

## IMPACTING YOUTH LEADER SELF-EFFICACY

### Abstract

Leader self-efficacy (LSE) is associated with leader emergence and effectiveness, and is a strong predictor of both individual and group performance. While some research exists related to the connection between LSE and adult leadership, more studies are required to better understand the details surrounding LSE as it relates to adolescents. This mixed methods study examines the effects of a leadership development intervention on LSE in an eighth-grade student population. Results indicate strong support for the effectiveness of the intervention and its potential to increase youth LSE. This finding holds significant implications for educational practice, research, and the future of leadership development.

### Impacting Youth Leader Self-Efficacy

Although investment in leadership development for adults and college students has been extensive, research on youth leader development is still in its infancy (Murphy & Johnson, 2011). Leader development for youth provides an opportunity to expand the leadership pipeline of potential future leaders by making leader development accessible to earlier ages (Van Velsor & Wright, 2012, p. 1). Among other outcomes, leader development can increase civic engagement, leadership skills, multicultural awareness, assertiveness and confidence in opinions, personal and societal values, and understanding of group dynamics (Zimmerman-Oster & Burkhardt, 1999; Reichard et al., 2011). By using specific leader development training to focus on key constructs during sensitive periods in youth development, educators can increase students' beliefs, willingness, and capacity to lead, thus increasing the pipeline of

available leaders to the workplace and society.

Our research expands the current collective understanding of youth leader development by focusing specifically on the factors that influence youth leader self-efficacy. It is necessary, at this time, to operationally define leader self-efficacy (LSE) as a modified version of Bandura's (1986) definition of self-efficacy: "a leader's judgments of their capabilities to organize and execute courses of action required to attain designated types of leadership outcomes" (p. 391). In this study, eighth-grade students underwent pre- and post-intervention assessments to measure their LSE following a school-based leadership development program, which served as the intervention for our study. An open-ended survey further assessed participants' perceptions of their own leadership abilities following the intervention. Quantitative and qualitative results suggest that participation in leadership instruction positively

impacts LSE in eighth-grade students. Eighth graders were selected to participate in our study because adolescence represents a significant time of growth, and impacting youth leader self-efficacy at an early stage has implications for high school leadership and beyond (Avolio & Vogelgesang, 2012). Moving forward with an understanding of the importance of youth leader self-efficacy, our research sought to advance both the established knowledge and potential future research in the field of youth leader development.

## Literature Review

Historically, leadership development initiatives have focused primarily on adults via business- and career-focused programs and interventions. More recently, universities have started allocating more resources toward leadership development programs in order to better prepare their graduates for life after college (Diallo & Gerhardt, 2017). Kuhn and Wienberger (2005) discussed leadership as a desirable workplace skill, college admissions offices' increased focus on applicants' leadership roles, and evidence linking high school leadership with increased adult earning potential. Additionally, there is a growing call to incorporate more youth leaders into decision making and authority-driven processes that could benefit from diversity of perspective (Mortensen et al., 2014; MacNeil, 2006). However, explicit school-based programs that aim to shape primary and secondary students into effective leaders remain the exception rather than the rule. More than a decade ago, Heath (2005) explained, "there appears to be a lack of research to indicate how such organizations can best direct their efforts to be most effective in their work with students" (p. 2); there is a significant lack of relevant and empirically researched school-based leadership programs. Therefore, it behooves schools to focus on key constructs which can affect the leader development and ability of students.

## Developmental Considerations

In contrast to the peer-reviewed research on youth leadership development, literature regarding youth and adolescent development is extremely prevalent, yet less so when linked to leader development. Murphy and Johnson (2011) argued that the younger years in life are a sensitive period of development during which skills can be more easily and quickly developed. The concept is based on the work of Bornstein (1989) who postulated that sensitive periods have the potential to exert a distinct influence over future history.

Adolescence is a unique growth period characterized by complex mental, physical, and social change which may offer unique opportunity to influence leader development (Murphy, 2011; van Linden & Fertman, 1998). The adolescent developmental stage can include higher levels of risk-taking, but also offers opportunities for positive transformations (Curran & Wexler, 2017). In particular, the development of self-conceptions is heavily linked with the transition from childhood to adolescence as youth create more sophisticated views of themselves which may differ across contexts (Steinberg & Morris, 2001). Scholars have called for researchers to further explore early developmental periods in youth as precursors for influencing future leadership potential, and as well as the educational processes that impact leader development (Brungardt, 1997; Matthews, 2004; Murphy & Johnson, 2011; Whitehead, 2009). While schools have vast traditions of instructing, developing, and preparing students for life, student leader development is, historically, a more underdeveloped tradition within schools in terms of the amount of programs that exist and the consistency across those programs. However, youth leadership development has garnered more explicit and deliberate attention in recent years.

## Leader Development in Schools

Leader and leadership development within schools

can be traced back several centuries.

