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THE RELATIONSHIP BETWEEN SOCIAL-EMOTIONAL LEARNING SKILLS AND PEER-  
PERCEPTION OF LEADERSHIP IN A SAMPLE OF UNDERSERVED MIDDLE SCHOOL  
YOUTHS

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And approved by

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## **ABSTRACT OF THE THESIS**

The Relationship between Social-Emotional Learning Skills (SEL) and Peer-Perception of  
Leadership in a Sample of Underserved Middle School Youths

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Current thinking about 21st-century schools and civic involvement recognizes social-emotional competencies and character education as the groundwork of engaged citizenship and conscious leadership (Elias, 2009; Wilczenski & Coomey, 2007). Social emotional learning (SEL), in the context of positive character, is essential to nurturing emerging young leaders to participate effectively in a global and highly politicized world where their performances are challenged in the numerous and multifaceted roles that contemporary leadership demands (Elias, 2009). Although there is substantial interest in youth leadership development as a vehicle to promote psychosocial development in adolescents, no studies have examined the relationship between SEL and peer perceptions of youth leadership.

This study evaluated this relationship in a group of 203 students in grades 6-8th from two diverse urban middle schools in NJ. Participants self-identified their race and ethnicity (38.9% Hispanic; 28.6% Black; 21.2% White; 10.3% Asian; 1.0% Others). The primary goal of the current study was to address several gaps in the youth leadership development literature by quantitatively assessing the role of social emotional learning (SEL) in peer perceived ethical

leadership nominations in the context of urban middle schools. Focusing on peer perceptions of ethical leadership, I explored (a) the effect of teacher-rated SEL on predicting peer-nominated student leadership facets; (b) the mediating functionality of self-reported self-efficacy on SEL and peer-nominated student leadership facets; (c) the difference in effects of SEL on leadership between male- versus female- identifying students; and (d) the difference in effects of SEL on leadership between native English-speaking (L1) students versus non-native English-speaking (L2) students.

Results indicated that SEL had a significant and positive impact on peer-nominated student leadership, yet this relationship is not mediated through self-efficacy. In addition, results showed that gender moderated the relationship between SEL and leadership, such that SEL had a stronger positive effect for female students than it did for male students on leadership nominations in Spring 2016, but not Fall 2015. Moreover, SEL had a stronger positive effect on leadership for non-native English-speaking students than it did for native English speakers for both Fall 2015 and Spring 2016. These findings, their implications for theory and practice, study limitations, and future directions were explored.

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## **Introduction**

### **Adolescent Leadership and Development**

Dating back to at least the times of Plato, human societies have witnessed numerous scholarly attempts to define the concepts of leadership (Takala, 1998). In the past century, there has been an increasing popularity of investigating the essential attributes, functions, and contexts that distinguish effective leaders from others (Joullié & Spillane, 2015). Yet, leadership remains an elusive concept. The field has made progress that has evolved from “great-man theories” that accentuated inherent qualities or the social position of an individual who are born to become leaders in the early 1900s, to how the contexts and particular circumstances of individuals may affect the leader’s effectiveness in the early- to mid-twentieth century (MacNeil, 2006). Later in the twentieth century, “psychoanalytic” and “behavioral” theories emerged. Psychoanalytic researchers studied motivation theories on leadership, while behaviorists focused on how leaders could practice positive or negative reinforcement strategies to influence following behavior

Theory has evolved to move away from an individual perspective and toward an interpersonal lens that argues leadership only exists in the context of a relationship and is dependent on the perceptions of the persons involved in that relationship (Brower et al., 2000). In other words, both leaders and followers contribute to the leadership functions and shape the leader-follower relationship. Therefore, leadership cannot be defined outside of the context of this interaction. Despite the ever-increasing attention on leadership in the context of relationships and its wide theoretical and practical acceptance, the development of leadership behaviors, particularly in diverse ecological contexts were rarely empirically examined.

In addition to the obscurity of leadership development as a field, even less is known about leadership development in adolescents. The literature has consistently recognized the importance of adolescent years serving as a critical period during which effective leadership qualities could be seeded and cultivated through socialization and interactions with their peers and the community (Ricketts & Rudd, 2002). The consensus is that all adolescents can develop their leadership potential given the right support; specifically, cultivating leadership during the developmental stages of adolescence is essential (Eva & Sendjaya, 2013).

Youth advocates further highlight the significance of adolescent leadership development through espousing that “in the United States, awareness of the value of engaging youth in social change efforts has spawned national, congressional, statewide, and municipal youth leadership councils and initiatives” (Conner and Strobel, 2007, p. 276). Despite the wide recognition of the need for adolescent leadership development research that merits global attention, literature in this field continues to almost exclusively focus on adult leadership (Karagianni & Montgomery, 2016; Rehm, 2014). For instance, Bass conducted an exhaustive compilation and cataloguing of more than five thousand leadership studies, and none of the studies looked at adolescent leadership (Bass & Bass, 2008). With the relative absence in adolescent leadership development literature, researchers have begun to recognize the importance of bridging this gap.

In more recent years, there has been an emergence of youth leadership theories that tends to be greatly skewed by adult leadership literature context (Karagianni & Montgomery, 2018). These theories are problematic as their compatibilities have rarely been scrutinized in the context of the adolescence developmental trajectory and thus remains questionable and thus the evolution of youth leadership theories remains a fluid process. With the scarcity of established youth leadership development theories, for the purpose of this study, I have adapted a

comprehensive working definition of leadership that MacNeil (2016) proposed in her article on ‘applying “adult” leadership theories to youth leadership development’:

*Leadership is a relational process combining ability (knowledge, skills, and talents) with authority (voice, influence, and decision-making power) to positively influence and impact diverse individuals, organizations, and communities. (p. 29)*

This encompassing definition takes into account of the contextual nature of leadership, shaped by the relationships within various leadership contexts, and allows room to bring diversity into the conversation as a crucial moderator for leaders. Furthermore, in the context of this leadership definition, leadership abilities could be considered as an array of multifaceted, multicomponent and innovative competencies, versus as a fixed personality trait (Karagianni & Montgomery, 2018). Compatible with Lev Vygotsky’s “zone of proximal development”, this definition of youth leadership underscores not only the interactional and relationship-based nature of leadership for the leadership influence to be most effective (Kress, 2006). Thus, the current study adapts this conceptualization of youth leadership as a malleable process susceptible to positive change when developed by means of appropriate interventions (Steele & Day, 2018).

### **Adolescent Social-Emotional and Character Development (SECD) Competencies**

The adolescence stage is one of the most challenging developmental stages in one’s life (Dahl et al., 2018). This period involves rapid physical, psychological, cognitive, social, and emotional transformations that prepare youths to take on novel responsibilities, challenges, fears, attitudes and behaviors (Conderman & Pedersen, 2005). Furthermore, adolescents are more at risk for academic failure, internalizing disorders, suicide, juvenile delinquency, and other behavioral problems compared to youths of any other age cohorts (Blackorby & Wagner, 1996; Conderman & Pedersen 2005). On the other hand, the adolescence stage offers a dynamic

developmental window to stimulate adolescents' strengths, thereby boosting positive life outcomes. Hence, interventions that cultivate protective factors in adolescents' attitudes, skills, and relationships may yield extensive impacts on adolescents' aptitude to transcend their circumstances and overcome adversity, to successfully transition into adulthood (Morton & Montgomery, 2013).

In recent years, social-emotional learning (SEL) has been advanced as a way to conceptualized youth interpersonal skill development including leadership skills. The Collaborative for Academic, Social, and Emotional Learning (CASEL) is an international, university-based, scientific organization comprised of researchers, policymakers, educators, and practitioners who are dedicated to help make evidence-based social and emotional learning (SEL) an integral part of education from preschool through high school. CASEL defines SEL as the delivery and acquisition of essential skills and competencies to students including self- and social- awareness, self-management, responsible decision-making and relationship skills and are summarized below:

- (1) Self-Awareness: the ability to effectively label one's emotions and values, and assess strengths and weaknesses;
- (2) Self-Management: the ability to regulate one's emotions, thoughts and behaviors across a range of situations and to employ this capacity toward coping with stress, working toward goals, and managing impulses;
- (3) Social Awareness: the ability to take the perspective of others with different backgrounds, understand social and ethical behavior norms, and identify resources and supports;
- (4) Relationship Skills: the ability to effectively communicate, develop healthy and positive relationships, and resolve conflict with others; and

(5) Responsible Decision-Making: the ability to apply problem solving techniques to make constructive choices that take ethical standards, social norms, and safety into consideration (Durlak et al., 2011; Ogden et al., 2016).

It has been nearly two decades since the term, "social and emotional learning," was coined and much has been learned about the role of ecological contexts, such as school infrastructure, culture and climate, in mediating program development, implementation and sustainability (Elias et al., 1997). In essence, SEL skills delivery in absence of considering its operating context is at best a necessary but not sufficient condition for skills acquisition (Elias, Kranzler, Parker, Kash, & Weissberg, in press). Social-emotional and character development (SECD) advocates for a learning pedagogy that motivates students "not only know the right ways to behave, but also to possess and use the skills to enact desired behaviors effectively" (Elias, 2014. p. 37). This definition explicitly recognizes teaching SEL behavioral skills (i.e., right ways to behave) and cultivating positive virtues and character (i.e., enact desired behaviors effectively) must be integrated and synergized to enact long lasting positive change especially in the context of adversity, systematic oppression, trauma, and inequity that portrays many urban, minority environments (Hatchimonji, Linsky, & Elias, 2017). In addition, school characteristics such as structures, processes, systems, rituals and routines must be considered and synergized to mitigate skill acquisition fatigues that adolescents may experience especially within chaotic and/or demanding environments.

### **Adolescent SEL and Leadership**

In the era of globalization, leadership for change is among one of the many important areas of literacy that is not taught in traditional classroom settings. Whether it is leading organizational change in industries to sustain their relevance in the global market, or inspiring

social change to respond to instances of societal injustice, or initiating conversations to reframe the messiness of everyday life to strengthen personal relationships— many transformations begin with personal change and self- empowerment (Cohen, 2011; Issah, 2018). As literature has suggested, the fundamental skills of successful leadership include the ability of self- reflection, deciphering environmental cues, communication, decision-making, and building trust and empathy with followers, all of which are constructs of SEL competencies (Issah, 2018; Trehan & Shrivastav, 2012; Watkins, Earnhardt, Pittenger, Roberts, Rietsema, & Cosman-Ross, 2017). In addition, research defining SEL as emotional intelligence has suggested that the highest performing adult leaders have significantly higher emotional competence than their counterparts (Kerr et al., 2006; Rosete & Ciarrochi, 2005).

Relatedly, current thinking about 21st-century schools and civic involvement recognizes social-emotional competencies and character education as a groundwork of constructive democratic participation and engaged citizenship (Elias, 2009; Wilczenski & Coomey, 2007). Discerning judgment is one of the most essential competencies that distinguish in becoming responsible leaders on their path to adulthood (Elias, 2009). Emotion recognition, situation analysis, problem solving, and decision making are fundamental to augmenting this competency. Social-emotional skills, in the context of positive character, are essential to nurturing emerging young leaders to participate effectively in a global and highly politicized world where their performances are challenged in the numerous and multifaceted roles that contemporary leadership demands (Elias, 2009).

Fortunately, like any other literacies, SEL competencies and leadership skills can be taught and learned and this is further evidenced by the emerging field of social neuroscience. Neuroscientists have identified common structural and chemical changes in the brain that may be

associated with both social emotional and leadership development in adolescence. One such biological underpinning is the mirror neurons that are widely dispersed in the areas of the brain and operates as neural “Wi-Fi.” These neurons that allow individuals to navigate through their social world have great implications to both youth social emotional and leadership competencies. Specifically, individuals consciously or unconsciously detect others’ emotions through their actions and their mirror neurons reproduce those emotions (Rizzolatti & Craighero, 2004). For instance, mirror neurons and spindle-cell circuitry arise unconsciously when followers of an effective leader experience rapport, creating resonance between the two; collectively, these neurons generate an immediate sense of communal experience (Liu et al., 2015; Rizzolatti & Craighero, 2004). The effects of activating neural circuitry in followers’ brains can be very influential, such that leaders’ emotions and actions prompt followers to mirror their feelings and deeds.

In addition to the cognitive bio-neurological models of following behaviors, social exchange theory and role theory further establish the foundation of how the reciprocal relationship between leaders and their followers develops gradually over time (Emerson, 1976; Mahsud et al., 2010). In addition, the Leader-Member Exchange (LMX) theory suggests that over time a leader will develop and exchange relationships with their followers to varying degrees (Dienesch & Liden, 1986). In adult LMX studies, high exchange relationship is manifested in a higher level of trust, liking, and respect and in exchange engender greater follower satisfaction, lower turnover, better job performance and less job stress (Kacmar et al., 2011). However, no studies investigated the determinants, mediating variables, or outcomes of the Leader-member exchange on adolescents.

## **Peer Perception of Ethical Leadership**

The evidence pointing to the biological underpinnings of following behavior shed light upon the powerful influence of peer leadership (Liu et al., 2015). However, leadership does not always enable positive outcomes in spite of a penchant to examine the subject in aspirational terms (Reed, 2012). Leadership skills are neutral in nature and could take in the form of both a positive or a negative force that could catalyze both actions of evil and the good. For instance, while peer pressure among adolescents has gained significant attention, the impact of positive peer leadership in school has barely been explored in diverse samples. Steinberg and Monahan (2007) contested that one's sensitivity to peer influence could be represented by an inverted U-shaped curve, with age 14 being the peak level of susceptibility. Only recently have studies offered promising results on positive the influence of peers. For instance, one study of students (ages 11-13) in a small rural/suburban town in the United States found students' adaptive achievement motivation could be boosted by their perception of being valued and respected by classmates (Vollet et al., 2017). In addition, studies have shown that positive peer relations predict student academic performance and school enjoyment (Kiuru et al., 2020; Ryan, 2001). No studies, however, have examined how students elected as positive peer role models may improve social and emotional outcomes among schoolmates in settings populated primarily by low-income people of color in the United States.

