HOOD COLLEGE

The Relationship Between Teachers' Perceptions of Their Principal's Authentic Leadership and Their Own Academic Optimism in Title I Elementary Schools

A DISSERTATION

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by

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DOCTORAL COMMITTEE

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DEDICATION

To Teddy:

Finishing my dissertation means I get to spend more time with you.

Now I can better watch you as you laugh, giggle and coo.

You are mommy's and my little joy.

Thank you for being such an amazing little boy.

Also, thanks for staying asleep at night –

Because of you, I was able to write.

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My parents, Jon and Paula Drill, have always modeled what it means to live their lives authentically. My parents are both genuine and authentic in their professions and in their relationships with others. They raised me to have a growth mindset, to be independent, and to be curious. They taught me the importance of living life with kindness, empathy and humor. Their lessons were never explicit and direct; rather, I learned all of this through observing how they

carry themselves in this world. Perhaps this is what initiated my intense passion for authentic leadership.

My ears perked up as I sat in Dr. Bands' Leadership Seminar during the Fall of 2019. She had just introduced authentic leadership and I felt immediately drawn to it. I knew in my bones that I wanted to investigate it deeper. I thought about some of the most influential leaders in my life: (1) Rabbi Craig Scheff, my mother's co-Rabbi, who has always modeled the importance of making decisions congruent with one's values; (2) Elaine Chang, my first principal, who always sought out differing perspectives before making important decisions; and (3) Dr. Sundra Mann, who helped me reflect on my own strengths and weaknesses, and who prepared me and set me on my professional course. My interest and passion for authentic leadership was ignited by my personal, influential leaders and I thank them for lighting the spark.

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The Relationship Between Teachers' Perceptions of Their Principal's Authentic Leadership and Their Own Academic Optimism in Title I Elementary Schools

Noah Drill, DOL

Committee Chair: Jennifer Cuddapah, Ed.D.

ABSTRACT

Academic optimism (AO) is positively correlated for student achievement and is comprised of three constructs: academic emphasis, collective efficacy, and trust in students and parents. In essence, AO is the permeated belief of a teacher that academic achievement is important, that teachers can effectively increase student achievement, and that students and parents are trusted partners in the learning process. As effective principal leadership is vital towards developing and maintaining effective schools and improving student achievement, the development of AO in teachers must be analyzed within the context of leadership. If school principals were to increase the AO of their staff, student achievement would likely increase. In this exploratory study, I examined this relationship through the lens of authentic leadership (AL), an area of research that emphasizes genuine and 'real' leadership. I focused on the interaction between perceptions of principals' leadership behaviors (i.e., AL) and teachers' belief systems, measured through AO. A survey containing valid and reliable measurement scales for AO, AL and four control variables (i.e., gender, race, years of experience, Enabling School Structure) as well as supplemental open-ended prompts was sent through Survey Monkey to all of the 2,124 Title I elementary school teachers in XCPS, a large, diverse public school system in the Mid-Atlantic region. The survey received 245 complete responses that met criterion for inclusion. Using cross-sectional survey data analyzed with hierarchical multiple regression, this study investigated the relationship between teachers' perceptions of their principal's AL and their own AO. I found that after accounting for the control variables, AL was a statistically significant

predictor of AO, collective efficacy, and trust in students and parents, two of AO's three components. Given that AO predicts student achievement, it is notable that principals' AL was positively, moderately correlated with teachers' AO, as AL could thereby also indirectly result in increased student achievement. Additionally, the qualitative data from the open-ended responses suggested that teachers who perceived that their principal demonstrates authentic leadership had higher beliefs in their own ability to successfully teach and for their students to successfully learn. Thus, schools and school systems should consider focusing their leadership development programs and processes around developing authentic leaders. As academic interventions, strategies and processes that are successful in Title I schools tend to generalize well to other schools, comparable results could occur in schools across the nation.