Early models of prefecture existed at Eton College, a secondary school in England, wherein a select group of students were given limited authority over other students to help govern the school (Curtis & Boulwood, 1964). Contrastingly, Summerhill School, a small elementary and secondary school in England founded in 1921, sought to democratize the educational process by including all children in the leadership of the school. Varying forms of the democratic model of leadership are now advocated by other schools who seek to engage children in the governance and processes of change within the school (Lilley, 2010). It is important to note that while the history of leader development in schools is limited primarily to positional leadership contexts, our study seeks to highlight the need for a wider breadth of cross-contextual leadership opportunities for students. With opposing traditions of student leadership opportunity models to draw on, new leadership development programs are emerging around the country (Rehm, 2014). In order to be effective in preparing students for current and future leadership roles, merely providing the leadership opportunities without explicit instruction falls short of ideal implementation goals (Lilley, 2010). Intentionality of the desired attitudes, beliefs, and skills is essential for leader development programs to achieve desired outcomes. Several models exist to inform the intentional design of such programs.

#### Leader Development Models Pertinent to Youth and Youth Development

Literature, curricula, and program models often use the terms “youth development” and “youth leadership” interchangeably, although youth development is a larger field encompassing youth leadership and is characterized by equipping young people to successfully meet challenges (Edelman et al., 2004). This interchanging of terms creates confusion because leadership development is thus often conflated with entirely positive developmental experiences for youth, with less focus on the potential of programs designed specifically for increasing the

leadership potential at an early age (Kress, 2006). Despite the widespread ambiguity, several models are applicable to the study of youth and the effects of programmatic intervention on leader development.

#### Early Models

At the turn of the century, leadership training designers had not yet started to focus on leadership self-efficacy as a construct (McCormick, 2001). Since then, however, several researchers have started incorporating the concept into their work. Redmond (2013) and Seemiller (2018) created general youth leadership development models which, albeit through varying terms, highlight the importance of LSE through the larger category of “confidence.” Similarly, Ricketts and Rudd (2002) and van Linden and Fertman (1998) used the term “awareness” as a broader category in which to discuss the concept of LSE without directly addressing the construct by name.

However, while the preceding four models of youth leader development did not explicitly address LSE, the following three models offer specific lenses and context for understanding the influences of leadership; the following models are relatively recent contributions to the field of leadership studies and explore both youth leader development and leader self-efficacy directly: Komives, Longenecker, Owen, Mainella and Osteen’s (2006) “Leadership Identity Development Model;” Murphy and Johnson’s (2011) “Life Span Approach to Leader Development;” and Rehm’s (2014) “Practitioners’ Model for High School Student Leadership Development.” Therefore, we further examined each model relative to its contribution towards understanding LSE within youth leader development:

#### Leadership Identity Development Model

In a grounded theory study (Komives et al., 2005) and the subsequent leadership identity development (LID) model (Komives et al., 2006), the authors described a process through which college students pass through six stages in each of five categories to develop a leadership identity. The six stages of development

were awareness, exploration/engagement, leader identified, leadership differentiated, generativity, and integration/synthesis. The stages occurred across the categories of developmental influences, developing self, group influences, students' changing view of self with others, and students' broadening view of leadership. Komives et al. (2006) theorized that a critical component of developing a confident leadership identity is linking self-awareness with deliberate efforts to build self-efficacy for leadership. To help increase student self-awareness and self-efficacy, Komives et al. recommended assessment, advisors/mentors, and utilizing the entire group in dialogue, along with many specific stage-based recommendations to help students transition and grow a leadership identity. Day, Harrison, and Halpin (2009) argued that identity development spirals and develops over time. By examining the effectiveness of leadership interventions in promoting leader self-efficacy, our study contributed to the understanding of the potential development of the LSE construct in youth.

#### Life Span Approach to Leader Development Model

Murphy and Johnson (2011) also drew attention to the interaction of self-efficacy and leader identity and its impact on leader development. The "Life Span Approach to Leader Development" model (Murphy & Johnson, 2011) emphasized both sensitive periods in leader development and leader development as a self-reinforcing process. Likening the self-reinforcing concept to the snowball effect, Murphy and Johnson postulated that experiencing leader development at an early age could have a profound impact on future leader development. Murphy and Johnson (2011) called upon researchers to further explore the "Life Span Approach to Leader Development" model by seeking which developmental influences hold the potential to impact identity and efficacy. Our research was a response to Murphy and Johnson's call. By further exploring the ability of school programs to shape LSE in all youth, we can learn more about educators' ability to influence the self-reinforcing concept at an early age.

#### Practitioners' Model for High School Student Leadership Development

Similarly, in the "Practitioners' Model for High School Student Leadership Development" (Rehm, 2014), LSE was a key component of developing youth leadership capacity. Rehm advocated for schools to focus on LSE beyond the standard curriculum by using youth leadership narratives pertinent to the age span being addressed. Our study sought to ascertain if student LSE can be advanced through school interventions, consequently offering a more thorough understanding of how educators can utilize techniques to develop this in all students. The following sections explore the construct of leader self-efficacy and the relationship to leadership.

