385	.383	.419	.423	.820	.822
ICC Classroom	-	-	-	-	-	-
Log Likelihood	-2172.84	-2170.10	-2069.32	-2064.715	-2062.15	-2057.56
-2LL	4345.68	4340.2	4138.64	4129.43	4124.3	4115.12
AIC	4351.67	4348.20	4152.63	4145.43	4142.29	4135.12
BIC	4368.42	4370.52	4191.60	4189.97	4192.39	4190.79
LR Test	Null vs. linear: 156.93***	2 vs. 1:	-	4 vs. 3: 9.20**	5 vs. 3: 14.34***	6 vs. 5: 9.17** 6 vs. 4: 14.31***

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Teamwork

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For the teamwork measure, the ICC at level 2 (the individual level) was .469, and at level 3 (the classroom level) was .041. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-confidence measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random coefficient model with treatment, time, gender and grade emerged as the best model (model 5). More specifically, the likelihood ratio test comparing model 5 (random coefficient with treatment, time, gender and grade) to model 6 (also random coefficient including the same variables with the addition of the

treatment*time interaction) resulted in a χ^2 of 0.33 (n.s.). This indicates that the inclusion of the interaction term did not significantly improve the model. The likelihood ratio test comparing model 5 to model 3 (a random intercept model with the same variables) resulted in a χ^2 of 10.12 ($p < .01$). This indicates that the random coefficient (i.e., allowing the slopes to vary) significantly improves the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 5 is the model with the best fit.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.12.

Table 22.12. *Model building for Teamwork measure*

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	3.85*** (.02)	3.90*** (.03)	4.00*** (.04)	4.00*** (.04)	4.00*** (.04)	3.99*** (.04)
B ₁ =Treatment	-	-0.10** (.04)	-0.10** (.03)	-0.09* (.04)	-0.10** (.04)	-0.09* (.04)
B ₂ =Time	-	-	-0.06* (.02)	-0.04 (.03)	-0.06* (.02)	-0.04 (.03)
B ₃ =Treatment*Time	-	-	-	-	-	-
Gender	-	-	-0.15*** (.04)	-0.15*** (.04)	-0.15*** (.04)	-0.15*** (.04)
Grade	-	-	-0.01 (.04)	-0.01 (.04)	-0.00 (.04)	-0.00 (.04)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	0.600 (11.227)	0.600 (7.961)
Sd (_cons) id	0.473 (.018)	0.471 (.018)	0.466 (.018)	0.466 (.018)	0.595 (5.655)	0.596 (4.011)
Corr (time, _cons) id	-	-	-	-	-0.384 (8.017)	-0.384 (5.676)
Sd (residual)	0.504 (.011)	0.504 (.011)	0.503 (.011)	0.503 (.011)	0.271 (12.439)	0.270 (8.847)
ICC ID	.468	.465	.462	.462	.829	.830
ICC Classroom	-	-	-	-	-	-
Log Likelihood	-1938.37	-1934.92	-1898.34	-1898.17	-1893.28	-1893.11
-2LL	3876.74	3869.84	3796.68	3796.34	3786.56	3786.22
AIC	3882.73	3877.85	3810.67	3812.34	3804.55	3806.22
BIC	3899.48	3900.17	3849.64	3856.87	3854.65	3861.89
LR Test	Null vs. linear: 241.19***	2 vs. 1: 6.89**	-	4 vs. 3: 0.34	5 vs. 3: 10.12**	6 vs. 5: 0.33 6 vs. 4: 10.12**

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Perseverance

I first ran a null model with no explanatory variable to assess the appropriateness of a multilevel approach. In comparison to the linear model, the null model was significant ($p=.000$), so a multilevel approach was pursued. I then ran analyses to find the intraclass correlation coefficient (ICC), using Robson and Pevalin's (2016) threshold of .10 to determine if there was enough variance attributed to each level to include it in the model. For the perseverance measure, the ICC at level 2 (the individual level) was .403, and at level 3 (the classroom level) was .026. These numbers indicate that there was sufficient variance accounted for by the individual to include it as a level 2 grouping variable, but there was not enough variance accounted for by classroom to justify using it as a level 3 grouping variable. As such, a two-level multilevel modeling approach was pursued for the voice-confidence measure (time at level one, nested in individuals at level two). I then re-ran the null model with just these two levels to serve as the baseline model.