Further, influential leaders who carry a noble purpose may aspire to accelerate the advancement of humanity, whereas those with an ignoble purpose aim to exacerbate its destruction (Damon, Mariano, & Cotton Bronk, 2003; Hatchimonji, Linsky, & Elias, 2017). There is an increase in the recognition of the role and importance of leadership for moving



organizations and societies forward in a positive direction (Avolio & Gardner, 2005; Rhee & Sigler, 2015).

It seems equally sensible and necessary to cultivate both the skills and values needed for positive, contributory leadership when they are still developing. In light of the distinction between ethical and unethical leadership, this study operationalizes the peer perception of leadership in six facets capturing the intersections of SEL and qualities in being an ethical (i.e., intention; compassion) and effective (i.e., impact on others) leader. In addition, the following facets encompass three meta-categories of leadership: relations-oriented behaviors (i.e., being compassionate; being able to forgive), task-oriented behaviors (i.e., communication skills; problem solving skills) and change-oriented behaviors (i.e., making the community better) (Kacmar et al., 2011; Yukl et al., 2002). The six ethical leadership facets include: 1) being generally perceived as a good leader, 2) making the community better, 3) being compassionate, 4) communication skills, 5) problem solving skills, 6) being able to forgive. Since no prior studies have explored the relationship between SEL and youth leadership in school settings, this study addresses this gap, with the expectation that peer nominations for leadership would be positively associated with students' SEL.

### **Adolescent SEL and Leadership Development in School Settings**

Adolescents spend the majority of their lives in school settings, which translates to 12 years or 15,000 hours of the most shaping years of their lives (Whitlock, 2006). While the conventional primary purpose of schools is to develop students' academic capacities through standardized pedagogies, social and emotional environments created by students and staff on a daily basis are also profound in influencing students' safety, civic engagement, physical and mental health, leadership skills and social development. In other words, schools play an

imperative role to nurturing healthy adolescents by cultivating not only their cognitive development but also their social and emotional development (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). However, schools often face challenges when it comes to distributing limited resources to address multiple, critical, and often competing demands. This dilemma calls for adopting evidence-based interventions that are capable of harvesting multiple proximal and longitudinal positive student outcomes simultaneously. In addition, a better understanding of the underlying constructs of important skillsets would help program development yield a greater impact on adolescents.

Although a lot remains unknown about youth leadership processes, researchers seem to agree that the adolescent years serve as a critical window to youth leadership development. Research has also shown that through promoting SEL competencies and character and ethical education, schools may act as powerful and safe arenas to cultivate student participation and leadership in democratic participation and civic engagement (Elias, 2009).

### **Gender, SEL, and Leadership**

Extensive research on gender differences in emotion processing and societal roles escalated in the 1980s, in part fueled by social psychologists' maturing understanding of social role theory (Chaplin, 2015). Closely related to gender roles, traditional beliefs shaped the stereotypical division of labor where males are affiliated with instrumental specialization, and females to expressive specialization. In addition, men tend to be seen as more competitive in behaviors related to task performance, while females tend to be associated with group maintenance and other social-emotionally related roles (Chaplin, 2015).

With this long history of gender socialization, it is not surprising to find that studies have consistently found females outperformed males in various assessments related to SEL skills. For

instance, a study assessed gender differences of children and adolescents on positive SEL competencies with a cross-informant system involving caregivers, teachers, and students. Results demonstrated that female students were consistently rated as having significantly higher total scores of SEL competencies by all raters (Akos & Galassi, 2004). Another study showed that girls outperformed boys in both behavioral self-regulation and teacher-rated classroom self-regulatory assessments (Matthews, Ponitz, & Morrison, 2009). Hence, literature has consistently pointed to gender differences in SEL competency, where females outperformed males.

Another pertinent skill set that is greatly bias by the history of gender socialization are the effects of gender on perceptions and evaluation of leadership. Although leadership teams are increasingly composed of both male and female leaders, female leaders continue to face challenges of overcoming both sexual bias and stereotypes, especially in top management positions (Ho, Li, Tam, & Zhang, 2015; Rhee & Sigler, 2015). Despite various studies showing that male and female leaders are equally qualified in hard- and soft- leadership skills, and that organizations with a greater percentage of women in leadership roles perform better financially, the dominant habitus is embodied by male CEOs in the cooperate field (Fitzsimmons et al., 2014; Johns, 2013). These perceptual and statistical discrepancies make gender a critical variable in the dynamics of informal leadership emergence (Neubert & Taggar, 2004). However, literature on leadership to date suffers from an implicit masculine bias and more needs to be understood to level the playing field in shaping a leadership environment that is fair and equitable (Ho, Li, Tam, & Zhang, 2015).

Women leaders face unique challenges with regard to being perceived as effective leaders, as leadership has been immensely gendered in the Western discourse that is biased toward adopting masculine lenses of recognizing authority (Bettis & Adams, 2005). Research

has shown that equally qualified female leaders were rated to be less effective and less preferred over male leaders (Rhee & Sigler, 2015). Furthermore, the same study revealed that women leaders who go against their gender stereotype might be penalized even more, as women leaders who exhibited what was classified as a more masculine style were perceived as less effective and less preferred than male counterparts with the same style.

Despite extensive research on adult leadership, very little is known about leadership from the perspective of adolescents. This scarcity is especially glaring in how female youth construct leadership meanings and the spaces in which they identify themselves and others as leaders (Bettis & Adams, 2005). A study found that girls are more likely to identify themselves and others as informal leaders versus formal leaders. The former was those who do not fill a formal role but were widely recognized as leaders among their peers and the latter are individuals who are either appointed or elected to a designated position of leadership (Bettis & Adams, 2005). In this same study, when asked to describe when and where they or others demonstrated leadership qualities, most students gave examples of informal leadership scenarios that took place in between their classrooms and lives, such as in the hallway on the playgrounds. An example included “taking care of people” when teachers were not available. Thus, it is important to explore how students perceive of leadership differently in their male versus female peers.

To conclude, previous research suggests male and female are evaluated differently and often influenced by gender stereotypes while females often score lower than men on traditional behaviors related with leadership but outrun their male counterparts on relational based skills operationalized by SEL (Rosch et al., 2014). Based on these findings, this study, in part, investigates how gender moderated the relationship between SEL and peer evaluation of leadership effectiveness.

## **Language, SEL, and Leadership**

The population of the United States will shift to a minority majority by 2050 (Brown, 2006). According to the 2015–16 report of the National Clearinghouse for English Language Acquisition, 41 counties in the United States identify more than 30% of their total students were non-native language (L2) speakers and are predicted to be the fastest growing population of the United States K-12 population (Hernandez, Denton, & Macartney, 2008; NCELA, 2019). Therefore, there is an urgent demand for research to better understand this population who are navigating the social world using a language that they are actively acquiring.

In addition to coping with the normative developmental changes and related stresses, the youth of immigrant families also tend to endure second language anxiety, putting them at higher risks for developing internalizing disorders (Teimouri, Goetze, & Plonsky, 2019). A meta-analysis of 97 reports on second language anxiety has indicated firm evidence for both the negative role of second language anxiety in L2 speakers and the moderating effects of both linguistic and non-linguistic variables (Teimouri et al., 2019).

Literature have mixed findings regarding L2's SEL competencies. Some studies suggest that various environmental stressors unique to L2 speakers can negatively impact L2 speakers such as acculturation anxiety, trauma and upheaval associated with immigration, experiencing bullying by peer, and discrimination which could lead to varying degree of internalizing and externalizing problems (Adams & Richie, 2017; Niehaus & Adelson, 2014). However, a targeted search of the literature identified 14 peer-reviewed studies published from 2000 to 2011 that examined social–emotional outcomes for young L2 speakers in family, school, and peer contexts development (Halle et al., 2014). Results suggest that L2 speakers have at least equal (if not better) SEL outcomes compared to native English speakers as the use of the home language in

early childhood classrooms can be a positive, moderating factor for L2 speakers' SEL development. However, contextual and individual characteristics are highly correlated with L2 speakers' status, making it difficult to develop clear conclusions about the unique influence of L2 speaker's status on social-emotional outcomes. Considering the results of the 14 studies (Halle et al., 2014), it is predicted that L2 speaking students would score higher on SEL compared to their Native English speaking (L1) counterparts.

The moderating effect of language in the context of leadership skills is likewise equivocal. The adult research results have been mixed in whether language plays a role in leadership effectiveness and perceptions, not to mention there are fewer youth literature investigating the relationship between language and leadership. With this being said, being able to communicate effectively in the dominant language would seem necessary for youth to represent and stand up for themselves in leadership roles so that their voices are heard and valued in a highly diversified society. Neurolinguistic studies have shed light on a second language (L2) speakers' challenge to monitor social behaviors due to anxiety especially in high stress situations. There is an overlap between brain networks associated with L2 communication competing with the L2-related anxiety levels and oral proficiency levels during situations where both skills are demanded, situations like leadership engagement (Jeong et al., 2016). Furthermore, some would argue that leadership in a diverse setting is highly related to the ability to selecting the right words to foster understanding and alignment (Zulch, 2014). If student leaders use their second or third language to communicate with their peers, this requires more mental effort to cognitively translate their thoughts into words, thus losing some accuracy in translation.

Additional literature indicates that being an L2 speaker may be taxing to students who are facing situations to self-advocate in a leadership role, often requiring individuals to establish connections in communication through observation, imitation, and execution (Lieven & Tomasello, 2008). These leadership skills are highly reliant on social learning abilities and may become particularly strenuous to second language students. From a linguistic perspective, one's first language is usually developed through social interactions with others since early infancy, and tends to be an effortless, spontaneous, and automatic process (Jeong et al., 2016). However, L2 speakers tend to be affected by various external and internal factors such as lack of exposure to communicative contexts, and learners' anxiety about L2 use (Jeong et al., 2016). This is especially salient in contexts where language is imperative in generating an immediate response, such as situations of leadership or crisis management. This is especially true to middle school students who face unique challenges in situations of socio-cultural transitions that may hinder their cognitive availability to demonstrate and deliver leadership competencies. Furthermore, valued leadership qualities may be perceived differently in various cultural contexts, which may alter the standard to which students are perceived as leaders in school systems in other countries.

In contrast, other studies posit that language does not play a significant role in leadership. A 17-country empirical study examined whether varying language used in managerial reactions to specific leadership scenario-based situations were different. Results showed that language choice (native or English) did not affect the response to studied leadership scenarios. Instead, cultural and situational context predicted leadership decisions and reactions (Zander, Mockaitis, & Harzing, 2011). Although no consensus has been reached regarding the impact of language on leadership, more literature seems to suggest that there are more challenges than opportunities that

may jeopardize the chances of L2 youths being recognized and perceived as leaders in various contexts, including school settings.

To conclude, there are mixed results on students' non-native language speaking status influence their SEL and leadership developments. While some studies suggested that non-native language (L2) speakers face unique challenges that may be taxing to their functioning, others seemed to suggest that L2 speakers have at least equal (if not better) SEL and leadership outcomes compared to native English speakers. However, contextual and individual characteristics are highly correlated with L2 speakers' status, making it difficult to develop clear conclusions about the unique influence of L2 speaker's status on social-emotional and leadership outcomes. Based on these findings, this study, in part, examines how language moderated the relationship between SEL and peer evaluation of leadership effectiveness.

### **Self-efficacy and Leadership**

Leader self-efficacy in adults and college students has been shown to be a construct related to leader emergence, individual performance, and group performance (Rehm & Selznick, 2019). However, this concept has yet to be tailored and applied to adolescents.

Albert Bandura first described self-efficacy as "beliefs in one's capabilities to organize and execute the course of action required to produce given attainments" (Bandura, 1997, p. 3). Later models posit leadership self-efficacy as the fundamental cognitive variable regulating leader functioning in a dynamic environment (McCormick, 2001). Leadership research has concluded that leader self-efficacy may be one of the most fundamental elements in effective leadership and team functioning in that it has concurrent, predictive, and discriminant validity in contributing to leadership as a construct (Chemers, Watson, & May, 2000). In recent years, youth empowerment programs have flourished and gained mass attention in the promise of



boosting adolescents' sense of self-efficacy and self-esteem, thus improving developmental outcomes and positive transitions to adulthood such as leadership development (Morton & Montgomery, 2011). However, there is currently inadequate empirical evidence to support the efficacy of youth empowerment programs in improving youth leadership and the role of youth efficacy in creating change in leadership and other secondary outcomes (Morton & Montgomery, 2011). Thus, the relationship between youth leadership and self-efficacy is deserving of further investigation.

### **Self-Efficacy and SEL**

Emotional self-efficacy has been defined as the ability to regulate affective responses in regard to specific environmental demands, a construct under emotional regulation (Alessandri, Vecchione, & Caprara, 2015). The relationship between adolescent self-efficacy and social-emotional competencies along with other mental health outcomes has been well established. For instance, depression, among other internalizing disorders, has been shown to be correlated with an aspect of self-efficacy that pertains to the perceived capability of coping with negative emotions (Muris, 2002). In addition, a lower sense of self-efficacy also is correlated with aggressive and violent behavior that may lead to detrimental outcomes such as risks for injury, exposure to intimidation and threats, and perceptions of fear and vulnerability (Valois, Zullig, & Revels, 2017). Furthermore, research has shown that low levels of emotional self-efficacy are significantly associated with higher levels of suicidal ideation and suicide attempts in a sample of high school adolescents (Valois, Zullig, & Hunter, 2015).

In addition to lower self-efficacy predicting negative emotional and health outcomes, studies have also shown that higher adolescent self-efficacy has strong associations with positive outcomes such as experiences of a greater sense of belonging in school settings, ability to feel

pleasure in fun activities, quality of life, self-esteem, and participation in civic engagement activities (Meinhold & Malkus, 2005; Verloigne, Cardon, Craemer, D’Haese, & Bourdeaudhuij, 2016). With all of the known benefits of having higher self-efficacy, there is a difference between possessing skills of self-efficacy and being cognitively aware and motivated to take advantage of them in high stress, difficult situations. The challenge is to be able activate this skill in demanding circumstances, that may require the support of other social emotional competencies such as emotion regulation and self-discipline. Thus, exploring adolescents’ self-efficacy and social emotional competencies in real life school setting is required for a better understanding of the underlying constructs of these skills.