CHAPTER 1: INTRODUCTION

For more than 60 years, education in the United States has been driven by school reforms, initiatives and government mandates to increase student achievement (Gamage et al., 2009; Grissom et al., 2021), defined as the proficiency with which students demonstrate understanding of challenging academic standards (Every Student Succeeds Act, 2015). The emphasis on high-stakes school accountability in educational policies has made student achievement the goal of school improvement efforts (Grissom et al., 2021). Le Floch et al., (2018) describe how many educational research studies, reforms and initiatives focus specifically on schools participating in the Title I, Part A program, commonly referred to as Title I. The Title I program provides federal funding to schools with high percentages of children from families living in poverty, in order to improve their academic achievement (United States Department of Education, 2018). Title I schools have historically had low levels of student achievement in mathematics and literacy (Carver-Thomas & Darling-Hammond, 2017; Reardon, 2011).

With increased accountability and focus on student achievement, educational research (e.g., Bird et al., 2013; Creswell & Guetterman, 2019; Goddard et al., 2018; Leithwood et al., 2008, 2020; Rhodan, 2017) has sought to identify how schools can best improve student achievement. Children's socioeconomic status (SES), outside of a school's control, has historically been thought of as one of the largest determinants of student achievement (Beard et al., 2010; Coleman et al., 1966; Reardon, 2011). Thus, policy makers and scholars in the field of educational research have long sought to identify specific factors, controlled for SES, that directly relate to increased student achievement (Beard et al., 2010; Hoy, Tarter, & Hoy, 2006). Isolating and identifying these specific factors is particularly important for Title I schools (Padilla et al., 2020).

Early prominent researchers, Coleman et al. (1966) and Jensen (1969), concluded that academic achievement was explained by family background and SES, not by the quality of the school, teachers or administrators. Their conclusions would seemingly condemn Title I schools to perpetually low levels of student achievement, regardless of the quality of the administration or the teachers. In the 1970s, for the first time, Weber (1971) and Edmonds (1979) provided evidence that schools have defining characteristics unrelated to SES, such as strong leadership and high expectations, that directly impact student achievement. Weber and Edmonds refuted that academic achievement could only be explained by family background and SES (Hoy et al., 2006), finding that there is a positive relationship between schools with effective administrators and schools with higher levels of student achievement. Indeed, the school administration is one of the most significant factors that impact school effectiveness and academic achievement (Augustine-Shaw, 2015; Gamage et al., 2009; Gentilucci & Muto, 2007).

Although some leadership research studies aim to demonstrate the impact of principals on schools and students (e.g., Leithwood et al., 2004; Mulford & Silins, 2003), the direct effects of principals' leadership on student achievement are weak (Hallinger & Heck, 1996; Wahlstrom & Louis, 2008). Simply put, principals do not teach students; teachers do. At the same time, however, school leadership plays a significant, indirect role in student achievement, second only to the role of actual teachers (Leithwood et al., 2008, 2020). Effective principals' leadership is vital towards developing and maintaining effective schools and improving student achievement (Bandura, 1993; Tschannen-Moran & Barr, 2004). Therefore, as Mascall et al., (2008) write, "the challenge is to identify the indirect path through which leadership influences students; this is a challenge to identify variables that leaders influence and which also influence students" (p. 214).

Hoy et al., (2006) identified three such constructs: (1) academic emphasis; (2) collective efficacy; and (3) trust in students and parents, which have a direct impact on student achievement. Tschannen-Moran (2014) emphasizes that these three variables, which essentially comprise teachers' belief systems about education, are unique in that they are able to explain student achievement regardless of a student's SES. Previous research (e.g., Beard et al., 2010; Forsyth et al., 2011; Smith & Hoy, 2007; Wu et al., 2013) demonstrated that when the academic emphasis, collective efficacy, and trust in students and parents constructs are combined, they are mutually reinforcing, and form Academic Optimism (AO), a unified, general construct (Wu et al., 2013). AO, according to McGuigan and Hoy (2006), is the permeated belief that academic achievement is important, that teachers are able to effectively increase student achievement, and that students and parents are trusted partners in the learning process. Even when controlling for SES factors, high levels of AO in schools contribute to high levels of student achievement, while low levels of AO contribute to low levels of student achievement (Forsyth et al., 2011; Kirby & DiPaola, 2011; Mascall et al., 2008; McGuigan & Hoy, 2006; Wu et al., 2013). AO and its components will be explored in further detail in the theoretical framework.