Using a random intercept model at first, I then added variables in the following order (and ran likelihood ratio tests at each step) to see if there was justification for including them in the model: treatment; grade, gender and time; treatment*time. I then followed the same steps using a random coefficient model, and also comparing this model to the previous random intercept model using likelihood ratio tests to determine the best model to use. The random intercept model with treatment, time, gender and grade emerged as the best model (model 3). More specifically, the likelihood ratio test comparing model 3 to model 4 (random intercept with treatment, time, gender, grade, and

the treatment*time interaction) resulted in a χ^2 of 2.19 (n.s.). This indicates that the inclusion of the interaction term did not significantly improve the model. The likelihood ratio test comparing model 3 to model 5 (a random coefficient model with the same variables) resulted in a χ^2 of 2.20 (n.s.). This indicates that the random coefficient (i.e., allowing the slopes to vary) did not significantly improve the model.

I also reviewed the log-likelihood and the AIC and BIC at each step to see if these numbers were decreasing, which would indicate a model with better fit (Robson & Pevalin, 2016). These parameters reinforced the findings above that model 5 is the model with the best fit.

Finally, I reviewed the random effects at each step to see if the addition of variables to the model increased the variance explained. See Table 22.13.

Table 22.13. *Model building for Perseverance measure*

	Model 1 Null Model	Model 2 +treatment (RI)	Model 3 + treatment & time & gender & grade (RI)	Model 4 + treatment & time & gender & grade & treatment*time (RI)	Model 5 + treatment & time & gender & grade (RC)	Model 6 + treatment & time & gender & grade & treatment*time (RC)
B ₀ =Intercept	4.12*** (.02)	4.15*** (.03)	4.28*** (.04)	4.26*** (.04)	4.28*** (.04)	4.26*** (.04)
B ₁ =Treatment	-	-0.06 (.04)	-0.06 (.04)	-0.02 (.04)	-0.05 (.04)	-0.02 (.04)
B ₂ =Time	-	-	-0.12*** (.02)	-0.08* (.03)	-0.12*** (.02)	-0.08* (.03)
B ₃ =Treatment*Time	-	-	-	-0.07 (.05)	-	-0.07 (.05)
Gender	-	-	-0.13*** (.04)	-0.13*** (.04)	-0.13*** (.04)	-0.13*** (.04)
Grade	-	-	-0.03 (.04)	-0.03 (.04)	-0.02 (.04)	-0.02 (.04)
Random Effects						
Sd (_cons) class:id	-	-	-	-	-	-
Sd (time) id	-	-	-	-	0.620 (11.775)	0.619 (10.711)
Sd (_cons) id	0.435 (.019)	0.434 (.019)	.432 (.018)	0.433 (.018)	0.599 (6.088)	0.599 (5.532)
Corr (time, _cons) id	-	-	-	-	-0.464 (6.130)	-0.463 (5.586)
Sd (residual)	0.530 (.012)	0.530 (.012)	.517 (.012)	0.516 (.012)	0.274 (13.302)	0.274 (12.090)
ICC ID	.403	.401	.412	.413	.827	.827
ICC Classroom	-	-	-	-	-	-
Log Likelihood	-1955.23	-1954.06	-1889.03	-1887.94	-1887.93	-1886.84
-2LL	3910.46	3908.12	3778.06	3775.88	3775.86	3773.68
AIC	3916.47	3916.12	3792.07	3791.88	3793.86	3793.68
BIC	3933.21	3938.44	3831.03	3836.41	3843.96	3849.34
LR Test	Null vs. linear: 172.57***	2 vs. 1: 2.35	-	4 vs. 3: 2.19	5 vs. 3: 2.20	6 vs. 5: 2.19 6 vs. 4: 2.20

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Appendix F: Building Multilevel Models with Fidelity Variable

Tables 23.1 – 23.13 demonstrate multilevel model building with the addition of the fidelity variable. As described earlier, for each measure I began with the final model found above (see Appendix E). I first switched the comparison variable for the treatment variable to create Model 1. The comparison variable is simply the reverse code of the treatment variable (comparison schools=1 and *Leader in Me* schools=0). This allowed me to accurately include the fidelity variable in for just the treatment schools since the comparison schools were not assigned a fidelity score. I then added fidelity (Model 2) and then fidelity*time (Model 3) and compared each model using likelihood ratio tests and reviewing the -2LL. The highlighted column represents the final model used for each measure.