Since self-efficacy account for a big aspect of the effects of SEL on leader behavior, it is likely that self-efficacy also mediates the relationship of SEL to peer perception of ethical leadership.

### **The Current Study**

The current study is part of a larger three-year grant, funded by the John Templeton Foundation, entitled, *Enhancing Student Purpose with the Middle School Ambassador Collaborative Action-Research Study (ID #56203)*, for which IRB approval was given. The study included the implementation of an SECD intervention in six urban middle schools in New Jersey. The intervention, called MOSAIC (“Mastering Our Skills and Inspiring Character”) aims to help middle school students (6-8th grade) develop positive purpose, SEL skills, and inspiration to become their “best selves” in order to make contributions to their school, the community, and the wider world (Hatchimonji, Linsky, & Elias, 2017). MOSAIC includes a three-year curriculum that guides middle school students to find their positive purpose by supporting character inspiration and SEL skill mastery in daily 15-minute lessons sequenced

around monthly themes (see Appendix A: MOSAIC Virtues & Skills for breakdown of skills, virtues, and themes by calendar month; see also Hatchimonji, Linsky, & Elias, 2017 for further discussion on theory of the cultivation of noble purpose through MOSAIC). Data for this study came from two time periods in the project data set.

### **Research Questions and Hypotheses**

The limited literature on the topic of youth leadership points to the need to better understand the relationship of student engagement in leadership, the parameters of youth leadership, and the possible indicators of leadership qualities among children. The project aims to answer six research questions.

**Research Question 1.** How do the proposed leadership facets (peer perceptions of being a good leader, making the community better, being compassionate, communication skills, problem solving skills, being able to forgive) relate to each other and do they form a single leadership construct?

***Hypothesis 1.*** The proposed leadership facets (peer perceptions of being a good Leader, making the community better, being compassionate, communication skills, problem solving skills, being able to forgive) all correlate with one another and can be treated as a single construct.

**Research Question 2.** How are Social-Emotional Learning (SEL) skills, self-efficacy, gender and English language proficiency related to peer perceptions of leadership attributes?

***Hypothesis 2a.*** Students with higher Social-Emotional Learning skills would be more likely to be nominated as a good leader compared to students with lower Social-Emotional Learning skills.

***Hypothesis 2b.*** Students with higher self-efficacy would be more likely to be nominated as a good leader compared to students with lower self-efficacy.

***Hypothesis 2c.*** Male students would be more likely to be nominated as a good leader than female students.

***Hypothesis 2d.*** Native English-speaking (L1) students would be more likely to be nominated as a good leader compared to non-native English-speaking (L2) students.

**Research Question 3.** Are improvements in peer nominated leadership related to improvements in SEL and self-efficacy, from Fall 2015 to Spring 2016?

***Hypothesis 3a.*** Students who improve more on SEL from Fall 2015 to Spring 2016 would improve more on their peer nominated leadership from Fall 2015 to Spring 2016.

***Hypothesis 3b.*** Students who improve more on self-efficacy from Fall 2015 to Spring 2016 would improve more on their peer nominated leadership from Fall 2015 to Spring 2016.

**Research Question 4.** Does gender moderate the relationship between SEL and leadership?

***Hypothesis 4a.*** The relationship between SEL and leadership is moderated by gender such that the relationship is stronger for male students compared to female students in Fall 2015.

***Hypothesis 4b.*** The relationship between SEL and leadership is moderated by gender such that the relationship is stronger for male students compared to female students in Spring 2016.

**Hypothesis 4c.** The relationship between changes in SEL and changes in leadership is moderated by gender such that the relationship is stronger for male students compared to female students.

**Research Question 5.** Does language moderate the relationship between SEL and leadership?

**Hypothesis 5a.** The relationship between SEL and leadership is moderated by language such that the relationship is stronger for non-native English language (L2) speakers compared native language (L1) speakers in Fall 2015.

**Hypothesis 5b.** The relationship between SEL and leadership is moderated by language such that the relationship is stronger for non-native English language (L2) speakers compared native language speakers (L1) in Spring 2016.

**Hypothesis 5c.** The relationship between changes in SEL and changes in leadership is moderated by language such that the relationship is stronger for non-native English language (L2) speakers compared native language (L1) speakers.

**Research Question 6.** Does change in self-efficacy mediate the relationship between change in SEL and change in Leadership nominations?

**Hypothesis 6a.** The relationship between SEL and leadership is mediated by self-efficacy, such that higher SEL leads to higher self-efficacy, which in turn, increases leadership nominations in Fall 2015.

**Hypothesis 6b.** The relationship between SEL and leadership is mediated by self-efficacy, such that higher SEL influences higher self-efficacy, which in turn, increases leadership nominations in Spring 2016.

***Hypothesis 6c.*** The relationship between changes in SEL and leadership is mediated by changes in self-efficacy from Fall 2015 to Spring 2016, such that increase in SEL improves self-efficacy which in turn, increases leadership nominations.

## **Methods**

### **Sample Definition**

This study was part of a larger study that took place in six urban middle schools in one New Jersey school district during the academic years 2015-16, 2016-2017, and 2017-2018. Three of these six schools with higher school-level program implementation quality, defined by the Intervention Consultant Rating based on a prior study (Linsky, 2020), were selected for the current study.

There were 817 sixth to eighth grade students in the original sample, including students registered for both Fall 2015 and Spring 2016, in the three schools in this study according to demographic data given by the district. Students were included in this study if their data included more than 75% of the teacher rating of social-emotional learning (DESSA) at both Fall 2015 and Spring 2016 and completed more than 75% of both Fall 2015 and Spring 2016 of self-efficacy assessment (the General Self-Efficacy Scale). Students were removed from the study if they did not have both time points of the self-efficacy assessment ( $n = 397$ ) or they did not have both time points of the teacher ratings of SEL completed ( $n = 486$ ). There were no missing data for the leadership nomination survey at either time points as students who did not receive any nomination would be given “0” nominations. After removing participants meeting the above exclusion criteria, only 11 participants from School C remained. Because of this small  $n$ , these students were also removed from the final study sample.

Students in the selected analysis sample ( $n = 203$ ) were not significantly different than unselected students in the study schools during Fall 2015 and Spring 2016 in regard to gender, age, or eligibility for free/reduced lunch. The students selected for the study analysis were less likely to identify as Black and more likely to identify as Hispanic and White compared to students not selected for the sample ( $\chi^2 (6) = 24.08, p < .01$ ). Additionally, students in the analysis sample were more likely to identify as non-native English speakers compared to the unselected students ( $\chi^2 (1) = 42.46, p < .01$ ).

The final sample consisted of 203 grade 6-8th students from two diverse urban middle schools in NJ. Participants self-identified their race and ethnicity (38.9% Hispanic; 28.6% Black; 21.2% White; 10.3% Asian; 1.0% Others). Demographics of the selected analysis sample ( $n = 203$ ) can be found in Table 1.

## **Procedures**

In Fall 2015 and Spring 2016, students were consented to participate in the study through a passive consent process approved by the school board and the research institution's Institutional Review Board. Students were also provided an opportunity to decline participation through an "opt out" assent process.

Student self-report batteries were given twice (Fall and Spring) during each intervention year. In Fall 2015, surveys were administered electronically through the web-based system, Qualtrics. In response to school feedback, in Spring 2016, student assessments changed from web-based survey to paper-pencil scantron survey. MOSAIC teachers completed the Devereux Student Strengths Assessment-mini (DESSA-mini) at both time points using a Qualtrics survey during scheduled prep time as determined by individual school administrators (estimated survey completion time of one minute/student).

## Measures

**Demographics.** Student demographics, including race/ethnicity, grade level, free/reduced lunch status, age, and gender were collected from the district's student database.

**Youth Leadership.** All students were administered the Youth Leadership Survey (YLS; SECD lab) to assess students' perceptions of youth leadership. The YLS is a self-report nomination survey that asked students to nominate as many students they would like on six qualities that are proposed to be related to leadership. In addition to overall perception of who students consider to be a good leader among their peers, five facets of leadership were examined: making the community better, being compassionate, communication skills, problem solving skills, being able to forgive. The corresponding questions denoting leadership attributes are displayed in Appendix B.

**Social-Emotional Competencies.** The Devereux Student Strengths Assessment-mini-Survey (DESSA-mini; LeBuffe, Shapiro, & Naglieri, 2009), form A, is an 8-item teacher-report measure that assesses students' social-emotional strengths and resilience (i.e., positive behaviors). All homeroom teachers were administered the DESSA-mini to rate each student on their frequency of demonstrating specific positive behaviors during the past four weeks on a 5-point Likert scale (1=Never to 5=Very Frequently). The DESSA-mini is a validated universal screening and progress-monitoring tool for kindergarten-8th grade students' social-emotional competence and has very good internal consistency reliability (Fall 2015 =  $\alpha = .974$ ; Spring 2016,  $\alpha = .983$ ); See Appendix B for full measure).

**Youth Self-Efficacy.** The General Self-Efficacy Scale (GSE; Jerusalem & Schwarzer, 1992) is a 10-item self-report measure of self-efficacy. The total score is calculated by finding the sum of all items. For the GSE, the total score ranges between 10 and 40, with a higher score



indicating more self-efficacy. The scale was created to assess a general sense of perceived self-efficacy with the aim in mind to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events (Schwarzer, 1995). The measure has been used internationally with success for two decades and is appropriate for a broad range of applications. It is shown to predict adaptation after life changes and serve as an indicator of quality of life. In samples from 23 nations, Cronbach's alphas ranged from .76 to .90, with the majority in the high .80s. In the current study, GSE has good internal consistency reliability (Fall 2015 =  $\alpha = .853$ ; Spring 2016,  $\alpha = .845$ ; See Appendix B for full measure).

### **Preliminary Results**

**Descriptive Statistics.** Means, standard deviation, minimum and maximum scores of all major continuous variables are presented in Table 2.

**Data Transformation.** In order to eliminate the effect of differences between schools for overall number of leadership nominations, two transformations were made. First, the proportion of nominations each student received was used, rather than their raw number of nominations. This eliminated the effect of differences between schools where more nominations were given out than in other schools. Second, each student's proportion of nominations was multiplied by the proportion of students in the sample that came from their school. This eliminated the effect of school size.

**Normality.** Upon examining the centered leadership subscales for normality, skewness was very high for most variables, ranging from 1.1-2.2. This was not surprising, since most students received zero or one nomination and very few received more than ten nominations. Similarly, the kurtosis values were high for most variables, ranging from .3-6.5 across time points, indicating that at both time points, the distribution were heavy tailed for

most facets. Skewness and kurtosis values were generally not problems for the predictor variables with the exception of Spring 2016 DESSA which was negatively skewed ( $-0.62$ ,  $SE=.17$ ). Research has shown overpowered sample sizes have a tendency to inflate the significant tests of normality (McCrum-Gardner, 2010); for this reason, normality transformations were not conducted. However, because of these potential violations of the assumption of normality, analyses were conducted using both parametric and nonparametric statistics.

## **Results**

### **Research Question 1**

Hypothesis 1 tested if the proposed leadership facets (peer perceptions of being a good Leader, making the community better, being compassionate, communication skills, problem solving skills, being able to forgive) all correlate with one another and can be treated as a single construct. In order to test Hypothesis 1, Pearson correlation analyses were run between each of the separate leadership facets. Results indicated that there was a significant positive association between all the proposed leadership facets (peer perceptions of being a good Leader, making the community better, being compassionate, communication skills, problem solving skills, being able to forgive), ranging from  $.565-.794$  for Fall 2015 (see Table 3) and  $.541-.819$  for Spring 2016 (see Table 4). In addition, Spearman correlations generated similar results, ranging from  $.582-.752$  for Fall 2015 (see Table 5) and  $.506-.736$  for Spring 2016 (see Table 6). Given the high correlations, for both Fall 2015 and Spring 2016, Cronbach's alpha was run to test whether the subscales of leadership could be combined into single overall leadership scores for each time point. For Fall 2015,  $\alpha = .938$  and for Spring 2016,  $\alpha = .921$ , justifying the use of a single overall leadership score for both time points. Since it is possible that the Good Leader

item subsumes the other items on the Leadership survey, I ran a reliability test without good leader item, which was still highly reliable ( $\alpha$  (Fall 2015) = .923;  $\alpha$  (Spring 2016) = .902). I also examined the correlation between the good leader item and the combined score of the other items and found that the correlation was lower than many of the correlations between items for both Fall 2015 and Spring 2016 ( $r$  (201) = .696,  $p < .001$ ;  $r$  (201) = .671,  $p < .001$ ). Based on the correlation between Good Leader item and the combined score (without Good Leader item), it appears that the Good Leader item is capturing aspects of leadership that are not explained by the other items. Therefore, in the subsequent analyses, I used a single overall leadership score based on all six items on the Leadership Survey.

## **Research Question 2**

Before examining the research question 2, I ran a set of correlations on all continuous variables for Fall 2015 (see Table 7), Spring 2016 (see Table 8) and change scores from Fall 2015 to Spring 2016 (see Table 9). Across timepoints, SEL and self-efficacy were only related in Fall 2015 but not in other time points. The other relationships represented in the correlation tables will be more closely examined in the following hypotheses.

Hypothesis 2a tested if students with higher Social-Emotional Learning skills would be more likely to be nominated as a good leader compared to students with lower Social-Emotional Learning skills. To answer hypothesis 2a, correlations was run between SEL (using the DESSA summary score) and leadership nominations. Results of both Pearson and the Spearman correlations indicated that there were significant positive associations between students' SEL skills and leadership nominations for Fall 2015, ( $r$  (201) = .347,  $p < .001$ ;  $r_s$  (201) = .329,  $p < .001$ ). Similarly, results of both Pearson and the Spearman correlations indicated that there were significant positive associations between students' SEL skills and leadership nominations

for Spring 2016, ( $r(201) = .375, p < .001$ ;  $r_s(201) = .372, p < .001$ ). Results demonstrated that students with higher SEL skills would be more likely to be nominated as a good leader compared to students with lower SEL skills.