#### Leader Efficacy vs. Leadership Efficacy

While some researchers differentiated between leader and leadership when referring to efficacy or self-efficacy, others use the terms interchangeably (for example see McCormick et al., 2002). Although both concepts have been abbreviated as LSE, leader development has more recently been parsed as a focus on the individual; leadership development, conversely, focuses on collective forces both beyond and including the leader (Day, 2001). Hannah, Avolio, Luthans, and Harms (2008) extended a clear distinction between the use of the words leader and leadership and suggest, "there is potentially great value in building a more comprehensive understanding of the contribution of leader efficacy in building collective leadership efficacy" (Hannah et al., 2008, p. 670). They viewed leader efficacy as belonging to the individual, while leadership efficacy was the dynamic interplay of a broader system comprised of three parts: the leader, the follower(s), and collective efficacies. In this way, leader efficacy (or, an individual's potential to lead) influences leadership efficacy (the collective potential of the group and all three parts of the broader system). It can be deduced then, that given the difference between leader (belonging to the individual) efficacy and leadership (belonging to the group or system) efficacy, there is an important distinction to draw

between self-efficacy and the broader concept of efficacy itself.

### Efficacy vs. Self-Efficacy

While efficacy is defined as the power to produce an effect (Merriam-Webster, n.d.), self-efficacy is a concept referring to a category of beliefs about a human's individual ability to affect various situations in life (Bandura, 1982). In education, self-efficacy is shaped by past experiences, persuasion from others, vicarious experience, and physiological responses (Greene, 2017). In an effort to differentiate self-efficacy (belief in one's self) and generalized efficacy, Hannah et al. (2008) theorized that generalized leader efficacy is comprised of multiple internal and external components including a leader's thoughts, actions, self-motivations, and means. Hannah et al. (2008) drew on the work of Eden (2001) and elaborated: "One's internal resources include perceptions of such things as knowledge, experience, skills, and endurance, which we have referred to above as constituting self-efficacy" (Hannah et al., 2008, p. 677). While thought, action, and self-motivation comprise leader self-efficacy,

means efficacy consists of external resources such as "implements (e.g., equipment and computers), other persons (e.g., coworkers, followers, and supervisors), or bureaucratic means for accomplishing work (e.g., procedures and processes)" (Hannah et al., 2008, p. 677).

Multiple sources have made efforts to define, measure, and further isolate the differences between self-efficacy and generalized efficacy, including but not limited to Hannah, Avolio, Walumbwa, and Chan (2012)'s multidimensional measure of Leader Self and Means Efficacy (LSME) and Murphy and Johnson (2016)'s leader self-efficacy (LSE) and leader development efficacy (LDE) models. Our study focuses primarily on self-efficacy because our subjects, eighth-grade students, typically have significantly less access and exposure to external resources (means) compared to their adult counterparts.

### Leader Self-Efficacy

In summary of the prior sections, the terms related to the current understanding of leader self-efficacy are compiled in Table 1.

Table 1.  
Terms Related to Current Understanding of Leader Self-Efficacy.

Term	Definition
Efficacy	The power to produce an effect
Self-efficacy	Beliefs about a human's individual ability to affect various situations in life
Leadership efficacy	The collective leadership potential of the leader, the follower(s), and collectiv efficacies
Leader efficacy	A leader's power to product an effect which is comprised of multiple internal and external components including a leader's thoughts, actions, self- motivations, and means. The internal components relate to leader self- efficacy and the efficacy of means does not.
Leader self-efficacy	A leader's judgments of their capabilities to organize and execute courses of action required to attain designated types of leadership outcomes

As mentioned in the introduction section of this paper, leader self-efficacy is defined as a modified version of Bandura's (1986) definition of self-efficacy: "a leader's judgments of their capabilities to organize and execute courses of action required to attain designated types of leadership outcomes" (p. 391). In our work, leader self-efficacy was used exclusively to refer to the construct being measured in this

study, however, other research used alternate terms (e.g. leadership self-efficacy) to describe the same concept.

Hannah et al. (2008)'s review of leader efficacy literature resulted in the observation that "although leader self-efficacy (LSE) has only become a focus of empirical research very recently, there is growing evidence demonstrating its capacity to predict

relevant work outcomes" (p 674). While general self-efficacy could be linked to positive leadership outcomes (Fitzgerald & Schutte, 2010), LSE was specifically linked to both leader effectiveness (Ali et al., 2018) and the improved performance of individual leaders and groups (Chemers et al., 2000; Hannah et al., 2008; Anderson et al., 2008; Paglis, 2010). Additionally, LSE served as an antecedent to a person's motivation to lead and was also associated with higher levels of leader emergence (Chan & Drasgow, 2001; Key-Roberts et al., 2012; Hannah et al., 2008; Steele & Day, 2018).

Therefore, as a positive corollary to both leader emergence, individual performance, and group performance, LSE is a desired construct to develop in youth. This study extrapolated the existing adult LSE research to youth and tested whether this construct can be influenced at this early age. Research involving college students indicated that it was possible to increase LSE through leader development experiences on students with initially lower LSE (McCormick & Tanguma, 2007), but this has not yet been explored in younger ages. Additionally, Machida-Kosuga (2017) theorized that during the development of leadership competencies, a moderately lower level of initial leader self-efficacy followed by an increase during the learning process would be desirable.