Although researchers have not established a direct link between principal behaviors and increased student achievement (Hallinger & Heck, 1996), principals indirectly support student achievement (Leithwood et al., 2008, 2020), such as through increasing the AO of their teaching staff (Kulophas, 2018; Oldac & Kondakci, 2019; Srivastava & Dhar, 2016) and cultivating a positive school culture (MacNeil et al., 2009). A variety of studies across geographical settings have shown that school principals directly impact a school's AO (Hasanvand et al., 2013; Kulophas et al., 2018; Oldac & Kondakci, 2019; Srivastava & Dhar, 2016), thereby indirectly supporting student achievement (Leithwood et al., 2020; Mascall et al., 2008; Rutledge, 2010).

In this study, I investigated how teachers' perceptions of their principal's leadership impact their own academic optimism (AO) in the form of academic emphasis, collective efficacy, and trust in students and parents. Specifically, my study focused on this relationship through the lens of Authentic Leadership (AL), an area of research that focuses on genuine and 'real' leadership (George, 2003). Strong correlations exist between AL and factors such as the optimism, trust, efficacy and hope of employees (Rego et al., 2014; Semedo et al., 2016; Stander et al., 2015; Wang et al., 2014; Xu et al., 2017). While AL currently has many different definitions from a variety of perspectives (Chan, 2005), the present study adopts the developmental perspective of AL developed by Walumbwa, et al., (2008) which is comprised of four dimensions: self-awareness, internalized moral perspective, balanced processing, and relational transparency. AL and its dimensions will be explored in further detail in the theoretical framework.

Problem Statement

AO, essentially, a teacher's belief system, can predict student achievement, regardless of students' SES (Hoy et al., 2006; Tschannen-Moran, 2014; Wu et al., 2013). Gonzales (2016) explains that a principal's leadership can promote a positive school climate that results in all facets of school success improving, most notably student test scores. Similarly, Carver-Thomas and Darling-Hammond (2017) and Smith and Johnson (2015) conclude that in Title I schools, principals have a large impact on school climate, a determinant of school success. Further, schools with higher levels of AO tend to have more positive school climates (Kilinc, 2013; McGuigan & Hoy, 2006; Smith & Hoy, 2007). Therefore, if principals in Title I schools increased the AO of their staff, increased student achievement would likely follow. However, it is important to note that the present study will solely focus on how teachers' perceptions of their

principal's AL might impact their own AO, comprised of academic emphasis, collective efficacy and trust in students and parents. Due to the nature of the study, as will be further detailed in the methodology, student achievement was not measurable nor attributable to individual teachers.

Nevertheless, principals who demonstrate AL may be more effective at increasing the AO of their teachers (Kulophas et al., 2018; Srivastava & Dhar, 2016). Across a variety of industries and fields, when employees perceive that their leader demonstrates high levels of AL, they have higher levels of optimism, trust, efficacy and hope (Laschinger & Fida, 2014; Semedo et al., 2016; Stander et al., 2015; Xu et al., 2017). Perhaps, if principals purposefully and deliberately engage in AL (e.g., are aware of their own strengths and weaknesses, are transparent in their interactions and relationships, make decisions after considering multiple perspectives, and take actions that are congruent with their belief systems), they will be able to directly impact teachers' belief systems, increasing their academic emphasis, collective efficacy, and trust in students and parents (i.e., AO). As mentioned above, student achievement is not measurable in the present study. Still, given that AO predicts student achievement (Forsyth et al., 2011; Hoy et al., 2006; Kirby & DiPaola, 2011; Mascall et al., 2008; Oldac & Kondakci, 2019), if principals' AL increases teachers' AO, AL could also indirectly result in increased student achievement. Using cross-sectional survey data analyzed with hierarchical multiple regression, I studied how teachers' perceptions of their principal's AL impact their own AO, and the three individual dimensions of AO: academic emphasis, collective efficacy, and trust in students and parents. If principals in Title I schools who are perceived to demonstrate higher levels of AL increase the AO of their staff, it is highly likely that the teachers' increased AO will increase student achievement. However, as previously mentioned, my study did not include student achievement data.