Hypothesis 2b tested if students with higher self-efficacy would be more likely to be nominated as a good leader compared to students with lower self-efficacy. To answer hypothesis 2b, correlations were run between self-efficacy and leadership nominations. Results of the Pearson correlations indicated that there were no significant correlations between students' self-efficacy scores and leadership nominations for Fall 2015 ( $r(201) = .076, p = .279$ ;  $r_s(201) = .136, p = .053$ ) or for Spring 2016 ( $r(201) = .076, p = .279$ ). However, Spearman correlations indicated that there was a significant positive association between students' self-efficacy scores and leadership nominations for Spring 2016 ( $r_s(201) = .144, p < .05$ ). Self-efficacy and leadership did not appear to have a meaningfully strong relationship.

Hypothesis 2c tested if male students would be more likely to be nominated as a good leader than female students. For hypothesis 2c, an independent t-test showed that there was a significant difference in leadership nominations for Fall 2015 between male students ( $M = .0120, SD = 0.01$ ) and female students ( $M = 0.0229, SD = .02$ );  $t(171.39) = -5.019, p < .001$ , where female students scored higher than male students. Similarly, a Mann-Whitney u test showed that Fall 2015 leadership nominations were higher for females ( $Mdn = .0177$ ) than males ( $Mdn = .0087$ )  $U = 3,170.5, p < .001$ . In addition, there was a significant leadership nominations difference in the scores for male students for Spring 2016 ( $M = .0116, SD = .01$ ) and female students ( $M = .0241, SD = .02$ );  $t(158.90) = -5.592, p < .001$ , where female students scored higher than male students. Similarly, a Mann-Whitney U test showed that Spring 2016 leadership nominations were higher

for females ( $Mdn=.0190$ ) than males ( $Mdn = .0085$ )  $U = 2,967.0, p<.001$ . This was the opposite of what was hypothesized.

Hypothesis 2d tested if L1 students would be more likely to be nominated as a good leader compared to L2 students. Similar analyses were ran to address hypothesis 2d. There was a significant leadership nominations difference in the scores for L1 students in Fall 2015 ( $M= .014$ ,  $SD= 0.014$ ) and L2 students ( $M= 0.020$ ,  $SD= 0.017$ );  $t(200.17)=2.91, p < .01$ . A Mann-Whitney U test showed that Fall 2015 leadership nominations were higher for L2 students ( $Mdn= .015$ ) than L2 students ( $Mdn = .009$ )  $U = 3,866.5, p<.01$ . Similarly, there was a significant leadership nominations difference in the scores for L1 students for Spring 2016 ( $M=.013$ ,  $SD=.012$ ) and L2 students ( $M=.021$ ,  $SD=.019$ );  $t(195.66)=3.66, p < .05$ . A Mann-Whitney u test showed that Spring 2016 leadership nominations were higher for L2 students ( $Mdn= .015$ ) than L1 students ( $Mdn = .011$ )  $U = 3,958.5, p<.001$ . This was contrary to the hypothesis.

### **Research Question 3**

To answer Research question 3, I created residualized difference scores for leadership, SEL, and self-efficacy as a way to represent the difference between the Fall 2015 scores and Spring 2016 scores, to avoid the issues related to simple difference scores. For each variable, I ran a regression using the Fall 2015 scores to predict the Spring 2016 scores and used SPSS to generate unstandardized residual scores for each student. I applied these residual difference scores as the outcome variable in the following analyses.

Hypothesis 3a tested if students who improved more on SEL from Fall 2015 to Spring 2016 would improve more on their peer nominated leadership from Fall 2015 to Spring 2016. To answer hypothesis 3a, I ran a correlation between the SEL and leadership nominations difference scores. Results of both Pearson and the Spearman correlations indicated that there were

significant improvements in peer nominated leadership related to improvements in SEL from Fall 2015 to Spring 2016 ( $r(201) = .153, p < .05$ ;  $r_s(201) = .197, p < .01$ ).

Hypothesis 3b tested if students who improve more on self-efficacy from Fall 2015 to Spring 2016 would improve more on their peer nominated leadership from Fall 2015 to Spring 2016. To answer hypothesis 3b, I ran a correlation between the self-efficacy and leadership nominations difference scores. Results of both Pearson and the Spearman correlations indicated that there were no significant improvements in peer nominated leadership related to improvements in self efficacy from Fall 2015 to Spring 2016 ( $r(201) = .047, p = .51$ ;  $r_s(201) = -.011, p = .878$ ).

#### **Research Question 4**

Research question 4 tested the moderating effect of gender on the relationship between SEL and leadership. First, I ran three independent sample t-tests in order to see if there are any differences in SEL across genders. Results showed that there was a significant difference in SEL for Fall 2015 between male students ( $M=2.6512, SD= 0.92$ ) and female students ( $M= 3.1037, SD=.81$ );  $t(201)=-3.726, p < .001$ , where female students scored higher than male students. Similarly, results indicated that there was a significant difference in SEL for Fall 2015 between male students ( $M= 2.6824, SD=.94$ ) and female students ( $M= 3.2902, SD=.73$ );  $t(201)=-5.161, p < .001$ , where female students scored higher than male students. Lastly, results demonstrated that there was a significant difference in SEL change scores from Fall 2015 to Spring 2016 between male students ( $M= -.1670, SD=.72$ ) and female students ( $M= .1620, SD=.65$ );  $t(201)=-3.43, p < .005$ , where female students scored higher than male students.

The moderating effect of gender on the relationship between SEL and leadership were tested using hierarchical regressions. Hypothesis 4a posited that the relationship between SEL

and leadership are moderated by gender such that the relationship is stronger for male students compared to female students in Fall 2015. This was tested by an interaction term of gender and SEL for Fall 2015, the interaction was not significant ( $b = .001, p = .81$ ), though there were main effects for gender ( $b = .008, p < .001$ ) and for SEL ( $b = .005, p < .001$ ). A visual presentation of the interaction demonstrating the pattern of effect in male and female students is presented in Figure 1.

Hypothesis 4b claimed that the relationship between SEL and leadership are moderated by gender such that the relationship is stronger for male students compared to female students in Spring 2016. This was tested by an interaction term of gender and SEL for Spring 2016, the interaction was significant ( $b = .008, p < .01$ ). In addition, there were main effects for gender ( $b = .008, p < .001$ ) and for SEL ( $b = .006, p < .001$ ). A visual presentation of the interaction demonstrating the pattern of effect in male and female students is presented in Figure 2. The figure plots the relationship between SEL and leadership for male students and for female students (Aiken & West, 1991) and showed that the line representing female students is steeper than that for males, suggesting that SEL had a stronger positive effect for female students than it did for male students on leadership nominations in Spring 2016, though not in Fall 2015.

Hypothesis 4c stated that the relationship between changes in SEL and changes in leadership are moderated by gender such that the relationship is stronger for male students compared to female students. First, I ran a model with just gender and changes in SEL predicting changes in leadership nominations. Although the model was statistically significant ( $F(2, 199) = 4.6, p = .01$ ), neither gender ( $b = .003, p = .06$ ) nor SEL change ( $b = .002, p = .08$ ) were statically significant. Then, I ran another model where I added the interaction term of gender and SEL change as a predictor. This model was significant ( $F(3, 198) = 3.0, p = .03$ ). However, neither the

interaction term ( $b = .000, p = .91$ ), nor any main effects were found for gender ( $b = .003, p = .06$ ) or for SEL change ( $b = .002, p = .16$ ). A visual presentation of the interaction demonstrating the pattern of effect in male and female students is presented in Figure 3.

### Research Question 5

Research question 5 tested if language moderates the relationship between SEL and leadership and by examining the interaction term of language and SEL. First, I ran three independent sample t-tests in order to see if there are any differences in SEL across L1 and L2 students. Results showed that there was not a significant difference in SEL for Fall 2015 between L1 students and L2 students. However, results indicated that there was a significant difference in SEL for Fall 2015 between L1 students ( $M = -2.7537, SD = .92$ ) and L2 students ( $M = 3.1686, SD = .83$ );  $t(201) = 3.368, p < .005$ , where L2 students scored higher than L1 students. Lastly, results demonstrated that there was a significant difference in SEL change scores from Fall 2015 to Spring 2016 between L1 students ( $M = -.1725, SD = .74$ ) and L2 students ( $M = .1294, SD = .65$ );  $t(201) = 3.103, p < .005$ , where L2 students scored higher than L1 students.

The moderating effect of language on the relationship between SEL and leadership were tested using hierarchical regressions. Hypothesis 5a tested whether the relationship between SEL and leadership are moderated by language such that the relationship is stronger for L1 students compared to L2 students in Fall 2015, the interaction was significant ( $b = -.005, p < .05$ ). In addition, there were main effects for language ( $b = -.005, p < .05$ ) and for SEL ( $b = .006, p < .001$ ). Visual presentations of the interaction demonstrating the pattern of effect in L1 versus L2 are presented in Figure 4. The figure plotted the relationship between SEL and leadership for L2 students compared to L1 students (Aiken & West, 1991) and showed that the line for L2



students is steeper than that for L1 students. This suggested that SEL had a stronger positive effect on leadership for L2 students than it did for L1 students in Spring 2015.

Hypothesis 5b stated the relationship between SEL and leadership are moderated by language such that the relationship is stronger for L2 speakers compared to L1 speakers in Spring 2016. This interaction term was marginally significant ( $b = -.005, p = .05$ ). In addition, there were main effects for language ( $b = -.006, p < .05$ ) and for SEL ( $b = .007, p < .001$ ). Visual presentations of the interaction demonstrating the pattern of effect in L1 students versus L2 students are presented in Figure 5. The figure plotted the relationship between SEL and leadership for L1 and L2 students (Aiken & West, 1991) and showed that the line for L2 students was steeper than that for L1 students, suggesting that improvements in SEL had a stronger positive effect in gains in leadership for L2 students than it did for L1 in Spring 2016.

Hypothesis 5c tested if the relationship between changes in SEL and changes in leadership are moderated by language such that the relationship is stronger for L2 students compared to L1 students. The interaction was not significant for the residualized difference scores for SEL and leadership ( $b = .001, p = .67$ ). No main effects were found for language ( $b = -.002, p = .15$ ) or for SEL ( $b = .002, p = .31$ ). Visual presentations of the interaction demonstrating the pattern of effect in L1 students versus L2 students are presented in Figure 6.

### **Research Question 6**

Research question 6 posited a mediation effect for SEL and self-efficacy on leadership for Fall 2015, Spring 2016, and residualized difference scores between Fall 2015 and Spring 2016. While the hypothesis tests for 3b suggested that a mediation was unlikely, to answer hypothesis 6a, a mediation model was tested on the chance that a suppression effect might emerge and that the non-overlapping portion of SEL or self-efficacy would significantly predict

leadership. Procedures suggested by Baron and Kenny (1986) were followed as the analysis strategy for testing mediation hypotheses under research question 6. In this method for mediation, there are two paths to the dependent variable.

Hypothesis 6a tested if the relationship between SEL and leadership is mediated by self-efficacy, such that higher SEL leads to higher self-efficacy, which in turn, increases leadership nominations in Fall 2015. For step 1, I ran a regression using Fall 2015 SEL mean score to predict Fall 2015 leadership nominations. For mediation to be possible, Fall 2015 SEL score must predict Fall 2015 leadership nominations, which it did ( $b = .006, p < .001$ ). To test the step 2 of the mediation, a regression using Fall 2015 SEL score to predict Fall 2015 self-efficacy score was ran. In order for mediation to be possible, Fall 2015 SEL score needed to be a significant predictor, which it was ( $b = 1.11, p = .007$ ). Step 3 involved running a regression with Fall 2015 SEL and Fall 2015 self-efficacy predicting Fall 2015 leadership nominations. For mediation to be present, Fall 2015 self-efficacy must be significant, but it was not ( $b = 0.0, p = .87$ ). Unsurprisingly, the  $b$  weight for SEL predicating Fall 2015 leadership remained unchanged ( $b = .006, p < .001$ ). This pattern suggested that while F15 SEL is related to Fall 2015 Leadership, they were not related through Fall 2015 self-efficacy score.

Hypothesis 6b stated that the relationship between SEL and leadership is mediated by self-efficacy, such that higher SEL leads to higher self-efficacy, which in turn, increases leadership nominations in Spring 2016. The same procedures were applied to Spring 2016 as were used in Fall 2015. First, for mediation to be possible, Spring 2016 SEL must predict Spring 2016 leadership, which it did ( $b = .007, p < .001$ ). For the second step of mediation, a regression using Spring 2016 SEL to predict Spring 2016 self-efficacy was ran. In order for mediation to be possible, Spring 2016 needed to be a significant predictor, but it was not ( $b = 0.59, p = .127$ ).

This pattern suggested that while Spring 2016 SEL was related to Spring 2016 leadership, it was not related through Spring 2016 self-efficacy.

Hypothesis 6c tested if the relationship between changes in SEL and leadership are mediated by changes in self-efficacy from Fall 2015 to Spring 2016, such that an increase in SEL improves self-efficacy which in turn, increases leadership nominations. Changes in variables were operationalized by residualized difference scores between Fall 2015 to Spring 2016 values for all measures. Using the same approach, a regression using SEL residualized difference scores to predict leadership residualized difference scores was ran. For mediation to be possible, the SEL change score must predict the leadership change score, which it did ( $b = .002, p < .05$ ). To test the second step, a regression using the SEL change score to predict the self-efficacy change score was ran, but it was not a significant predictor for the self-efficacy change score ( $b = -.053, p = .903$ ). This pattern suggested that the SEL change score predicted the leadership change score, yet they were not related through the self-efficacy change score.

## **Discussion**

The primary goal of the current study is to address several gaps in the youth leadership development literature by quantitatively assessing the role of SEL in peer perceived ethical leadership nominations in the context of urban middle schools. Findings from these analyses help to illuminate the relationship of (peer-nominated) student leadership facets, (teacher-rated) student social-emotional learning, and (self-reported) student self-efficacy. Results demonstrated that while SEL was positively related to leadership, this relationship was not mediated through self-efficacy. Additional analysis investigated how gender and language status influenced the relationship between the variables of interest. The results supported some but not all of the

hypotheses proposed. These findings, their implications, study limitations, and future directions are explored in this section.