Table 23.1. *Model building for Voice- confidence measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.62*** (.03)	4.37*** (.13)	4.37*** (.13)
B ₁ =Comparison	-0.02 (.03)	0.23 (.13)	0.23 (.13)
B ₂ =Time	-0.11*** (.02)	-0.11*** (.02)	-0.10** (.03)
B ₃ =Comparison*Time	-	-	-
Gender	-0.02 (.03)	-0.03 (.03)	-0.03 (.03)
Grade	0.02 (.03)	0.02 (.03)	0.02 (.03)
Fidelity	-	0.08* (.04)	0.08* (.04)
Fidelity*Time	-	-	-0.01 (.01)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	0.626 (6.732)	0.627 (8.580)	.626 (6.440)
Sd (_cons) id	0.514 (4.103)	0.513 (5.238)	0.513 (3.93)
Corr (time, _cons) id	-0.335 (6.820)	-0.337 (8.665)	-0.336 (6.520)
Sd (residual)	0.255 (8.269)	0.255 (10.550)	0.256 (7.889)
ICC ID	.802	.802	.801
ICC Classroom	-	-	-
Log Likelihood	-1802.42	-1800.41	-1800.35
-2LL	3604.84	3600.82	3600.70
AIC	3622.83	3620.82	3622.69
BIC	3672.95	3676.50	3683.95
LR Test	-	2 vs. 1: 4.02*	3 vs. 2: 0.33 3 vs. 1: 0.12

*p<.05, **p<0.01, ***p<.001

(Standard Errors in parentheses)

Table 23.2. *Model building for Voice – civic participation skills measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.42*** (.04)	4.06*** (.16)	3.91*** (.19)
B ₁ =Comparison	-0.02 (.05)	0.35* (.16)	0.49* (.19)
B ₂ =Time	-0.25*** (.04)	-0.25*** (.04)	0.04 (.21)
B ₃ =Comparison*Time	0.12* (.06)	0.13* (.06)	-0.17 (.22)
Gender	-0.22*** (.04)	-0.22*** (.04)	-0.22*** (.04)
Grade	-0.02 (.04)	-0.03 (.04)	-0.03 (.04)
Fidelity	-	0.12* (.05)	0.17** (.06)
Fidelity*Time	-	-	-0.09 (.07)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	-	-	-
Sd (_cons) id	0.471 (.021)	0.468 (.022)	0.469 (.021)
Corr (time, _cons) id	-	-	-
Sd (residual)	0.606 (.014)	0.606 (.014)	0.606 (.014)
ICC ID	.376	.374	.374
ICC Classroom	-	-	-
Log Likelihood	-2161.57	-2158.76	-2157.79
-2LL	4323.14	4317.52	4315.58
AIC	4339.13	4335.52	4335.58
BIC	4383.68	4385.63	4391.26
LR Test	-	2 vs. 1: 5.62*	3 vs. 2: 1.93 3 vs. 1: 7.55*

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.3. *Model building for Voice – value of group work measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.32*** (.05)	4.39*** (.08)	4.17*** (.20)
B ₁ =Comparison	0.02 (.05)	-0.09 (.18)	0.13 (.21)
B ₂ =Time	-0.24*** (.04)	-0.24*** (.04)	0.29 (.24)
B ₃ =Comparison*Time	0.14* (.06)	0.14* (.06)	-0.39 (.25)
Gender	-0.07 (.05)	-0.07 (.05)	-0.07 (.05)
Grade	-0.01 (.05)	-0.01 (.05)	-0.01 (.05)
Fidelity	-	-0.02 (.06)	0.05 (.06)
Fidelity*Time	-	-	-0.17* (.08)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	0.837 (14.750)	0.838 (12.082)	.836 (11.45)
Sd (_cons) id	0.735 (8.401)	0.735 (6.880)	0.734 (6.506)
Corr (time, _cons) id	-0.436 (7.406)	-0.437 (6.038)	-0.436 (5.742)
Sd (residual)	0.353 (17.509)	0.352 (14.362)	0.351 (13.617)
ICC ID	.813	.813	.814
ICC Classroom	-	-	-
Log Likelihood	-2388.90	-2388.82	-2386.32
-2LL	4777.8	4777.64	4772.64
AIC	4797.80	4799.63	4796.65
BIC	4853.49	4860.89	4863.47
LR Test		2 vs. 1: .681	3 vs. 2: 4.99* 3 vs. 1: 5.15