#### Conclusion of Literature Review

Drawing on the models designed particularly for youth leader development, we focused on leader self-efficacy because of its impact on leader emergence, leadership outcomes, and the developmentally sensitive nature of this life period. Since research on leader self-efficacy and leader development in schools is still not extensively researched, our study contributes a new perspective to the field by examining the impact of interventions on students' LSE in school age youth. Our work capitalizes on the opportunity to develop student LSE because students' efficacy development occurs during the periods of sensitive growth. Our research examined the impact of previous initiatives to enhance LSE and provided a basis for understanding to what extent youth LSE can

be improved through leadership interventions.

## Methods

A mixed methods approach was utilized to provide a robust perspective to potential changes in LSE for all eighth graders within a private school who were exposed to leadership development interventions. The overall guiding research question for the mixed methods sought to establish whether eighth grade students' participation in leadership instruction through the school's program would impact student leader self-efficacy.

In this study, eighth-grade students underwent pre- and post-intervention assessments to measure their LSE following a school-based leadership development program, which served as the intervention for our study. An open-ended survey further assessed participants' perception of their own leadership abilities following the intervention. A self-reported survey was used to assess participants' experiences and leadership perceptions because of the needs and restraints in the school-based leadership program; this study included activities that were feasible to administer within the confines of the standard curriculum and did not add activities such as staged behavioral observations because they would not have been appropriate to conduct in the context of program delivery. Quantitative and qualitative results suggest that participation in leadership instruction positively impacts LSE in eighth-grade students. Eighth graders were chosen for our work because adolescence represents a significant time of growth, and impacting youth leader self-efficacy at an early stage has implications for high school leadership and beyond (Avolio & Vogelgesang, 2012).

#### Participants and Data Collection

##### CCL and School Partnership

Our work emerged from a partnership between a private school in North Carolina and the Center for Creative Leadership (CCL). The school serves students in transitional kindergarten through twelfth

grade. Approximately 1,400 students are enrolled each school year. functions as an independent, coeducational, non-sectarian, college-preparatory day school. Officials from the school approached the CCL for assistance in order to identify ways to infuse leadership development into different aspects of their programming. While the scope of the entire project between CCL and the school extends well beyond our study, this research refers specifically to the examination of the eighth-grade class, the pilot leadership intervention program, and the impact of the intervention on youth LSE. The duration of the pilot program took place throughout the course of the 2016-2017 school year; all eighth grade students from our study participated in the entirety of the pilot program.

### Participants

Participants in the pilot study consisted of 120 eighth grade students who were surveyed both in Fall 2016 (pre-intervention) and Spring 2017 (post-intervention). Students without parental permission were excluded from the analysis as well as any students with missing fall or spring surveys.

### Test Items

Both quantitative and qualitative items were contained in both surveys and thus were collected simultaneously. The pre-test and post-test examined the effect of the pilot programs on the student's LSE.

### Eighth Grade Program Intervention

The Eighth Grade Leadership Development Program consisted of a leadership rotation built into the Physical Education class time and curriculum. Content for the initiative was created by the school as an extension of pre-existing experiential learning programs. The goal of this leadership rotation was to create opportunities for the eighth graders to practice and discuss leadership and thus build student capacity for leadership. Student instructional opportunities included structured discussions, challenge tasks, and project based learning activities.

Students were divided by gender and alphabetically

by last name into groups of approximately 20 students. The student leadership development rotation took place in both the fall and spring during a 45-minute P.E. class and lasted 13 consecutive school days each semester. The groups participated at different intervals throughout each semester so that all students could have the same instructors. Each eighth grade student totaled 26 days and approximately 19.5 instructional hours devoted to leadership development over the course of the year.

The leadership development initiative was primarily group and project based in both the fall and spring. In the fall, teachers led the students through leadership team-building exercises, ice breakers, goal-setting sessions, and a multiday group project to construct a stable wooden fort structure. In the spring, teachers led students through team-building exercises, survival simulation exercises, and a multiday group project to build an egg drop container. The projects, as well as other activities conducted during the instructional time, focused on hands-on leadership experiences with opportunities for discussion and reflection.

Outcomes for this program focused on the students' leadership development through the following areas: group dynamics, student perceptions of their individual leadership ability, student perceptions of the ability of others to lead, and an understanding of leadership related actions. Furthermore, the instructors stated three additional desired student outcomes: positive teamwork, an understanding that leadership is not necessarily positional, and an understanding of the potential to lead in all students.

### Research Design

The overall research design for this mixed methods study followed a convergent parallel approach that emphasized concurrent data collection (Creswell, 2015). Both quantitative and qualitative data were collected from participants in order to provide well-rounded perspectives on participants' LSE development. Multiple forms of data collection allowed for more thorough insight and viewpoints

on the effects of the intervention from the students. An initial emphasis on quantitative data followed by an exploration of the qualitative data was utilized in order to more robustly explain the statistical findings and make recommendations for the future. This mixed method approach allowed the individuals' words found in the qualitative data to explain trends found in the quantitative data (Creswell, 2015). Concurrent data collection allowed the benefit of close analysis and fastidious comparison of quantitative and qualitative data. Confidentiality and privacy of participants was upheld through anonymous survey data collection.