Research Question

I sought to expand the literature and better inform principals' practices by investigating the relationship between teachers' perceptions of their principals' AL and their own AO in Title I schools. Additionally, I sought to identify how teachers' perceptions of their principals' AL impact the individual dimensions of AO. My study's research question, after controlling for enabling school structure, a predictor of AO, as well as other potential predictors (i.e., teachers' gender, race, and total years of experience) is:

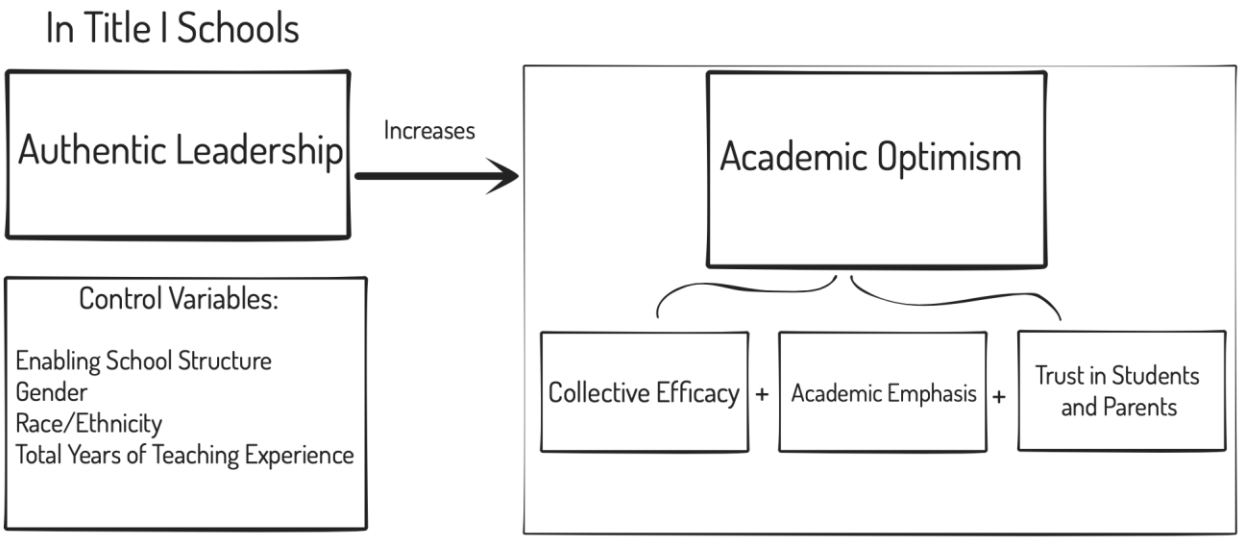
RQ. *Within Title I elementary schools, how do teachers' perceptions of their principals' authentic leadership impact their academic optimism and its individual components (i.e., academic emphasis, collective efficacy, and trust in students and parents)?*

Conceptual Framework

The conceptual framework of the present study, summarized in Figure 1 on the next page, posits that in Title I schools, perceptions of principals' AL is positively correlated with the AO of their teachers. Additionally, it hypothesizes that AL will also be positively correlated with academic emphasis, collective efficacy, and trust in students and parents, the dimensions of AO. First, AO and AL, as well as their dimensions, will be introduced and discussed. Next, in the conceptual framework, I will argue why Title I elementary school teachers' perceptions of their principals' AL can be positively correlated with their own AO, academic emphasis, collective efficacy, and trust in students and parents.

Figure 1.

Conceptual Framework.