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.4. *Model building for Voice- communication measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.20*** (.05)	3.84*** (.18)	3.77*** (.21)
B ₁ =Comparison	0.02 (.05)	0.40 (.18)	0.46* (.21)
B ₂ =Time	-0.26*** (.04)	-0.26*** (.18)	-0.12 (.24)
B ₃ =Comparison*Time	0.15* (.06)	0.15* (.06)	0.00 (.24)
Gender	-0.18*** (.05)	-0.19*** (.05)	-0.19*** (.05)
Grade	-0.04 (.04)	-0.05 (.05)	-0.05 (.05)
Fidelity	-	0.12* (.12)	0.14* (.07)
Fidelity*Time	-	-	-0.05 (.07)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	0.819 (15.043)	0.820 (11.992)	0.820 (9.938)
Sd (_cons) id	0.744 (8.284)	0.742 (6.625)	0.742 (5.489)
Corr (time, _cons) id	-0.461 (6.626)	-0.461 (5.289)	-0.461 (4.384)
Sd (residual)	0.351 (17.557)	0.350 (14.058)	0.350 (11.653)
ICC ID	.818	.818	.818
ICC Classroom	-	-	-
Log Likelihood	-2367.17	-2364.861	-2364.67
-2LL	4734.34	4729.722	4729.34
AIC	4754.34	4751.72	4753.34
BIC	4810.02	4812.97	4820.15
LR Test		2 vs. 1: 4.62*	3 vs. 2: 0.39 3 vs. 1: 5.00

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.5. *Model building for Empowerment measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	3.27*** (.06)	2.87*** (.25)	2.83*** (.27)
B ₁ =Comparison	-0.02 (.07)	0.39 (.25)	0.43 (.27)
B ₂ =Time	-0.22*** (.03)	-0.22*** (.03)	-0.16 (.19)
B ₃ =Comparison*Time	0.10* (.05)	0.10* (.04)	0.03 (.19)
Gender	-0.08* (.03)	-0.08* (.04)	-0.08* (.04)
Grade	0.04 (.07)	0.04 (.07)	0.04 (.07)
Fidelity	-	0.13 (.08)	0.14 (.08)
Fidelity*Time	-	-	-0.02 (.06)
Random Effects			
Sd (_cons) class:id	0.253 (.028)	0.247 (.028)	0.247 (.028)
Sd (time) id	-	-	-
Sd (_cons) id	0.388 (.020)	0.388 (.020)	0.388 (.020)
Corr (time, _cons) id	-	-	-
Sd (residual)	0.532 (.012)	0.532 (.012)	0.532 (.012)
ICC ID	.432	.428	.428
ICC Classroom	.129	.124	.124
Log Likelihood	-1925.13	-1923.76	-1923.69
-2LL	3850.26	3847.52	3847.38
AIC	3868.26	3867.51	3869.38
BIC	3918.38	3923.19	3930.64
LR Test		2 vs. 1: 2.75	3 vs. 2: 0.72 3 vs. 1: 2.88

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.6. *Model building for Voice: Quaglia measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.04*** (.04)	3.73*** (.16)	3.70*** (.16)
B ₁ =Comparison	0.03 (.04)	0.35* (.16)	0.35* (.16)
B ₂ =Time	-0.31*** (.03)	-0.31*** (.03)	0.27*** (.04)
B ₃ =Comparison*Time	-	-	-
Gender	-0.08 (.04)	-0.08 (.04)	0.08 (.04)
Grade	-0.11* (.04)	-0.11** (.04)	0.11** (.04)
Fidelity	-	0.10 (.05)	0.11* (.05)
Fidelity*Time	-	-	-0.03 (.02)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	0.787 (13.383)	0.789 (13.908)	0.787 (19.257)
Sd (_cons) id	0.671 (7.852)	0.669 (8.206)	0.668 (11.346)
Corr (time, _cons) id	-0.436 (7.435)	-0.434 (7.832)	-0.433 (10.905)
Sd (residual)	0.327 (7.435)	0.324 (7.832)	0.326 (23.254)
ICC ID	.808	.810	.808
ICC Classroom	-	-	-
Log Likelihood	-2237.61	-2235.60	-2234.59
-2LL	4475.23	4471.20	4469.18
AIC	4493.23	4491.20	4491.17
BIC	4543.34	4546.88	4552.42
LR Test	-	2 vs. 1: 4.02*	3 vs. 2: 2.03 3 vs. 1: 6.05*