### **SEL and Leadership**

Results indicated that there was a significant positive association at both time points between all the proposed ethical leadership facets (peer perceptions of being a good leader, making the community better, being compassionate, being able to communicate well, being able to solve problems effectively, being able to forgive), which justified the use of a single overall leadership score. Findings demonstrates that at both time points, students with higher SEL skills were more likely to be nominated as a good leader compared to students with lower SEL skills. In addition, there was a significant improvement in peer nominated leadership related to improvements in SEL from Fall 2015 to Spring 2016. This finding aligns with the adult leadership literature which suggests that the highest performing adult leaders have significantly higher emotional competence than their counterparts (Kerr et al., 2006; Rosete & Ciarrochi, 2005). However, it is important to note that correlation was used as the statistic model in this analysis; thus, a causal direction could not be determined. It is possible that higher SEL is leading to leadership nominations or that the leadership nominations are increasing SEL. Either is a possibility or there might be a third variable causing changes in both SEL and leadership nominations.

### **Self-efficacy, SEL, and Leadership**

Since research (mostly with adults) has shown that self-efficacy accounts for a large aspect of the effects of SEL on leadership behaviors, it was predicted that self-efficacy also mediates the relationship of SEL to peer perception of ethical leadership. In Fall 2015, students' SEL scores significantly predicted Fall 2015 self-efficacy, yet students' SEL scores in Spring

2016 did not significantly predict their Spring 2016 self-efficacy scores. One potential explanation of this unexpected result is that in Fall 2015, before receiving the MOSAIC lessons, teachers' perception of students' SEL were more heavily based on students' presentation of self-efficacy. After teaching the MOSAIC lessons, teachers' perceptions and assessments of SEL were driven by the impact of the training on the conscious, learned abilities of SEL and was no longer a byproduct of students' higher self-efficacy. While I anticipated a positive relationship between self-efficacy and leadership, no relationship was apparent in the data I examined. This pattern of results suggests that while SEL is related to leadership for both timepoints, they are not related through self-efficacy.

### **Gender, SEL and Leadership**

One of the objectives of the present work was to explore gender differences on SEL and leadership. Consistent with previous literature, results demonstrated that female students were rated as having significantly higher teacher rated SEL at all timepoints. Furthermore, this resembled past studies showing that gender differences in positive emotions were especially evident in middle childhood and adolescence (Chaplin & Aldao, 2013). This sample of students are within the age range that this difference is most pronounced.

As for how male and female leaders are perceived differently as leaders by their peers, results showed that female students were more likely to be nominated as effective leaders than male students for both timepoints. This was surprising since most of the adult leadership literature suggest that due to an implicit masculine bias in societal perceptions of leadership, equally qualified female leaders were rated to be less effective and less preferred over male leaders (Rhee & Sigler, 2015). However, a small number of studies mentioned in the

introduction countered these general findings and support the results of the current study (e.g., Bettis & Adams, 2005).

Additionally, this study investigated whether the relationship between SEL and peer-perceived leadership nominations is different for male and female students. My analyses showed that SEL had a stronger positive effect for female students than it does for male students on leadership nominations in Spring 2016, but not Fall 2015. Female students who were high in SEL were particularly seen as good leaders, compared to their female counterparts who were low in SEL. This finding did not hold for male students. One explanation for this could be that students all had lessons on leadership through the MOSAIC curriculum which might have reduced the gender bias; in other words, by Spring 2016, students were more likely to know what to look for in leaderships constructs, versus following implicit masculine biased impressions.

### **Language, SEL and Leadership**

Another objective of the present study was to explore the difference between non-native English language (L2) speakers compared native language (L1) speakers on SEL and ethical leadership. Results in the current study demonstrated that L2 students were rated as having significantly higher teacher-rated SEL at all timepoints. This is partly supported by some past research that suggested social–emotional outcomes for young L2 learners have at least equal (if not better) social–emotional outcomes compared to native English speakers (Halle et al., 2014). However, contextual and individual characteristics are important factors for illuminating the unique influence of L2 status on social–emotional outcomes. Some may argue that the challenging experiences of L2 students have led to higher cultural intelligence that builds on emotional intelligence concepts and allows them to connect with people with similarities and adapt to different environments. Other studies have proposed that other sociodemographic

variables are related to foreign language anxiety that may then influence SEL skills. This includes age, education level, number of languages known, age of acquisition, context of acquisition, and frequency of use (Dewaele, Petrides, & Furnham, 2008).

Additionally, this study investigated whether the relationship between SEL and peer perceived leadership nominations is different for L1 and L2 students. Unexpectedly, leadership nominations were higher for non-native English-speaking students than native English-speaking students. This was consistent with only a few studies on language and adult leadership. A 17-countries empirical study that assessed the role of language on specific leadership scenario-based situations demonstrated that language choice (native or English) did not affect the response to studied leadership scenarios. Instead, cultural and situational context predicted leadership decisions and reactions (Zander, Mockaitis, & Harzing, 2011). Nevertheless, there has been a lack of youth literature on language and leadership and even the adult research results have been mixed in whether language plays a role in leadership effectiveness and perceptions. Because of this gap in research, no consensus could be reached regarding the impact of language on leadership.

Lastly, additional analyses investigated if the relationship between SEL and leadership is moderated by language. As predicted, SEL had a stronger positive effect on leadership for non-native students than it did for native students in both time points. However, the relationship between changes in SEL and changes in leadership was not moderated by language.

### **Study Limitations**

The present study has several limitations. First, there are some limitations to the measures used in this study. The DESSA mini survey may reflect reporting biases such as reference bias and unconscious bias in expectations and/or assessment of performance. Furthermore, it would

be key to include multiple informants outside of the classroom context such as parents and other stakeholders in a student's life to increase the representativeness of assessing a students' SEL skills and leadership abilities in various contexts. In addition, the leadership survey administered was not created as an assessment to evaluate leadership qualities but rather to examine students' perceptions of youth leadership. Relatedly, it is possible that peer perceptions of youth leadership occur in additional ways that have not been captured in the leadership survey from the current study.

Second, there were no control schools to compare the potential impact of program effects as it is often difficult in an educational setting to carry out random assignment because school district officials tend to decline withholding educational programs from some classrooms or schools. This makes the potential reason for SEL's impact (or not) on leadership change uncertain. Future studies could utilize the cross-lagged panel analysis to establish reciprocal relationships, or directional influences, between leadership nominations and social-emotional learning skills over time.

### **Implications and Future Directions**

Schools play an imperative role to nurturing healthy adolescents by cultivating not only their cognitive development but also their social and emotional development. However, the competing demands and limited resources in schools warrants the need for adopting evidence-based interventions that are capable of concurrently harvesting multiple proximal and longitudinal positive student outcomes. The current study is the first study that explored SEL, self-efficacy and peer-nominated leadership in the context of gender and language for middle school students, the findings from the current study have important implications for academics and practitioners.



From a research perspective, although self-reported self-efficacy did not come out as a significant mediator of teacher reported SEL and peer perceptions leadership in this study, additional studies should explore this relationship in the context of a single consistent informant across measures (e.g., all self-reports). Furthermore, future studies could explore other mediators that could better explain the relationship between SEL and peer perceptions of leadership. For instance, problem solving, and communication skills were shown to have the highest correlation with peer perceptions of good leadership. Thus, it might be worthwhile to further explore problem solving and communication skills as potential mediators of SEL and peer perceptions leadership and/or that they might be the third variable causing changes in both social emotional learning and leadership nominations.

Additionally, the reasoning behind why the effects of SEL on leadership differ by gender and language warrants further research. Future research could look at interpersonal and intrapersonal aspects of SEL and leadership separately and how gender and language might moderate these relationships. In addition, another study could look at how gender and language moderate the relationship between SEL and the three meta-categories of leadership: relations-oriented behaviors (i.e., being compassionate; being able to forgive), task-oriented behaviors (i.e., communication skills; problem solving skills) and change-oriented behaviors (i.e., making the community better) (Kacmar et al., 2011; Yukl et al., 2002). It is possible that gender and language moderate certain aspects of leadership better than others.

Relatedly, the Leader-Member Exchange (LMX) theory suggests that over time a leader will develop and exchange relationships with their followers to varying degrees (Dienesch & Liden, 1986). In adult LMX studies, high exchange relationship is manifested in a higher level of trust, liking, and respect. This in exchange engender greater follower satisfaction, lower turnover,

better job performance and less job stress (Kacmar et al., 2011). However, no other studies have been conducted to look at the determinants, mediating variables, or outcomes of the LMX in adolescents. The LMX theory could facilitate future directions on youth SEL and leadership development before and beyond middle school years to track how youth perceptions of leadership evolves across developmental stages and contexts.

From the practitioner's perspective, the fact that teacher perceptions of SEL consistently and positively predict peer perceptions of leadership is a very intriguing finding. At a minimum, it suggests that leadership development should be an explicit aspect of SEL interventions. This could serve to educate all students about the nature of effective leadership and influence students' decisions about leadership opportunities of all kinds in school, including student government. It also suggests that a special focus of SEL programs could be to nurture a cadre of particularly effective, SEL-skilled student leaders (e.g., Hatchimonji et al, 2017). Additionally, future studies could look at longitudinal data to examine the evidence for persistence and fade-out programmatic effects in nurturing impactful leadership skills that can transcend into adulthood (Bailey et al., 2020).

Moreover, the fact that SEL has a stronger positive effect on leadership for L1 students and for female students than their L2 and male student counterparts was noteworthy findings with important program development implications. Both female and non-native speaking students are unrepresented populations in top leadership positions due to varying barriers and socialization expectations. However, this study seems to suggest within this limited sample, when these underrepresented groups are offered appropriate opportunities and resources (e.g., SEL and leadership development resources), they tend to benefit from them equally if not more than their more represented counterparts. This calls for the need of a better understanding of how

the social identities of our young leaders (i.e., race, ethnicity, gender, language, minority status) may interact to influence the exercise of effective leadership that is much needed for the future of our country.

## References

- Adams, S. R., & Richie, C. (2017). Social emotional learning and English language learners: A review of the literature. *Intesol Journal*, 14(1), Article 1. <https://journals.iupui.edu/index.php/intesol/article/view/21625>
- Akos, P., & Galassi, J. P. (2004). Gender and race as variables in psychosocial adjustment to middle and high school. *The Journal of Educational Research*, 98(2), 102–108.  
<https://www.tandfonline.com/doi/abs/10.3200/JOER.98.2.102-108>
- Alessandri, G., Vecchione, M., & Caprara, G. V. (2015). Assessment of regulatory emotional self-efficacy beliefs: A review of the status of the art and some suggestions to move the field forward. *Journal of Psychoeducational Assessment*, 33(1), 24–32.
- F, K., Vella-Brodrick, D., & Waters, L. (2017). School belonging and the role of social and emotional competencies in fostering an adolescent's sense of connectedness to their school. In E. Frydenberg, A. J. Martin, & R. J. Collie (Eds.), *Social and Emotional Learning in Australia and the Asia-Pacific: Perspectives, Programs and Approaches* (pp. 83–99).
- Ashdown, D. M., & Bernard, M. E. (2012). Can explicit instruction in social and emotional learning skills benefit the social-emotional development, well-being, and academic achievement of young children? *Early Childhood Education Journal*, 39(6), 397–405.
- Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly*, 16(3), 315–338.  
<https://doi.org/10.1016/j.leaqua.2005.03.001>
- Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual Review of Psychology*, 60(1), 421–449.
- Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. Macmillan.
- Bailey, D. H., Duncan, G. J., Cunha, F., Foorman, B. R., & Yeager, D. S. (2020). Persistence and fade-out of educational-intervention effects: Mechanisms and potential solutions. *Psychological Science in The Public Interest*, 21(2), 55–97.
- Bass, B. M., & Bass, R. (2008). The bass handbook of leadership: Theory, research, and managerial applications (4 edition). *New York: Free Press*.
- Bettis, P. J., & Adams, N. G. (2005). Geographies of girlhood: Identities in-between. *Routledge*.
- Blackorby, J., & Wagner, M. (1996). Longitudinal postschool outcomes of youth with disabilities: Findings from the national longitudinal transition study. *Exceptional Children*, 62(5), 399–413.  
<https://doi.org/10.1177/001440299606200502>
- Brower, H. H., Schoorman, F. D., & Tan, H. H. (2000). A model of relational leadership: The integration of trust and leader–member exchange. *The Leadership Quarterly*, 11(2), 227–250.  
[https://doi.org/10.1016/S1048-9843\(00\)00040-0](https://doi.org/10.1016/S1048-9843(00)00040-0)

- Brown, K. M. (2006). Leadership for social justice and equity: Evaluating a transformative framework and andragogy. *Educational Administration Quarterly*, 42(5), 700–745. <https://doi.org/10.1177/0013161X06290650>
- Chaplin, T. M. (2015). Gender and emotion expression: A developmental contextual perspective. *Emotion Review*, 7(1), 14–21. <https://doi.org/10.1177/1754073914544408>
- Chaplin, T. M., & Aldao, A. (2013). Gender differences in emotion expression in children: A meta-analytic review. *Psychological Bulletin*, 139(4), 735–765. <https://doi.org/10.1037/a0030737>
- Charbonneau, D., & Nicol, A. A. M. (2002). Emotional intelligence and leadership in adolescents. *Personality and Individual Differences*, 33(7), 1101–1113.
- Chemers, M. M., Watson, C. B., & May, S. T. (2000). Dispositional affect and leadership effectiveness: A comparison of self-esteem, optimism, and efficacy. *Personality and Social Psychology Bulletin*, 26(3), 267–277.
- Cohen, G. B. (2011). Just ask leadership: Why great managers always ask the right questions. *Human Resource Management International Digest*, 19(2). *Therapy*, 6(4), 169–179.
- Conderman, G., & Pedersen, T. (2005). Promoting positive special education practices. *NASSP Bulletin*, 89(644), 90–98. <https://doi.org/10.1177/019263650508964406>
- Conner, J., & Strobel, K. (2007). Leadership development: an examination of individual and programmatic growth. *Journal of Adolescent Research*, 22, 275–297.
- Dahl, R. E., Allen, N. B., Wilbrecht, L., & Suleiman, A. B. (2018). Importance of investing in adolescence from a developmental science perspective. *Nature*, 554(7693), 441–450. <https://doi.org/10.1038/nature25770>
- Damon, W., Mariano, J., & Cotton B, K. (2003). Damon W, Menon J, Bronk KC. The development of purpose during adolescence. *Applied Developmental Science*, 7, 119–128.
- Dewaele, J.-M., Petrides, K. V., & Furnham, A. (2008). Effects of trait emotional intelligence and sociobiographical variables on communicative anxiety and foreign language anxiety among adult multilinguals: A review and empirical investigation. *Language Learning*, 58(4), 911–960.
- Dienesch, R. M., & Liden, R. C. (1986). Leader-member exchange model of leadership: A critique and further development. *Academy of Management Review*, 11(3), 618–634. <https://doi.org/10.5465/amr.1986.4306242>
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405–432.
- Edwards, C. A. (1994). Leadership in groups of school-age girls. *Developmental Psychology*, 30(6), 920–927.