Authentic Leadership

Northouse (2018) reports that AL "holds a great deal of promise" (p. 223). Indeed, AL had been an area of interest to researchers for quite some time, especially within the context of transformational leadership (Bass & Steidlmeier, 1999; Howell & Avolio, 1993). Yet, only recently have researchers begun to focus attention on AL, to clarify and conceptualize it. AL is difficult to define because it has multiple definitions and each attempt has conceptualized it from a different perspective, with a different focus (Chan, 2005). Walumbwa et al., (2008)'s conceptualization of AL, building off of the work of Avolio et al., (2004) and Gardner et al., (2005), is widely used in studies involving AL.

Walumbwa et al., (2008) take a developmental approach to AL. After thoroughly reviewing the literature and interviewing a variety of experts in the leadership field, Walumbwa et al. (2008) defined AL and created a valid measurement of the AL construct. Walumbwa et al. (2008) defined AL as:

A pattern of leader behavior that draws upon and promotes both positive psychological

capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development (p. 94).

Additionally, Walumbwa et al., (2008) developed the Authentic Leadership Questionnaire (ALQ), to explore and validate the assumptions of AL (Avolio et al., 2007). The four dimensions of the ALQ have since been validated, and it is positively correlated with outcomes such as organizational commitment, and satisfaction with supervisor and performance (Avolio et al., 2007; Walumbwa et al., 2008). Therefore, given that the developmental approach of Walumbwa et al (2008) includes a systematic method to measure AL, my study adopted their construct, the specific components of which are explained next.

Self-Awareness. Walumbwa et al., (2008) summarizes a leader's self-awareness as a process through which leaders reflect on their strengths and weaknesses, gaining a better understanding of themselves and how they impact others. When leaders have a strong understanding of themselves and what they stand for, they have a solid base from which they make effective decisions and actions (Gardner et al., 2005). Additionally, leaders who have high levels of self-knowledge and self-consistency have a positive impact on their followers' satisfaction, commitment, and perceived team effectiveness (Leroy et al., 2015; Pues et al., 2012).

Internalized Moral Perspective. Internalized moral perspective is a process where individuals self-regulate their behavior through their morals and values, rather than allowing outside forces or pressure to decide their behavior. Leaders with a strong internalized moral perspective lead with their values, ethically and morally. Followers see individuals with an

internalized moral perspective as authentic because their actions are congruent with their beliefs (Avolio & Gardner, 2005).

Balanced Processing. Similarly, balanced processing is also a self-regulatory behavior that occurs when leaders objectively analyze relevant data before coming to a decision. Leaders who exhibit balanced processing seek out views that challenge their positions, particularly from those who disagree with them (Gardner et al., 2005). They are seen as authentic because when they make decisions, they are transparent with regard to their own perspectives, while objectively considering the perspectives of others (Avolio et al., 2004).

Relational Transparency. Kernis (2003) explains that leaders show relational transparency when they share their inner feelings, motives, and perspectives appropriately with their followers. Relational transparency occurs when leaders communicate openly and are real in their relationships with others, increasing trust and commitment as a result.

Academic Optimism

AO refers to teachers' belief systems about their ability to effectively teach their students. It combines academic emphasis, collective efficacy and trust in students and parents, three mutually reinforcing constructs (Wu et al., 2013). Hoy et al., (2006) and Hoy et al., (2008) explain the AO construct as a natural extension of Bandura's (1977) work on self-efficacy. A significant body of research has found that AO is positively correlated with and is predictive of student achievement, even when controlling for SES factors (Beard et al., 2010; Hoy et al., 2006; Hoy et al., 2008; Mascall et al., 2008; Thien & Chan, 2020; Wu et al., 2013).