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.7. *Model building for School connectedness measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.12*** (.05)	3.78*** (.19)	3.68*** (.21)
B ₁ =Comparison	0.04 (.05)	0.38 (.20)	0.48* (.21)
B ₂ =Time	-0.22*** (.04)	-0.22*** (.04)	0.06 * (.23)
B ₃ =Comparison*Time	0.14* (.06)	0.14* (.06)	-0.14 (.24)
Gender	-0.13** (.05)	-0.13** (.05)	-0.13** (.05)
Grade	-0.04 (.05)	-0.05 (.05)	-0.05 (.05)
Fidelity	-	0.11 (.06)	0.14* (.07)
Fidelity*Time	-	-	-0.09 (.07)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	0.790 (14.031)	0.790 (11.866)	0.789 (11.823)
Sd (_cons) id	0.771 (7.194)	0.769 (6.098)	0.769 (6.071)
Corr (time, _cons) id	-0.321 (9.522)	-0.319 (8.122)	-0.318 (8.097)
Sd (residual)	0.353 (15.694)	0.354 (13.253)	0.353 (13.200)
ICC ID	.826	.825	.825
ICC Classroom	-	-	-
Log Likelihood	-2436.04	-2434.48	-2433.75
-2LL	4872.08	4868.96	4867.50
AIC	4892.09	4890.95	4891.49
BIC	4947.77	4952.21	4958.31
LR Test	-	2 vs. 1: 3.14	3 vs. 2: 1.46 3 vs. 1: 4.60

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.8. *Model building for Teacher academic support measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.81*** (.02)	4.62*** (.09)	4.61*** (.09)
B ₁ =Comparison	0.04 (.02)	0.23** (.09)	0.23** (.09)
B ₂ =Time	-0.08*** (.02)	-0.08*** (.02)	0.07** (.02)
B ₃ =Comparison*Time	-	-	-
Gender	-0.06** (.02)	-0.06** (.02)	-0.06** (.02)
Grade	-0.01 (.02)	-0.01 (.02)	-0.01 (.02)
Fidelity	-	0.06* (.03)	0.06* (.03)
Fidelity*Time	-	-	-0.01 (.01)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	0.478 (5.643)	0.479 (10.137)	0.479 (4.633)
Sd (_cons) id	0.357 (3.783)	0.355 (6.831)	0.355 (3.121)
Corr (time, _cons) id	-0.389 (7.098)	-0.386 (12.928)	-0.386 (5.914)
Sd (residual)	0.186 (7.268)	0.185 (13.129)	0.185 (5.994)
ICC ID	.787	.787	.787
ICC Classroom	-	-	-
Log Likelihood	-1163.79	-1161.43	-1161.24
-2LL	2327.58	2322.86	
AIC	2345.59	2342.86	2344.49
BIC	2395.70	2398.55	2405.74
LR Test	-	2 vs. 1: 4.73*	3 vs. 2: 0.37 3 vs. 1: 5.10

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.9. *Model building for Teacher personal support measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.47*** (.06)	3.87*** (.24)	3.74*** (.26)
B ₁ =Comparison	0.06 (.07)	0.67** (.25)	0.80** (.26)
B ₂ =Time	-0.31*** (.04)	-0.31*** (.04)	0.10 (.22)
B ₃ =Comparison*Time	0.17** (.06)	0.17** (.06)	-0.24 (.23)
Gender	-0.09* (.04)	-0.09* (.04)	-0.09* (.04)
Grade	-0.03 (.07)	-0.40 (.07)	-0.04 (.07)
Fidelity	-	0.20* (.08)	0.24** (.08)
Fidelity*Time	-	-	-0.13 (.07)
Random Effects			
Sd (_cons) class:id	0.243 (.030)	0.228 (.029)	0.228 (.029)
Sd (time) id	0.782 (9.638)	0.783 (8.666)	0.781 (6.993)
Sd (_cons) id	0.596 (6.326)	0.595 (5.702)	0.594 (4.593)
Corr (time, _cons) id	-0.322 (8.789)	-0.318 (8.003)	-0.317 (6.475)
Sd (residual)	0.310 (12.156)	0.309 (10.963)	0.309 (8.828)
ICC ID	.812	.809	.809
ICC Classroom	.116	.104	.104
Log Likelihood	-2202.99	-2199.91	-2198.20
-2LL	4405.98	4399.82	4396.4
AIC	4427.97	4423.81	4422.39
BIC	4489.20	4490.60	4494.75
LR Test	-	2 vs. 1: 6.16*	3 vs. 2: 3.42 3 vs. 1: 9.58**