#### Quantitative

The quantitative portion of this study used the dependent variable of a weighted average scale of a Youth Leader Self-Efficacy Score measured at two time points: one immediately before the start of the leadership development program and a second immediately after the conclusion of the leadership development program. This instrument was designed during a previous, separate study and successfully measured leadership self-efficacy in an eighth-grade population in 2019 (Rehm & Selznick, 2019). Researchers selected this instrument to measure data because it was a leadership scale specifically designed for an eighth grade population. This youth LSE scale has been shown to discriminate changes in this construct among adolescents and is originally based on LSE measures used with adults. The scale was also shown to be reliable (five items;  $\alpha = .818$ ) (Rehm & Selznick, 2019). The data we collected provided researchers with insight related to relationships and general trends within participant

responses, which offered the opportunity for generalization and precision, while qualitative data provided personal statements and deeper meaning as to the individual perspectives of the participants (Creswell, 2015). Quantitative data was analyzed using descriptive statistics and a paired-samples t-test through SPSS. This process allowed researchers to easily compare the means between the eighth grade participant group pre- and post-intervention.

#### Qualitative

The qualitative portion of this study investigated whether the eighth grade students' perception of leadership—and specifically students' personal connection to their ability to be a leader—changed after participating in the leadership development program. Participants recorded their experiences through open-ended response survey questions taken at both pre- and post-intervention. Qualitative data was analyzed through a combination of a priori and emergent coding in Dedoose.

### Results

The data analysis was conducted in three stages. The first stage examined the differences in LSE scores before and after the leadership development intervention through a paired samples t-test. The second stage analyzed the open-ended question responses. The final stage merged the results from the prior two stages. Table 2 compares the findings of both the quantitative and qualitative data and demonstrates how the qualitative data supports the quantitative findings.

Table 2.

Integration of Quantitative and Qualitative Results.

Quantitative Results	Qualitative Results Explaining Quantitative Results	How Qualitative Findings Helped Explain Quantitative Results
Eighth grade students scored statically significantly higher on the five-item weighted youth LSE measure after participation in the leadership development program	67.5% of responding students reported a positive change in thinking or actions as a result of the intervention, and 57.1% of these students made an unsolicited reference to a positive impact on LSE	Qualitative findings support the quantitative results that students' personal connection to their ability to be a leader was impacted as a result of the intervention, specifically as students cite the intervention as the source of positive impact

## Quantitative Results of Paired Samples T-Test

A five-item weighted measure youth scale was created and utilized to examine changes in the eighth grade LSE before and after the intervention (see Rehm & Selznick, 2019). Students recorded their responses to the following items using a Likert-type scale, which ranged from 1-5 (with 5 being strongest agreement) on the following questions which comprised the scale:

- I believe I have the ability to be a leader.
- I know how to be a leader.
- I see myself as a leader.
- I know how I can help make my world a better place.
- I can help others work hard on a task.

While some prompts (i.e., 2, 3, and 5) have the potential to measure cognitive understanding of leadership, they also measure self-efficacy. Students who feel they understand how to accomplish tasks (e.g., be a leader, help others) and who can easily see achieving those tasks (e.g., as a leader) are more likely to adopt a positive, progressive attitude when taking actions to meet those goals (Bandura, 1986).

Two outliers were filtered in the factor analysis process for scale creation (see Rehm & Selznick, 2019), and one additional outlier was discovered upon re-analysis. Inspection of the value did not reveal it to be extreme. Further inspection of the student data for this record did not reveal any abnormalities; therefore, we decided to retain this

outlier. Additionally, the assumption of normality was not violated, as judged by Shapiro-Wilk's test,  $p = .370$ . A paired samples t-test was then used to determine whether there was a statistically significant difference between the mean score of the five-item weighted youth LSE scale score before and after the leadership development intervention.

A weighted sum score was utilized that reflected the loadings of the factor items (see Rehm & Selznick, 2019). The results from the paired samples t-test showed that the mean difference was statistically significantly different from zero. The school's eighth grade students scored higher on the five-item weighted youth LSE measure after participation in the six-month leadership development program ( $M = 3.987$ ,  $SD = 0.518$ ) than on the pre-test prior to the program ( $M = 3.881$ ,  $SD = 0.596$ ), a statistically significant increase of 0.106, 95% CI [0.004, 0.209],  $t(79) = 2.059$ ,  $p = .043$ ,  $d = 0.260$ .

## Qualitative Results of Survey Items

### Survey Items

Qualitative survey items were designed to elicit student views of leadership and perceptions of how leadership is enacted within the student's daily school environment (see Table 3). The first two open ended survey items were asked at both baseline and at the end of the school year. An additional question was added for the end of year data collection that sought to elicit student perception of leadership development on thinking and actions.