Academic Emphasis. Academic emphasis is defined as "the extent to which a school is driven by a quest for academic emphasis – a press for academic achievement" (Hoy et al., 2006, p. 427). Wu et al., (2013) describe how schools demonstrate high levels of academic emphasis

when rigorous and achievable goals are set for students, when the learning environment is orderly, and when students are encouraged to persevere and demonstrate grit. Academic emphasis is strongly linked to student achievement (Hasanvand et al., 2013; Hoy et al., 2006; McGuigan & Hoy, 2006) and essential for academic success in Title I schools (Padilla et al., 2020). This finding has been replicated repeatedly across a variety of school settings (Forsyth et al., 2011; Gray & Kruse, 2016; Tschannen-Moran & Gareis, 2015).

Collective Efficacy. Based on Bandura's (1986, 1977) Social Cognitive Theory, collective efficacy represents the collective judgment and belief of teachers that they can successfully teach and have a positive effect on student achievement (Goddard et al., 2004). Bandura (1993) found that regardless of SES, teachers' collective efficacy has a positively correlated relationship with student achievement. Many studies (Forsyth et al., 2011; Goddard et al., 2000, 2004; Hoy et al., 2006) have found that collective efficacy is closely linked with high student achievement.

Trust in Students and Parents. Trust in students and parents measures the extent to which teachers collectively trust students and parents, with trust being defined as, "One's vulnerability to another in terms of the belief that the other will act in one's best interests" (Hoy et al., 2006, p. 429). Wu et al. (2013) conclude that trust in parents and trust in students are one and the same, citing Goddard et al., (2001), Bryk and Schneider (2002), and Smith et al., (2001), who found that when teachers trust parents, they also trust students (and vice versa). Similarly, in their review of successful Title I schools in Texas, Padilla et al., (2020) found that in order to have high levels of student achievement, teachers must develop mutually positive, trusting and supportive partnerships with parents and students. The trust in students and parents construct is

positively correlated to student achievement, even after controlling for SES (Bryk & Schneider, 2002; Forsyth et al., 2011; Goddard et al., 2001).

How Principal Leadership Impacts Student Achievement

Although a direct link between principals' behaviors and students' academic achievement cannot be established (Hallinger & Heck, 1996), longitudinal studies (Bartanen, 2020; Dhuey & Smith, 2018; Laing et al., 2016) have shown that principals' effective leadership can indirectly cause students to achieve at higher levels. Grissom et al., (2021) and Leithwood et al., (2008, 2020) concluded that principals' leadership is one of the biggest factors that influences student achievement. They concluded that an effective principal's impact on student learning is nearly as large as that of having an effective teacher. In their review of six comprehensive, longitudinal studies across a variety of educational contexts in the United States, Grissom and colleagues (2021) found that replacing a below-average (25th percentile) elementary school principal with an above-average (75th percentile) elementary school principal would result in a gain of 2.9 months of math learning and 2.7 months of reading learning each year for each student in the school.

Principals' characteristics, skills, and behaviors directly influence teachers, who then impact students (Goddard et al., 2015; Leithwood et al., 2020). Barth (1990) argued that school principals directly impact the teaching quality, the professional development in the school, and the school culture, making them a key factor in determining a school's success. For instance, skillful leaders who demonstrate care, communicate effectively, and foster trust, cause a more positive and productive school climate, necessary for higher levels of student achievement (Grissom et al., 2021; MacNeil et al., 2009).

However, the present study did not measure or analyze student achievement data. Instead, the present study measured how teachers' perceptions of their principal's AL impacts their own AO, which is positively correlated with student achievement (Hoy et al., 2006; Beard et al., 2010).

How Authentic Leadership Impacts Academic Optimism

The premise of the present study, as shown above in Figure 1, was that through AL, elementary school principals in Title I schools can increase their teachers' AO. While studies have investigated the impact of Distributed Leadership on AO (Hasanvand et al., 2013; Mascall et al., 2008) and Transformational Leadership on AO (Hong, 2017; Rutledge, 2010), the impact of AL on AO has not yet been thoroughly studied. Although Srivastava and Dhar (2016) studied the impacts of AL on AO in Northern India, and Kulophas et al., (2018) did so in Thailand, the impacts of AL on AO has not yet been investigated in the United States. Given that AL is associated with a variety of positive impacts across industries and fields (Wang et al., 2014), the impact that AL could have on AO and its dimensions in Title I elementary schools is worth studying.