- Elias, M. (2009). Social-emotional and character development and academics as a dual focus of educational policy. *Educational Policy - Educational Policy*, 23, 831–846.
- Elias, M. J., Kranzler, A., Parker, S. J., Kash, V. M., & Weissberg, R. P. (2014). The complementary perspectives of social and emotional learning, moral education, and character education. In L. Nucci, D. Narvaez, & T. Krettenauer (Eds.), *Handbook of Moral and Character Education* (2nd Ed) (pp.272-289). Taylor and Francis.
- Elias, M. J., Leverett, L., Duffell, J., Humphrey, N., Stepney, C.T., & Ferrito, J. J. (in press). Integrating social-emotional learning with related prevention and youth-development approaches. In J. A. Durlak, C. Domitrovich, R. P. Weissberg, & T. P. Gullotta (Eds.), *Handbook of Social and Emotional Learning (SEL): Research and Practice*. Guilford.
- Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., Kessler, R., Schwab-Stone, M. E., & Shriver, T. P. (1997). Promoting social and emotional learning: Guidelines for educators. *ASCD*.
- Emerson, R. M. (1976). Social exchange theory. *Annual Review of Sociology*, 2(1), 335–362.  
<https://doi.org/10.1146/annurev.so.02.080176.002003>
- Eva, N., & Sendjaya, S. (2013). Creating future leaders: An examination of youth leadership development in Australia. *Education and Training*, 55(6). <https://doi.org/10.1108/ET-08-2012-0082>
- Fitzsimmons, T. W., Callan, V. J., & Paulsen, N. (2014). Gender disparity in the C-suite: Do male and female CEOs differ in how they reached the top? *The Leadership Quarterly*, 25(2), 245–266.  
<https://doi.org/10.1016/j.leaqua.2013.08.005>
- Glenn, S. D., & Horn, T. S. (1993). Psychological and personal predictors of leadership behavior in female soccer athletes. *Journal of Applied Sport Psychology*, 5(1), 17–34.
- Groves, K. S. (2005). Gender differences in social and emotional skills and charismatic leadership. *Journal of Leadership & Organizational Studies*, 11(3), 30–46.
- Hatchimonji, D. R., Linsky, A. V., & Elias, M. J. (2017). Cultivating noble purpose in urban middle schools: A missing piece in school transformation. *Education*, 138(2), 162–178.
- Hatchimonji, D., V. Linsky, A., DeMarchena, S., Nayman, S., Kim, S., & Elias, M. (2017). Building a culture of engagement through participatory feedback processes. *The clearing house: A Journal of Educational Strategies, Issues and Ideas*, 91, 1–7.
- Hernandez, D. J., Denton, N. A., & Macartney, S. E. (2008). Children in immigrant families: Looking to America's future. *Social Policy Report*, 22(3), 1–24. <https://doi.org/10.1002/j.2379-3988.2008.tb00056.x>
- Ho, S. S. M., Li, A. Y., Tam, K., & Zhang, F. (2015). CEO gender, ethical leadership, and accounting conservatism. *Journal of Business Ethics*, 127(2), 351–370.

- Issah, M. (2018). Change leadership: The role of emotional intelligence. *SAGE open*, 8(3), 2158244018800910. <https://doi.org/10.1177/2158244018800910>
- Jeong, H., Sugiura, M., Suzuki, W., Sassa, Y., Hashizume, H., & Kawashima, R. (2016). Neural correlates of second-language communication and the effect of language anxiety. *Neuropsychologia*, 84, e2–e12. <https://doi.org/10.1016/j.neuropsychologia.2016.02.012>
- Jeong, S., Hsiao, Y.-Y., Song, J. H., Kim, J., & Bae, S. H. (2016). The moderating role of transformational leadership on work engagement: The influences of professionalism and openness to change. *Human Resource Development Quarterly*, 27(4), 489–516. <https://doi.org/10.1002/hrdq.21265>
- Johns, M. L. (2013). Breaking the glass ceiling: structural, cultural, and organizational barriers preventing women from achieving senior and executive positions. *Perspectives in Health Information Management / AHIMA, American Health Information Management Association*, 10(Winter). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3544145/>
- Joullié, J.-E., & Spillane, R. (2015). Philosophy of leadership: The power of authority. *Springer*.
- Kacmar, K. M., Bachrach, D. G., Harris, K. J., & Zivnuska, S. (2011). Fostering good citizenship through ethical leadership: Exploring the moderating role of gender and organizational politics. *Journal of Applied Psychology*, 96(3), 633–642. <https://doi.org/10.1037/a0021872>
- Karagianni, D., & Montgomery, A. J. (2018). Developing leadership skills among adolescents and young adults: A review of leadership programmes. *International Journal of Adolescence and Youth*, 23(1), 86–98.
- Kerr, R., Garvin, J., Heaton, N., & Boyle, E. (2006). Emotional intelligence and leadership effectiveness. *Leadership & Organization Development Journal*, 27(4), 265–279. <https://doi.org/10.1108/01437730610666028>
- Khoshhal, K. I., & Guraya, S. Y. (2016). Leaders produce leaders and managers produce followers. *Saudi Medical Journal*, 37(10), 1061–1067. <https://doi.org/10.15537/smj.2016.10.15620>
- Kiuru, N., Wang, M.-T., Salmela-Aro, K., Kannas, L., Ahonen, T., & Hirvonen, R. (2020). Associations between adolescents' interpersonal relationships, school well-being, and academic achievement during educational transitions. *Journal of Youth and Adolescence*, 49(5), 1057–1072. <https://doi.org/10.1007/s10964-019-01184-y>
- Kress, C. A. (2006). Youth leadership and youth development: Connections and questions. *New Directions for Youth Development*, 2006(109), 45–56. <https://doi.org/10.1002/ym.154>
- Lieven, E., & Tomasello, M. (2008). Children's first language acquisition from a usage-based perspective. In *Handbook of Cognitive Linguistics and Second Language Acquisition* (pp. 168–196). Routledge/Taylor & Francis Group.

- Linsky, A. C. (2020). The effect of program implementation quality on the social-emotional learning and negative mental health of urban middle school students in the mosaic intervention [Rutgers University - Graduate School - New Brunswick].
- Lobel, S. A. (1990). Global leadership competencies: Managing to a different drumbeat. *Human Resource Management*, 29(1), 39–47.
- Lopez-Zafra, E., Garcia-Retamero, R., & Martos, M. P. B. (2012). The relationship between transformational leadership and emotional intelligence from a gendered approach. *The Psychological Record*, 62(1), 97–114. <https://doi.org/10.1007/BF03395790>
- MacIntyre, P. D., & Gardner, R. C. (1994). The subtle effects of language anxiety on cognitive processing in the second language. *Language Learning*, 44(2), 283–305.
- MacNeil, C. A. (2006). Bridging generations: Applying “adult” leadership theories to youth leadership development. *New Directions for Youth Development*, 2006(109), 27–43.
- Mahsud, R., Yukl, G., & Prussia, G. (2010). Leader empathy, ethical leadership, and relations-oriented behaviors as antecedents of leader-member exchange quality. *Journal of Managerial Psychology*, 25(6), 561–577. <https://doi.org/10.1108/02683941011056932>
- Matthews, J. S., Ponitz, C. C., & Morrison, F. J. (2009). Early gender differences in self-regulation and academic achievement. *Journal of Educational Psychology*, 101(3), 689–704.
- McCormick, M. J. (2001). Self-efficacy and leadership effectiveness: Applying social cognitive theory to leadership. *Journal of Leadership Studies*, 8(1), 22–33.
- McCrum-Gardner, E. (2010). Sample size and power calculations made simple. *International Journal of Therapy and Rehabilitation*, 17(1), 10–14. <https://doi.org/10.12968/ijtr.2010.17.1.45988>
- Meinhold, J. L., & Malkus, A. J. (2005). Adolescent environmental behaviors: Can knowledge, attitudes, and self-efficacy make a difference? *Environment and Behavior*, 37(4), 511–532. <https://doi.org/10.1177/0013916504269665>
- Morton, M., & Montgomery, P. (2011). Youth empowerment programs for improving self-efficacy and self-esteem of adolescents. *Campbell Systematic Reviews*, 7(1), 1–80. <https://doi.org/10.4073/csr.2011.5>
- Morton, M. H., & Montgomery, P. (2013). Youth empowerment programs for improving adolescents’ self-efficacy and self-esteem: A systematic review. *Research on Social Work Practice*, 23(1), 22–33.
- Muris, P. (2002). Relationships between self-efficacy and symptoms of anxiety disorders and depression in a normal adolescent sample. *Personality and Individual Differences*, 32(2), 337–348. [https://doi.org/10.1016/s0191-8869\(01\)00027-7](https://doi.org/10.1016/s0191-8869(01)00027-7)
- Naglieri, J. A., LeBuffe, P., & Shapiro, V. B. (2011). Universal screening for social-emotional competencies: A study of the reliability and validity of the DESSA-mini. *Psychology in the Schools*, 48(7), 660–671. <https://doi.org/10.1002/pits.20586>



- Neubert, M. J., & Taggar, S. (2004). Pathways to informal leadership: The moderating role of gender on the relationship of individual differences and team member network centrality to informal leadership emergence. *The Leadership Quarterly*, 15(2), 175–194.
- Niehaus, K., & Adelson, J. L. (2014). School support, parental involvement, and academic and social-emotional outcomes for english language learners. *American Educational Research Journal*, 51(4), 810–844.
- Ogden, C. L., Carroll, M. D., Lawman, H. G., Fryar, C. D., Kruszon-Moran, D., Kit, B. K., & Flegal, K. M. (2016). Trends in obesity prevalence among children and adolescents in the united states, 1988-1994 Through 2013-2014. *JAMA*, 315(21), 2292. <https://doi.org/10.1001/jama.2016.6361>
- Reed, G. E. (2012). Leading questions: Leadership, ethics, and administrative evil. *Leadership*, 8(2), 187–198.
- Rehm, C. J. (2014). An evidence-based practitioner’s model for adolescent leadership development. *Journal of Leadership Education*, 13(3), 83-97.
- Rehm, C., & Selznick, B. (2019). Measuring leader self-efficacy among youth. *Journal of Leadership Education*, 18(2).
- Rhee, K. S., & Sigler, T. H. (2015). Untangling the relationship between gender and leadership. *Gender in Management: An International Journal*.
- Ricketts, J. C., & Rudd, R. D. (2002). A comprehensive leadership education model to train, teach, and develop leadership in youth. *Journal of Career and Technical Education*, 19(1), 7–17.
- Rizzolatti, G., & Craighero, L. (2004). The mirror-neuron system. *Annual Review of Neuroscience*, 27(1), 169–192. <https://doi.org/10.1146/annurev.neuro.27.070203.144230>
- Romer, N., Ravitch, N. K., Tom, K., Merrell, K. W., & Wesley, K. L. (2011). Gender differences in positive social-emotional functioning. *Psychology in the schools*, 48(10), 958–970.
- Rosch, D., Collier, D., & Zehr, S. (2014). Self-vs.-teammate assessment of leadership competence: The effects of gender, leadership self-efficacy, and motivation to lead. *Journal of Leadership Education*, 13(2), 96–124. <https://doi.org/10.12806/v13/i2/r5>
- Rosete, D., & Ciarrochi, J. (2005). Emotional intelligence and its relationship to workplace performance outcomes of leadership effectiveness. *Leadership & Organization Development journal*, 26(5), 388–399. <https://doi.org/10.1108/01437730510607871>
- Jerusalem, M., & Schwarzer, R. (1992). Self-efficacy as a resource factor in stress appraisal processes. In R. Schwarzer (Ed.), *Self-efficacy: Thought Control of Action* (p. 195–213). Hemisphere Publishing Corp.
- Luszczynska, A., Scholz, U., & Schwarzer, R. (2005). The general self-efficacy scale: Multicultural validation studies. *The Journal of Psychology*, 139(5), 439–457. <https://doi.org/10.3200/JRLP.139.5.439-457>
- Steele, A. R., & Day, D. V. (2018). The role of self-attention in leader development. *Journal of Leadership Studies*, 12(2), 17–32.