Table 3.  
Qualitative Interview Questions and Data Collection Timing

Question	Data Collection Timing
What is a leader?	Baseline and End of Year
What does leadership look like in your grade?	Baseline and End of Year
How has participating in Leadership Development in PE made you think or act differently this year?	End of Year

Analyzing this information in conjunction with the quantitative items provided insight on both real and perceived changes. It was important to include questions that addressed potential changes in perception as well as questions that addressed changes in efficacy. For example, the first question that asked students to explain their definition of a leader specifically focuses on student perception to understand the comprehension and overall connection of the participant. Just as efficacy itself is a perception, the participants' overall grasp of the concept of leadership is reflected in their perception of the construct. It was essential to understand the ways in which participants conceptualized leadership in order to qualify the change of their perception of leader efficacy. Initially, both sets of questions were examined by grade appropriate educators. Responses were kept anonymous so that teachers or other school staff could not comment on or otherwise alter student responses. Additionally, our research team contained former teachers and administrators in independent schools with experience working with eighth grade populations.

### Response Analysis

Qualitative analysis of the open-ended questions was conducted using Dedoose software with a blended design of both a priori and emergent coding. Comparisons were made of the two question sets that were surveyed both at baseline and end of year: "What is a leader?" and "What does leadership look like in your grade?" Separate analysis was conducted of the question asked only at end of year: "How has participating in Leadership Development in PE made you think or act differently this year?"

### Coding Process

Initial a priori codes were developed based on categories from the final quantitative questions forming the weighted LSE scale. The initial codes were then combined with potentially applicable codes from prior qualitative work conducted by a CCL research team in related work with youth.

Throughout subsequent rounds of coding, emergent coding revised and modified the categories to better fit the themes found in the student responses. Overall, the emergent themes provided further categorization as compared to the a priori themes. The category structure remained intact but the category names changed slightly to better reflect the embedded themes. Similarly, a priori codes received further definition or child codes to parse out differences. An example of this includes the "Processes and Actions" code which received the child-codes of "Steps Up," "Task Decision Making," and "Outcome Oriented." Five rounds of coding were conducted by one team member for internal consistency and clarity.

### Coding Results

Analysis of the results after five rounds of coding provided additional insights on the findings of the quantitative data. Within the expanded explanations which provided further clarity to the codes, the themes agreed with the a priori understanding with the exception of the unexpectedly high "Steps Up" code. Defined through language referencing "takes charge, takes responsibility, takes control, speaking up" or similar concepts, this code was present in approximately half of all responses, although less at end of year compared to baseline. Student responses in the category suggested that a large component of leadership as perceived by this population involves assertion of viewpoint or in behavior. This was not necessarily perceived negatively by the students, and this response was not anticipated in the a priori codes. Although overall the pre-test and post-test questions did not provide conclusive insights to answer the research question (see Limitations section), the question featured exclusively at the end of the year, "How has participating in Leadership Development in PE made you think or act differently this year?" was much more illuminating and aligned with items from the quantitative measure. Table 4 compares the quantitative scale items with key qualitative themes. The key qualitative themes emerged from

the end of year question relating to the impact of the leadership development program on students thoughts and actions and were discussed by at least five students who responded to this question.

Table 4.  
Comparison of Quantitative Items and Key Qualitative Themes.

Quantitative Items	Potential Commonality	Key Qualitative Themes
I believe I have the ability to be a leader. I know how to be a leader. I see myself as a leader.	Personal Leadership Beliefs	I am a leader
I know how I can help make my world a better place.	Direction Oriented Action	Processes and Actions: Stepping Up to Leadership and Making the Right Task Decisions
I can help others work hard on a task.	Working with Others	Helping/Caring for others Collaboration Listening

Note. Key Qualitative Themes were expressed by five or more participants in response to the EOY question asking how participating in the Leadership Development program led to different thinking or action.

Almost all, 96.4%, of the respondents for this question had responses which were coded in the category of intervention impact with 67.5% reporting a positive change (e.g. "I've become more of a leader") and 28.9% reporting no change (e.g. "It has done nothing for me but it's fun") in thinking or actions as a result of the intervention. Additionally, 38.6% noted some form of change in leader self-efficacy in response to the intervention impact without this topic being specifically elicited. Three representative examples of this are: "It changed my definition of leadership and taught me that everyone can be a leader;" "It showed me my inner self. And in a difficult situation, I can be a leader;" and, "I realized all the qualities that a leader has and realized that at times I was a leader." Overall, 57.1% of students who answered positively regarding the impact of the leadership development initiative made an unsolicited reference to a positive impact on LSE as defined through the lens of the five-item youth LSE scale.

In response to the leadership development impact assessment question, participants most frequently

(31.3%) cited an increase in understanding of "Working with Others." An example of this read: "It made me think about others feelings before my own. I try to get to know others better and try to help them as much as possible." Within the category of working with others, "Collaboration" was the most frequent code, with 21.7% of overall students making a reference to collaboration in some form. Student responses that elaborated on their gained understanding of collaboration encompassed ideas about being inclusive, having influence or connections with others, collaborative communication with others, awareness of working with and interacting with others, and general references to positive interactions with others. A representative example of this dealt with listening: "Made me actively think about listening to opinions of others because mine is not most important. I try to be a leader and can recognize leaders around me."