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.10. *Model building for self-efficacy for enlisting social resources measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.32*** (.04)	3.83*** (.16)	3.60*** (.19)
B ₁ =Comparison	-0.09 (.05)	0.40* (.17)	0.635*** (.19)
B ₂ =Time	-0.19*** (.04)	-0.19*** (.04)	0.34 (.22)
B ₃ =Comparison*Time	0.13* (.06)	0.13* (.06)	-0.41 (.22)
Gender	-0.15*** (.04)	-0.15*** (.04)	-0.15*** (.04)
Grade	0.00 (.04)	-0.01 (.04)	-0.01 (.04)
Fidelity	-	0.16** (.05)	0.24*** (.06)
Fidelity*Time	-	-	-0.17* (.07)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	0.758 (9.850)	0.759 (9.807)	0.757 (30.616)
Sd (_cons) id	0.689 (5.422)	0.683 (5.449)	0.683 (16.973)
Corr (time, _cons) id	-0.464 (4.627)	-0.460 (4.752)	-0.458 (14.894)
Sd (residual)	0.325 (11.496)	0.324 (11.503)	0.322 (35.973)
ICC ID	.818	.817	.818
ICC Classroom	-	-	-
Log Likelihood	-2216.15	-2211.53	-2208.45
-2LL	4432.3	4423.06	4416.9
AIC	4452.29	4445.05	4440.89
BIC	4507.97	4506.30	4507.71
LR Test	-	2 vs. 1: 9.24**	3 vs. 2: 6.16* 3 vs. 1: 15.40***

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.11. *Model building for Self-efficacy for self-regulated learning measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.15*** (.04)	4.07*** (.16)	3.99*** (.17)
B ₁ =Comparison	0.02 (.04)	0.10 (.16)	0.19 (.18)
B ₂ =Time	-0.34*** (.04)	-0.34*** (.04)	-0.12 (.20)
B ₃ =Comparison*Time	0.16** (.05)	0.16** (.05)	-0.06 (.20)
Gender	-0.19*** (.04)	-0.19*** (.04)	-0.19*** (.04)
Grade	0.01 (.04)	0.01 (.04)	0.01 (.04)
Fidelity	-	0.03 (.05)	0.05 (.06)
Fidelity*Time	-	-	-0.07 (.06)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	0.676 (13.007)	0.676 (10.717)	0.675 (9.206)
Sd (_cons) id	0.632 (6.954)	0.632 (5.732)	0.632 (4.920)
Corr (time, _cons) id	-0.394 (8.671)	-0.393 (7.158)	-0.393 (6.154)
Sd (residual)	0.295 (14.891)	0.295 (12.272)	0.295 (10.537)
ICC ID	.821	.821	.821
ICC Classroom	-	-	-
Log Likelihood	-2057.56	-2057.42	-2056.79
-2LL	4115.12	4114.84	4113.58
AIC	4135.12	4136.83	4137.58
BIC	4190.79	4198.07	4204.38
LR Test	-	2 vs. 1: 0.29	3 vs. 2: 1.25 3 vs. 1: 1.54