- Steinberg, L., & Monahan, K. C. (2007). Age differences in resistance to peer influence. *Developmental Psychology*, 43(6), 1531–1543. <https://doi.org/10.1037/0012-1649.43.6.1531>
- Teimouri, Y., Goetze, J., & Plonsky, L. (2019). Second language anxiety and achievement: A meta-analysis – erratum. *Studies in Second Language Acquisition*, 41(2), 489–489.
- Trehan, D. R., & Shrivastav, U. S. S. (2012). Perception of top management executives towards importance of ei for professional success. *IUP Journal of Management Research*, 11(3).
- Valois, R. F., Zullig, K. J., & Hunter, A. A. (2015). Association between adolescent suicide ideation, suicide attempts and emotional self-efficacy. *Journal of Child and Family Studies*, 24(2), 237–248.
- Valois, R. F., Zullig, K. J., & Revels, A. A. (2017). Aggressive and violent behavior and emotional self-efficacy: Is there a relationship for adolescents? *Journal of School Health*, 87(4), 269–277. <https://doi.org/10.1111/josh.12493>
- Van D, D. (2011). Servant leadership: A review and synthesis. *Journal of Management*, 37(4), 1228–1261.
- Verloigne, M., Cardon, G., Craemer, M. D., D’Haese, S., & Bourdeaudhuij, I. D. (2016). Mediating effects of self-efficacy, benefits and barriers on the association between peer and parental factors and physical activity among adolescent girls with a lower educational level. *Plos One*, 11(6), e0157216.
- Vollet, J. W., Kindermann, T. A., & Skinner, E. A. (2017). In peer matters, teachers matter: Peer group influences on students’ engagement depend on teacher involvement. *Journal of Educational Psychology*, 109(5), 635–652. <https://doi.org/10.1037/edu0000172>
- Watkins, D., Earnhardt, M., Pittenger, L., Roberts, R., Rietsema, K., & Cosman-Ross, J. (2017). Thriving in complexity: A framework for leadership education. *Journal of Leadership Education*, 16(4), 148–163. <https://doi.org/10.12806/v16/i4/t4>
- Whitehead, G. (2009). Adolescent leadership development: Building a case for an authenticity framework. *Educational Management Administration & Leadership*, 37(6), 847–872.
- Whitlock, J. L. (2006). Youth perceptions of life at school: Contextual correlates of school connectedness in adolescence. *Applied Developmental Science*, 10, 13–29.
- Wilczenski, F. L., & Coomey, S. M. (2007). A practical guide to service learning: Strategies for positive development in schools. *Springer Science & Business Media*.
- Zander, L., Mockaitis, A. I., & Harzing, A.-W. (2011). Standardization and contextualization: A study of language and leadership across 17 countries. *Journal of World Business*, 46(3), 296–304.
- Zulch, B. (2014). Leadership communication in project management. *Procedia - Social and Behavioral Sciences*, 119, 172–181. <https://doi.org/10.1016/j.sbspro.2014.03.021>

## Tables

Table 1.  
*Demographic Characteristics of Selected Analysis Sample by School, Fall 2015*

	A	B	Total
Female-Identified <i>n</i> (%)	84 (51.2)	19 (48.7)	103
Male-Identified <i>n</i> (%)	80 (48.8)	20 (51.3)	100
American Indian <i>n</i> (%)	1 (0.6)	0 (0)	1
Asian <i>n</i> (%)	19 (11.6)	2 (5.1)	21
Black <i>n</i> (%)	40 (24.4)	18 (46.2)	58
Hispanic <i>n</i> (%)	71 (43.3)	8 (20.5)	79
Multiracial <i>n</i> (%)	0 (0)	1 (2.6)	1
White <i>n</i> (%)	33 (20.1)	10 (25.6)	43
Native <i>n</i> (%)	60 (36.6)	27 (69.2)	87
Non-Native <i>n</i> (%)	104 (63.4)	12 (30.8)	116
Total Selected Analysis Sample <i>n</i> (%)	164 (81.2)	39 (19.3)	202

Table 2.

*Descriptive Statistics of Leadership Nominations, Self-Efficacy, and DESSA Scores by Timepoint*

Item	Mean	Std. Deviation	Minimum	Maximum
Fall 2015				
Leadership Nominations	3.12	2.74	0	15.33
Self-Efficacy	30.85	5.26	16.0	40.0
DESSA	2.88	0.89	0.22	4.0
Spring 2016				
Leadership Nominations	2.83	2.52	0	13.17
Self-Efficacy	30.58	4.88	18.0	40.0
DESSA	2.99	0.89	0	4.0

Table 3.

*Pearson's Correlations for Youth Leadership Survey Items (Fall 2015)*

Variable	1	2	3	4	5	6
1. Good Leader	—					
2. Community	.79**	—				
3. Compassionate	.78**	.75**	—			
4. Communication	.76**	.72**	.79**	—		
5. Problem Solver	.78**	.71**	.76**	.79**	—	
6. Forgiveness	.57**	.60**	.67**	.67**	.65**	—

\*\* $p < .01$ .

Table 4.

*Spearman's Correlations for Youth Leadership Survey Items (Fall 2015)*

Variable	1	2	3	4	5	6
1. Good Leader	—					
2. Community	.73**	—				
3. Compassionate	.75**	.69**	—			
4. Communication	.72**	.67**	.75**	—		
5. Problem Solver	.68**	.66**	.68**	.70**	—	
6. Forgiveness	.58**	.62**	.66**	.62**	.62**	—

\*\* $p < .01$ .

Table 5

*Pearson's Correlations for Youth Leadership Survey Items (Spring 2016)*

Variable	1	2	3	4	5	6
1. Good Leader	—					
2. Community	.78**	—				
3. Compassionate	.62**	.64**	—			
4. Communication	.65**	.58**	.72**	—		
5. Problem Solver	.82**	.77**	.75**	.69**	—	
6. Forgiveness	.54**	.54**	.68**	.57**	.62**	—

\*\* $p < .01$ .

Table 6.

*Spearman's Correlations for Youth Leadership Survey Items (Spring 2016)*

Variable	1	2	3	4	5	6
1. Good Leader	—					
2. Community	.64**	—				
3. Compassionate	.55**	.63**	—			
4. Communication	.61**	.59**	.66**	—		
5. Problem Solver	.74**	.66**	.64**	.69**	—	
6. Forgiveness	.53**	.52**	.58**	.54**	.51**	—

**\*\*** $p < .01$ .

Table 7.

*Pearson (lower left) and Spearman (upper right) Correlations Between Leadership Nominations, Self-Efficacy, and DESSA Scores for Fall 2015*

	Leadership Nominations	Self-Efficacy	DESSA
Leadership Nominations	—	.006	.329**
Self-Efficacy	.076	—	.190**
DESSA	.347**	.188**	—

**\*\*** $p < .01$ .

Table 8.

*Pearson (lower left) and Spearman (upper right) Correlations Between Leadership Nominations, Self-Efficacy, and DESSA Scores for Spring 2016*

	Leadership Nominations	Self-Efficacy	DESSA
Leadership Nominations	—	.144*	.372**
Self-Efficacy	.136	—	.106
DESSA	.375**	.107	—

\* $p < .05$ . \*\* $p < .01$ .

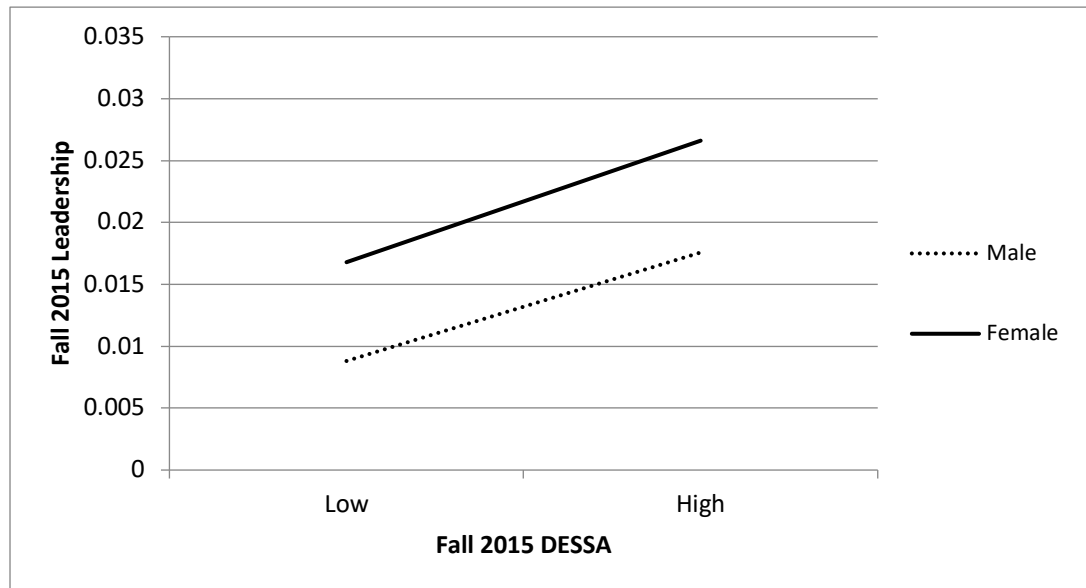
Table 9.

*Pearson (lower left) and Spearman (upper right) Correlations Between Leadership Nominations, Self-Efficacy, and DESSA Scores Across Timepoints*

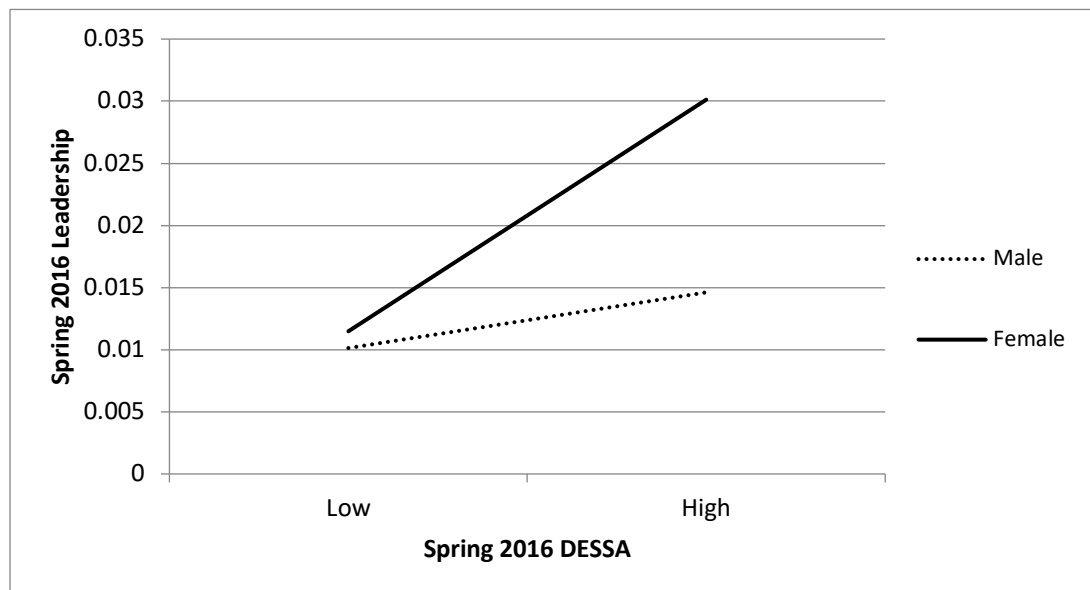
	Leadership Nominations	Self-Efficacy	DESSA
Leadership Nominations	0.718**	-.011	.197**
Self-Efficacy	.047	0.470**	-.016
DESSA	.153*	-.009	0.618**

\* $p < .05$ . \*\* $p < .01$ .

## Figures

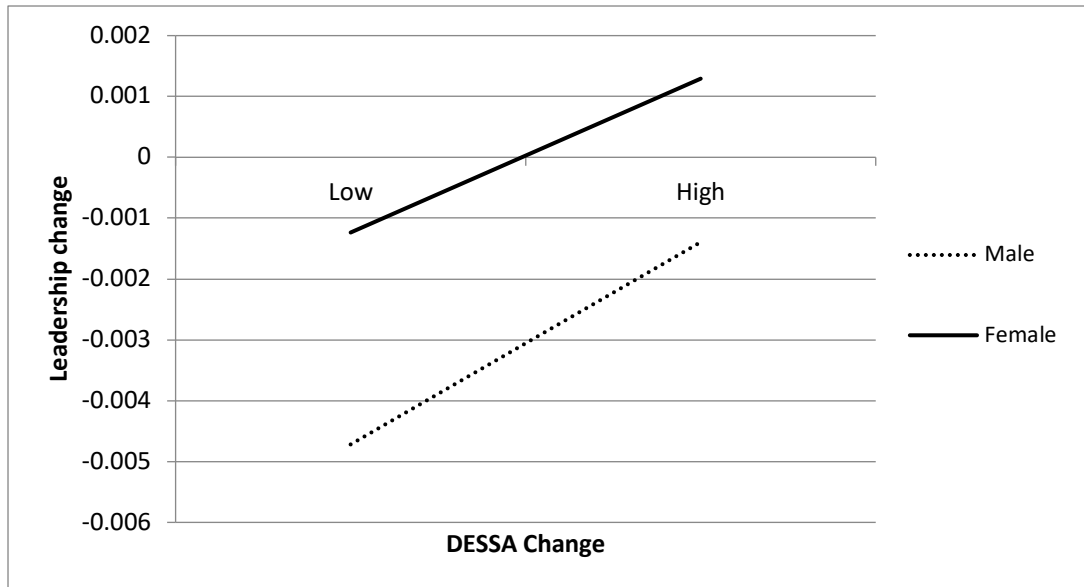


*Figure 1.* The moderating effect of gender on the relationship between SEL and leadership for Fall 2015. Low DESSA was defined as one SD below the mean while high DESSA was defined as one SD above the mean.

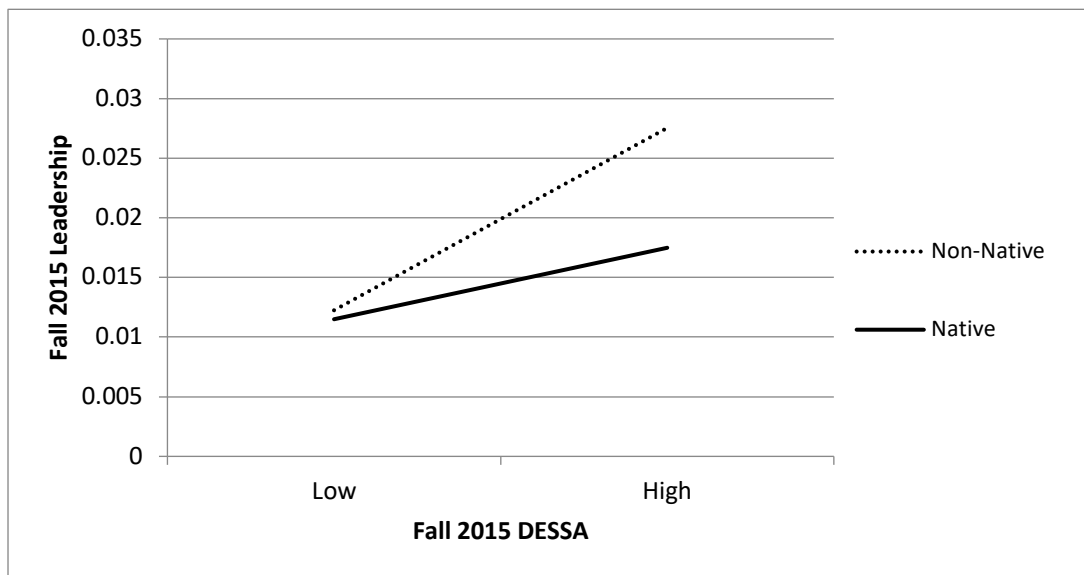


*Figure 2.* The moderating effect of gender on the relationship between SEL and leadership for Spring 2016. Low DESSA was defined as one SD below the mean while high DESSA was defined as one SD above the mean.