Another frequently referenced parent code was "Processes and Actions," with 10.8% of responding students citing increased awareness of related

leadership aspects. The responses encompassed references to many leadership tasks such as delegation, motivating, setting plans, taking charge, takes risks, and related topics. An example of this included "It has taught me to make plans before I act." It is clear from the responses to the leadership development impact question that students increased their belief in their own potentials as leaders.

## Discussion

Both quantitative and qualitative data from this study indicated students witnessed changes in LSE over the course of their eighth-grade year. While the effect size calculated from the paired samples t-test is interpreted as small according to Cohen's  $d = 0.260$  (Sawilowsky, 2009), the mean difference between the baseline and end of year results for the youth five-item LSE scale was significant ( $Mdiff = 0.106$ ). Additionally, while the first two qualitative research questions did not clearly indicate if students' perception of leadership changed significantly, substantial qualitative data from the third open-ended question indicated that the students' personal connection to their ability to be a leader was impacted as a result of the intervention. Overall, the findings from this study suggested that interventions for youth can have an impact on LSE.

The mixed methods design of this study allowed for three main advantages over an entirely quantitative or qualitative study. First, it provided more data to analyze, which was particularly valuable given the smaller number (120) of participants in the study which was subsequently reduced in the data set by permissions, missing data, and outliers to 80 students for the quantitative portion of the study. Second, it provided different perspectives from participants, and thus researchers collected a more comprehensive perspective on the perceived changes in LSE between the survey time points. The quantitative data allowed the examination of general trends, and the qualitative data provided opportunity for individual participant voice. Finally, this approach allowed the qualitative data of the students' voices

to help explain the quantitative data of numbers and thus allowed a more thorough understanding of the trends unearthed. While the two questions asked at both beginning and end of year did not provide conclusive results, the end of year question relating to the intervention impact was extremely supportive of the quantitative results.

This mixed methods approach further probed the impact of the intervention and provided greater clarity in the results. The small effect size of quantitative results was strengthened by the findings in the qualitative data. Qualitative findings supported the quantitative results that many students' personal connection to their ability to be a leader was impacted as a result of the intervention. Most students cited the intervention as the source of the positive impact, and in the majority of these responses, students specifically cited a positive impact on LSE. Creating even a small effect on a large group of students made the impact much greater and underscored the significance of our findings.

When analyzing the complete data as a whole set, there were three categories that could offer explanation of potential commonality between the qualitative and quantitative data. The common categories are personal leadership beliefs, direction-oriented action, and working with others. While theoretical, the categories do align with existing leadership characteristics.

## Conclusion

While varying student leadership models have a storied tradition within schools (Curtis & Boulwood, 1964), research over the past century has advanced the understanding of leader development. The creation of assessments and models at the adult level have increased our understanding of the various facets involved in enhancing leadership capacity. The construct of leader self-efficacy, albeit a relatively recent addition to empirical research, has been linked to leader emergence and performance (Hannah et al., 2008). Current research has studied

LSE in adults, but little has examined its creation in youth. Influencing this construct at an early age could lead to an increased pipeline of available research capacity in both college and the adult world, in addition to helping students obtain successful college admissions and increased earning potential (Kuhn & Wienberger, 2005). Attitudes, beliefs, routines, and actions regarding leadership can be influenced early in the life span with either positive or negative long-term impact. Thus, positively affecting leader self-efficacy in all youth could have long term implications for who will pursue leadership opportunities (Hannah et al., 2008).

### Limitations

#### Limitations on Control

While this study examined a relatively new construct in a previously unstudied population, as demonstrated in Murphy and Johnson's (2011) Life Span Approach to Leader Development model, ultimately there are many factors that influence leader development across all age ranges. Some of the factors are beyond the control of educators, yet may continue to influence leader development (e.g. genetics, gender, parenting, and temperament). Not all factors were covered in this research due to data collection limitations and the accessibility of this information. Similarly, the history of the students, maturation over the course of the year, the clientele of the school with both monetary obligations and

entrance criteria, potentially limit the generalizability of this study.

#### Limitations of Qualitative Data

While the question asked only at the end of the year yielded significant insights in student perceptions of programmatic impact, the two questions asked as both baseline and end of year did not provide clarity. Percentages comparing code count amounts per question to total responses per question were used to chart the amount of change in the number of times the code was recorded. When assessing increases or decreases in percentage comparisons, changes less than plus or minus 1.3 % were not considered whereas 1.3% represented the input of only one individual. The comparison of responses for the question "What does leadership look like in your grade?" had an increase greater than 1.3% in seven codes and a decrease of at least -1.3% in 11 codes. Similarly, the comparison of responses for the question "What is a leader?" had an increase greater than 1.3% for four codes and a decrease of at least -1.3% in 12 codes. Overall, from baseline and end of year, the child code counts for the two questions decreased from 343 to 270, a 21.3% decrease, while the number of respondents decreased by six, a 3.4% decrease. Similarly, character count and word count also decreased suggesting that student response rates were not as thorough at post-test as compared to the beginning of the year (see Table 5).