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.12. *Model building for Teamwork measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	3.90*** (.04)	3.64*** (.15)	3.63*** (.15)
B ₁ =Comparison	0.10** (.04)	0.36* (.15)	0.36* (.15)
B ₂ =Time	-0.06* (.02)	-0.06* (.02)	-0.04 (.03)
B ₃ =Comparison*Time	-	-	-
Gender	-0.15*** (.04)	-0.15*** (.04)	-0.15*** (.04)
Grade	-0.00 (.04)	-0.01 (.04)	-0.01 (.04)
Fidelity	-	0.09 (.05)	0.09 (.05)
Fidelity*Time	-	-	-0.01 (.01)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	0.600 (8.300)	0.600 (16.492)	0.600 (9.720)
Sd (_cons) id	0.596 (4.182)	0.594 (8.332)	0.594 (4.911)
Corr (time, _cons) id	-0.385 (5.917)	-0.383 (11.883)	-0.383 (6.996)
Sd (residual)	0.270 (9.222)	0.270 (18.303)	0.269 (10.816)
ICC ID	.829	.828	.829
ICC Classroom	-	-	-
Log Likelihood	-1893.28	-1891.58	-1891.16
-2LL	3786.56	3783.16	3782.32
AIC	3804.55	3803.16	3804.32
BIC	3854.65	3858.83	3865.56
LR Test	-	2 vs. 1: 3.40	3 vs. 2: 0.83 3 vs. 1: 4.23

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Table 23.13. *Model building for Perseverance measure with fidelity variable*

	Model 1 Final model from multilevel models (without fidelity variable) with new “Comparison” variable	Model 2 +fidelity	Model 3 + fidelity*time
B ₀ =Intercept	4.23*** (.04)	3.98*** (.14)	3.95*** (.14)
B ₁ =Comparison	0.06 (.04)	0.31* (.14)	0.31* (.14)
B ₂ =Time	-0.12*** (.02)	-0.12*** (.02)	-0.07* (.03)
B ₃ =Comparison*Time	-	-	-
Gender	-0.13*** (.04)	-0.13*** (.04)	-0.13*** (.03)
Grade	-0.03 (.04)	-0.03 (.04)	-0.03 (.04)
Fidelity	-	0.08 (.05)	0.10* (.05)
Fidelity*Time	-	-	-0.03 (.01)
Random Effects			
Sd (_cons) class:id	-	-	-
Sd (time) id	-	-	-
Sd (_cons) id	0.432 (.018)	0.431 (.018)	0.431 (.018)
Corr (time, _cons) id	-	-	-
Sd (residual)	0.517 (.012)	0.517 (.012)	0.516 (.012)
ICC ID	.412	.410	.411
ICC Classroom	-	-	-
Log Likelihood	-1889.03	-1887.37	-1885.79
-2LL	3778.06	3774.74	3771.58
AIC	3792.07	3790.73	3789.58
BIC	3831.03	3835.27	3839.68
LR Test		2 vs. 1: 3.33	3 vs. 2: 3.15 3 vs. 1: 6.48*

*p<.05, **p<0.01, ***p<.001
(Standard Errors in parentheses)

Appendix G: Fidelity Scores and Rubric

The Leader in Me organization visited each school during the 2014-15 school year and evaluated them on a scale of 1-5 on different components of the program. The table below shows each school's scores on these components.

Table 24.1. *Fidelity Scores*

School	1. Lighthouse Team	2. Leadership Environment	3. Integrated Instruction & Curriculum	4. Staff Collaboration	5. Student Leadership	6. Parent Involvement	7. Leadership Events	8. Goal Tracking	Average Fidelity
Hill	3	3	2	2	2	2	3	1	2.25
Waterberry	3	3	3	3	3	3	3	1	2.75
Orion	4	3	3	3	3	3	4	3	3.25
Nodes	5	5	4	4	4	4	5	4	4.375
Venture	3	3	3	3	3	3	2	3	2.875
Tully	3	3	3	3	3	2	3	2	2.75

The following table is the rubric used and provided by *The Leader in Me* organization to evaluate the fidelity of implementation for the schools in the study.