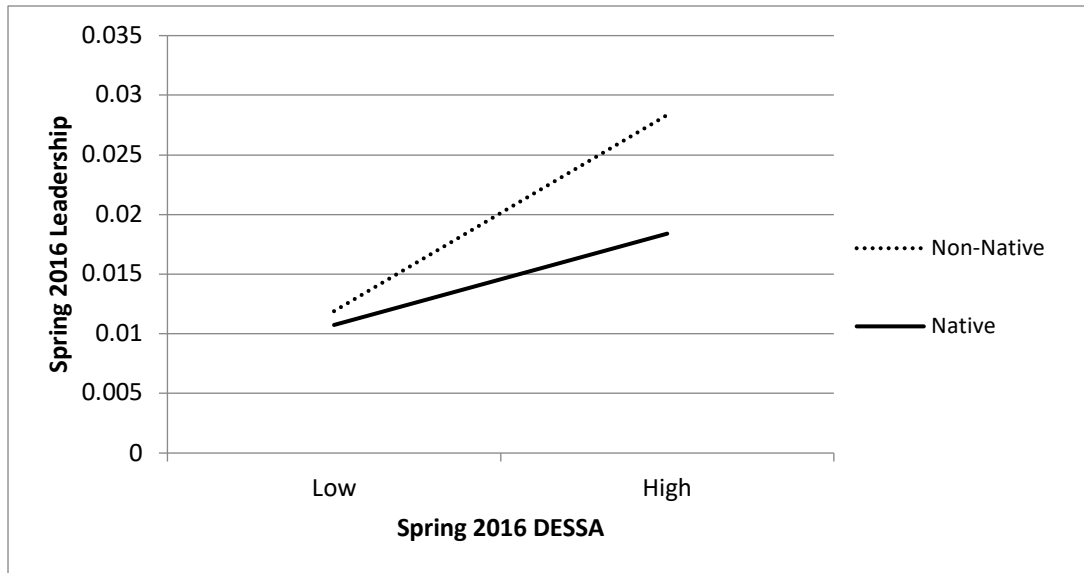




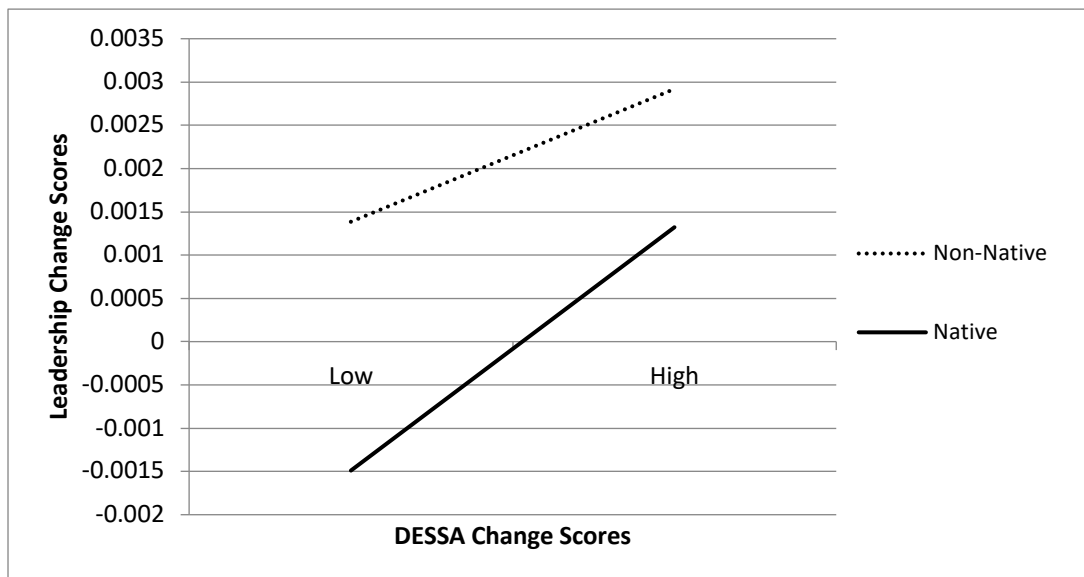
*Figure 3.* The moderating effect of gender on the relationship between SEL and leadership change scores. Low DESSA was defined as one SD below the mean while high DESSA was defined as one SD above the mean.



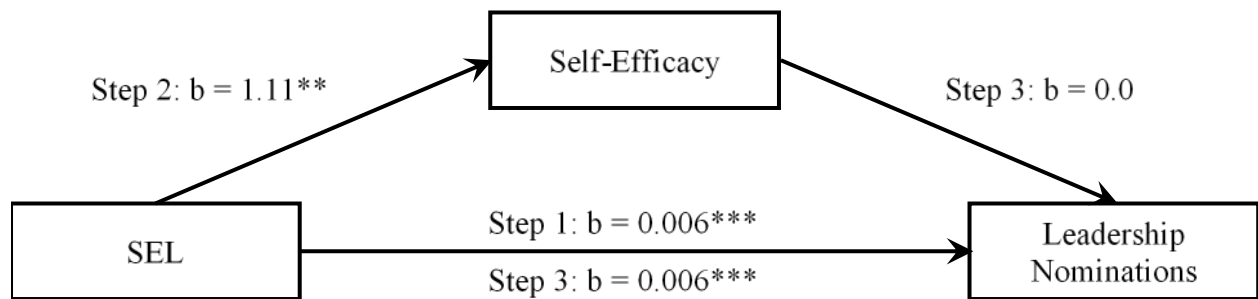
*Figure 4.* The moderating effect of language on the relationship between SEL and leadership for Fall 2015. Low DESSA was defined as one SD below the mean while high DESSA was defined as one SD above the mean.



*Figure 5.* The moderating effect of language on the relationship between SEL and leadership for Spring 2016. Low DESSA was defined as one SD below the mean while high DESSA was defined as one SD above the mean.

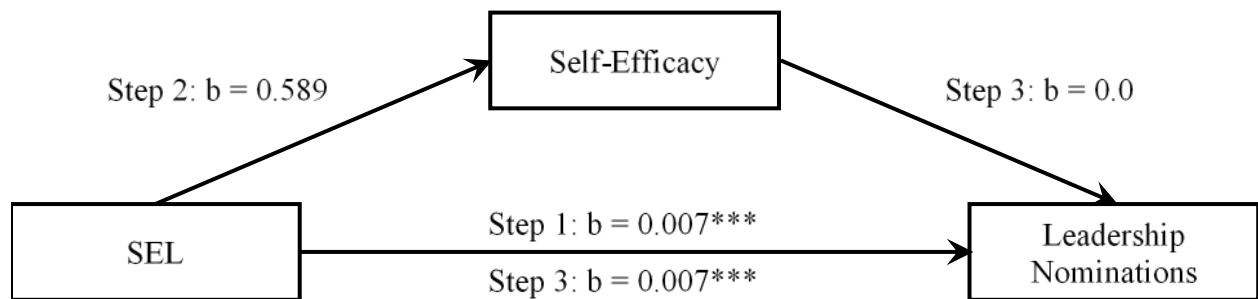


*Figure 6.* The moderating effect of language on the relationship between SEL and leadership change scores. Low DESSA was defined as one SD below the mean while high DESSA was defined as one SD above the mean.



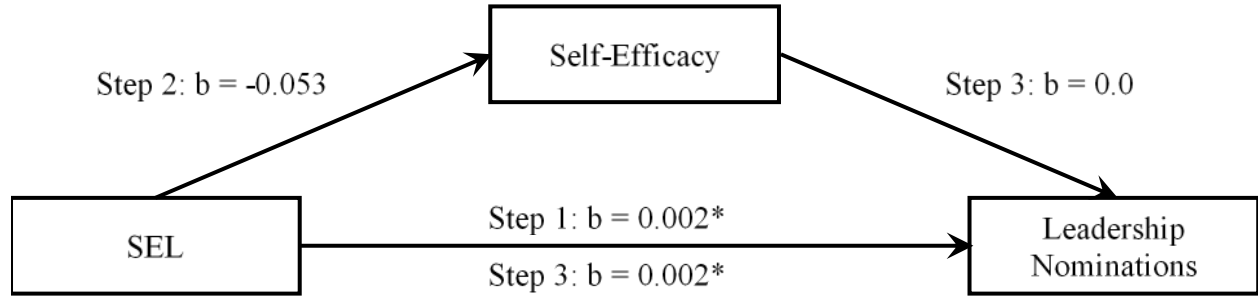
$^{**}p < .01$ .  $^{***}p < .001$ .

Figure 7. Standardized regression coefficients for the relationship between Fall 2015 SEL and Fall 2015 leadership nominations was not mediated by Fall 2015 self-efficacy



$^{***}p < .001$ .

Figure 8. Standardized regression coefficients for the relationship between Spring 2016 SEL and Spring 2016 leadership nominations was not mediated by Spring 2016 self-efficacy



\* $p < .05$ .

*Figure 9.* Standardized regression coefficients showing that the relationship between Fall 2015 to Spring 2016 SEL residualized difference scores and Fall 2015 to Spring 2016 leadership residualized difference scores was not mediated by the Fall 2015 to Spring 2016 self-efficacy residualized difference scores

### **List of Appendixes**

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## Appendix A.

## Appendix A

# MOSAIC Virtues & Skills

## Positive Purpose

### Supporting Virtues

- 1) Constructive Creativity
- 2) Helpful Generosity
- 3) Optimistic Future-Mindedness
- 4) Responsible Diligence
- 5) Compassionate Forgiveness and Gratitude

### Supporting Skills

- 1) Emotional Regulation
- 2) Communication
- 3) Empathy
- 4) Social Problem Solving

## MOSAIC VIRTUES & SKILLS BY MONTH

MONTH	THEME	VIRTUE	SKILLS
<b>September</b>	<i>Why are we here: Finding Our Positive Purpose</i>	Introduction to Positive Purpose	Communication & Social Problem Solving
<b>October</b>	<i>What Kind of Person Do I Want to Be?</i>	Virtue Identification	Skill Identification
<b>November</b>	<i>Making Ourselves, School, and World Better</i>	Constructive Creativity	Communication & Social Problem Solving
<b>December</b>	<i>Giving Back to Ourselves, School, and World</i>	Helpful Generosity	Communication & Social Problem Solving
<b>January</b>	<i>Planning for the Future</i>	Optimistic Future-Mindedness	Empathy & Social Problem Solving
<b>February</b>	<i>Showing Resilience and Overcoming Obstacles</i>	Responsible Diligence	Emotion Regulation & Social Problem Solving
<b>March</b>	<i>Appreciating Ourselves, Our School, and the World</i>	Compassionate Gratitude	Communication & Empathy
<b>April</b>	<i>Connecting with Others and Being a Leader</i>	Compassionate Forgiveness	Emotion Regulation & Empathy
<b>May</b>	<i>Looking Forward: Next Steps on the Journey</i>	Positive Purpose	Communication & Social Problem Solving
<b>June</b>	<i>Looking Back: What Have I Accomplished? What Have I Learned?</i>	All Virtues Summary	All Skills Integrated

## Appendix B. Measures

## Measures

*Devereux Student Strengths Assessment-mini, Form A (Naglieri, LeBuffe, & Shapiro, 2009)*

---

**Item**

1. Accept responsibility for what she/he did
  2. Do something nice for somebody?
  3. Speak about positive things?
  4. Pay attention?
  5. Contribute to group efforts?
  6. Perform the steps of a task in order?
  7. Show care when doing a project or schoolwork?
  8. Follow the advice of a trusted adult?
- 

*Note.* Teachers rate the frequency with which they observed the student carry out specific positive behaviors on a 5-point scale. Ratings ranged from 0 (*never*) to 4 (*very frequently*). The DESSA-mini has an internal reliability of  $\alpha = .912$ .

*Youth Leadership Survey Questions*

Variable Name	Question
Good Leader (School)	Who, in your whole school, do you think is a good leader?
Community Better (School)	Who, in your whole school, wants to make your school and community better?
Compassionate (School)	Who, in your whole school, is compassionate and shows concern for others?
Communication (School)	Who, in your whole school, communicates well with others?
Problem Solving (School)	Who, in your whole school, is helpful in solving a problem or getting something important done?
Forgiveness (School)	Who, in your whole school, forgives others easily and does not hold grudges?

---

*Note.* This measure was created by the SECD Lab.



*The General Self-Efficacy Scale (GSE; Jerusalem & Schwarzer, 1992)*

**Item**

---

1. I can always manage to solve difficult problems if I try hard enough.
  2. If someone opposes me, I can find the means and ways to get what I want.
  3. It is easy for me to stick to my aims and accomplish my goals.
  4. I am confident that I could deal efficiently with unexpected events.
  5. Thanks to my resourcefulness, I know how to handle unforeseen situations.
  6. I can solve most problems if I invest the necessary effort.
  7. I can remain calm when facing difficulties because I can rely on my coping abilities.
  8. When I am confronted with a problem, I can usually find several solutions.
  9. If I am in trouble, I can usually think of a solution.
  10. I can usually handle whatever comes my way.
- 

*Note.* The total score is calculated by computing the sum of the all items. For the GSE, the total score ranges between 10 and 40, with a higher score indicating more self-efficacy.