Table 5.

Total Two Question Counts at Baseline and End of Year.

	BL Total	EOY Total	Percent Change
Character Count	12,532	10,692	-14.7%
Word Count	2,862	2,327	-18.7%
Child Code Count	343	270	-21.3%
Student Responses	177	171	-3.4%

Overall, the mixed results from the two questions asked at both baseline and end of year provided inconclusive evidence to answer the portion of the qualitative research question targeting the eighth-

grade students' perception of leadership.

#### Limitations of the Population

Additionally, differences between the eighth grade

population at a private school and the general eighth grade population at large are unknown. Although students and family situations are varied in all schools, students at this school as a whole have greater financial means than the average eighth grade student in the United States. It is possible socioeconomic status could influence the transfer of the study's findings into alternate contexts.

### Implications

The findings of this study respond to the call for researchers to explore sensitive growth periods in adolescent leadership development, as noted in the Life Span Approach to Leader Development Model (Murphy & Johnson, 2011). In showing the positive effect of the leadership development program on eighth-graders' leadership self-efficacy, we are postulating that this age group may represent a sensitive development period wherein leadership development skill-building is impactful and self-reinforcing. We have reason to believe, based on our findings, that participating in a leadership program such as the one in our study may hold potential to impact students' identities and efficacies as leaders.

This study established that eighth grade students' participation in leadership instruction could impact leader self-efficacy. Quantitative results showed there was a statistically significant difference in the LSE measure among eighth-grade students after participation in the leadership development program. Qualitative data also strongly supported the idea that students felt an increase in their personal connection to their ability to be a leader, and the majority of students felt the leadership development program had a positive impact on either thinking or actions. The quantitative and qualitative data indicated that the leadership development initiative had an impact on the students, particularly on LSE. The small effect size of the quantitative data was strengthened by the qualitative research which together make a powerful case that LSE can be affected by intervention during the eighth-grade year. Additionally, a small change across the population of an entire class reflected the

impactful nature of the limited intervention.

This conclusion has implications for potential educational initiatives. Since our study indicated the possibility to impact LSE at an early age, programs could be tailored towards increasing this construct in youth who might lack high levels of this valuable component of leadership. Specifically, many schools promote leader development as part of educational programming, but often lack research-based methodology and implementation of the underlying empirical constructs. Potential exists for schools to more fully develop and prepare students for leadership roles by seeking to intentionally increase student LSE. One potential benefit of such programs is that they help target a broader student base, including but intentionally not limited to student council, sport captains, prefects, and other elite positions. The results suggested great value in using an inclusive approach to youth leader development beyond self-selected or peer/faculty appointed positions. By including all students in leader development opportunities, schools could democratize the educative access for leadership and thus potentially broaden the representation of leaders within societies. This intentional impact on more students could increase youth beliefs in their ability to lead, helping to increase youth pursuit of leadership opportunities, and hopefully, increasing the pipeline of future leaders in the workplace, civic society, and the social sectors.

Additionally, youth development organizations including after school programs (such as Boys and Girls Club, 4-H, Scouts, etc.) could deliberately seek to increase the LSE of youth participating in programming by intentionally teaching leadership skills to students using well-developed instructional tools, as demonstrated in our study. Interventions impacting LSE are feasible both within and beyond differing academic environments, thus making similar programs accessible to all students through a variety of settings.

Finally, the potential categorical commonality

between the quantitative measure and qualitative findings of Personal Leadership Beliefs, Working with Others, and Direction-Oriented Action could serve as a model and foundation for future leadership curriculum development, training, and research. Schools or organizations could build curricula around the three pillars to help emergent leaders first know themselves before moving forward in leadership and collaboration. Belief or value inventories could lay the groundwork for the first pillar. Interpersonal relations and team-building could serve as the second stage. Finally, goal setting, strategic planning, and similar best practices training could complete the curricular framework. The commonality of the research confirms the thematic threads of intrapersonal and interpersonal learning as well as achievement-based results within leadership development.

and in a broader scale, increase the diversity of leadership represented in the world.

#### Future Research

The results of this research demonstrate the effectiveness of engaging young people earlier in the leadership process, and offer numerous future research possibilities because this area lacks significant empirical emphasis in the field of leadership studies. This current study generates many legitimate questions that require answers in order to further verify and focus future research. One critical question to study is the impact of youth LSE on motivation to lead and the subsequent impact on acceptance of leadership opportunities. This study has demonstrated the effectiveness of intervention during the end of middle school; future longitudinal studies could examine how interventions impact student leadership trajectory through high school and beyond. Other key questions include: Which initiatives are most effective in affecting LSE? Which activities, durations, and ages best develop this construct? What long term impacts do initiatives have on students later in life? By answering similar key questions, future exploration can capitalize on the research of our study. Additionally, by learning how to best affect youth LSE and the long-term impact of related efforts, researchers and educators can hopefully help prepare students for future success

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