Table 24.2. *Fidelity Rubric*

1. Lighthouse Team				
5	4	3	2	1
A Lighthouse Team is in place, meets regularly, and highly effectively oversees an implementation plan with innovative action teams.	A Lighthouse Team is in place, meets regularly, and effectively oversees an implementation plan with action teams.	A Lighthouse Team is in place, meets occasionally, and ineffectively oversees an implementation plan.	Lighthouse team is in place but does not meet.	A Lighthouse Team is not in place.
2. Leadership Environment				
5	4	3	2	1
The school environment ubiquitously & innovatively integrates the leadership paradigm and 7 Habits for students to see, hear and feel.	The school environment consistently integrates the leadership paradigm and 7 Habits for students to see, hear and feel.	The school environment moderately integrates the leadership paradigm and 7 Habits for students to see, hear and feel.	The school environment minimally integrates the leadership paradigm and 7 Habits for students to see, hear and feel.	The school environment does not integrate the leadership paradigm and 7 Habits for students to see, hear and feel.
3. Integrated Instruction and Curriculum				
5	4	3	2	1
Teachers effectively teach the leadership paradigm and 7 Habits while integrating principles consistently in their language and lessons. A highly effective school-wide plan has been established identifying when and how the leadership principles will be taught annually.	Teachers directly teach the leadership paradigm and 7 Habits while integrating principles consistently in their language and lessons. A school-wide plan has been established identifying when and how the leadership principles will be taught annually.	Most teachers directly teach the leadership paradigm and 7 Habits while integrating principles consistently in their language and lessons.	Some teachers directly teach the leadership paradigm and 7 Habits while integrating principles consistently in their language and lessons	Teachers do not directly teach the leadership paradigm and 7 Habits, nor do they integrate principles consistently in their language and lessons.

4. Staff Collaboration				
5	4	3	2	1
All staff members work together effectively through action teams to build a culture of leadership in classrooms and throughout the school.	Most staff members work together effectively through action teams to build a culture of leadership in classrooms and throughout the school.	Some staff members work together effectively through action teams to build a culture of leadership in classrooms and throughout the school.	Few staff members work together effectively through action teams to build a culture of leadership in classrooms and throughout the school.	Few staff work together effectively to build a culture of leadership in classrooms and throughout the school without action teams in place.
5. Student Leadership				
5	4	3	2	1
Students have a wide variety of leadership role opportunities in classroom and school-wide integrating their ideas and an application process, including a student lighthouse team.	Students have a variety of leadership role opportunities in classroom and school-wide integrating an application process, including a Student Lighthouse Team	Students have some leadership role opportunities in classroom and school-wide integrating an application process.	Students have limited leadership role opportunities without an application process.	Students have no leadership roles opportunities
6. Parent Involvement				
5	4	3	2	1
Many parents are involved in activities that support the leadership model including opportunities to learn the 7 Habits and participate in a Parent Lighthouse Team, and demonstrate an understanding of the principles.	Parents are involved in activities that support the leadership model including opportunities to learn the 7 Habits and participate in a Parent Lighthouse Team, and demonstrate an understanding of the principles.	Some parents are involved in activities that support the leadership model including opportunities to learn the 7 Habits.	Few parents are involved in activities that support the leadership model and few have an understanding of the common language being used at the school.	No parents are involved in activities that support the leadership model, nor have knowledge of the leadership model or principles

7. Leadership Events

5	4	3	2	1
The school regularly holds leadership events where students practice and share their leadership development, and annually hold a Leadership Day for community members to attend.	The school sometimes holds leadership events where students practice and share their leadership development, and annually hold a Leadership Day for community members to attend.	The school sometimes holds leadership events where students practice and share their leadership development, and piloted a Leadership Day for community members to attend.	The school rarely holds leadership events where students practice and share their leadership development.	The school does not hold leadership events.

8. Goal Tracking

5	4	3	2	1
There is a highly effective system in place for setting, tracking and scoreboarding WIGS (goals) at the school, classroom and student level including fully developed Leadership Notebooks integrating: Mission statements, 7 Habits, academic & personal goals, leadership role tracker, celebrations. Student-led conferences are an annual practice.	There is a system in place for setting, tracking and scoreboarding WIGS (goals) at the school, classroom and student level including Leadership Notebooks integrating: Mission statements, 7 Habits, academic & personal goals, leadership role tracker, celebrations. Student-led conferences are an annual practice.	Some WIGS (goals) are in place at the school, classroom or student level including Leadership Notebooks in process. Student-led conferences have been piloted	Some WIGS (goals) are in place at the school, classroom or student level including Leadership Notebooks in process.	No WIG (goals) systems and Leadership Notebooks are in not process.

9. Measurable Results

5	4	3	2	1
The school has identified and publicly displayed key measures to demonstrate growth in their leadership model and is demonstrating significant measureable improvement.	The school has identified and publicly displayed key measures to demonstrate growth in their leadership model and is demonstrating measureable improvement.	The school has identified and publicly displayed key measures to demonstrate growth in their leadership model and is demonstrating small measureable improvement.	The school has identified at least one key measure and is in the process of tracking progress against this measure.	The school has not identified key measures to improve.

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Curriculum Vitae