Numerous studies in the past decade have concluded that AL positively impacts variables such as optimism, trust, and efficacy (Laschinger et al., 2015; Ribeiro et al., 2020; Semedo et al., 2016). For instance, Stander et al., (2015) concluded that AL is positively correlated to optimism and trust and leads to higher levels of engagement at work. In a study of 794 followers and their leaders, Wang et al., (2014) found that across settings, AL is positively correlated with employees' efficacy, hope, optimism, and performance. Similarly, Xu et al., (2017) found that AL is directly linked with fostering successful, high-performing employees. These claims have been replicated in a variety of other studies (Luthans et al., 2007; Rego et al., 2014; Semedo et

al., 2016). Additionally, Clapp-Smith et al., (2009) found that AL increases followers' commitment, as well as their trust and confidence in their leader. Finally, Lambert et al., (2013) found that leaders whose leadership is based in their ethics and values, (the cornerstone of the internalized moral perspective component of AL) increased their followers' optimism. Therefore, given the positive impacts of AL, it is reasonable that a positive, statistically significant relationship may exist between AL and AO.

Academic Optimism in Title I Schools

Many students in Title I schools live in poverty, which causes numerous obstacles that impede high levels of student achievement, such as limited family resources, psychological, emotional and social challenges, acute and chronic stressors, and health and safety issues (American Psychological Association, 2017; Jensen, 2009). Given that Title I schools have historically had low levels of student achievement (Carver-Thomas & Darling-Hammond, 2017; Reardon, 2011), it is critical that principals identify and prioritize the factors that can make a difference in how well children learn. Klar and Brewer (2013) found that under effective leadership, Title I schools can significantly improve levels of academic achievement.

Since Hoy et al., (2006) found that AO, which represents teachers' belief systems, is positively correlated with student achievement, many studies (Beard et al., 2010; Forsyth et al., 2011; Mascall et al., 2008; Smith & Hoy, 2007; Wu et al., 2013) have successfully replicated and validated their findings. Simply stated, student achievement increases when teachers have high expectations for their students, believe they have the skills, abilities, and resources to effectively teach, and view their students and families as equal partners (McGuigan & Hoy, 2006; Tschannen-Moran, 2014). For Title I schools, which historically have low levels of academic

achievement (Carver-Thomas & Darling-Hammond, 2017; Reardon, 2011), increasing the AO of teachers is particularly important.

Carver-Thomas and Darling-Hammond (2017) recommend that school systems develop better school leadership capacity in Title I schools for cultivating positive school climates, which MacNeil et al., (2009) found to increase student achievement. Schools with higher levels of AO tend to have more positive school climates (Kilinc, 2013; McGuigan & Hoy, 2006; Smith & Hoy, 2007). Thus, perhaps with higher levels of AO, teachers at Title I schools would be more effective at increasing student achievement.

Purpose of the Study

The purpose of my study was to investigate how Title I elementary school teachers' perceptions of their principals' AL impact their own AO, academic emphasis, collective efficacy, and trust in students and parents. If principals in Title I schools who demonstrate higher levels of AL increase the AO (and its dimensions) of their staff, it is highly likely that the teachers' increased AO will increase student achievement. I sought to understand the relationship between perceptions of principals' AL and teachers' AO. With this understanding, I was able to note implications for practice and implications for future research regarding principal behaviors and professional development practices, through promoting AL as a vehicle through which teachers' AO can be increased. Celebi et al., (2020) describe how teacher perceptions of their principal's leadership can influence and reinforce the principal's practices. Thus, if principals are made aware that teachers respond positively to high levels of AL, principals might be more likely to demonstrate higher levels of AL. Additionally, if AL is found to be positively correlated with AO, schools and school systems can focus their leadership development programs and processes around developing authentic leaders. Academic interventions, strategies and processes that are

successful in Title I schools tend to generalize well to other schools. Comparable results could occur in schools across the nation.

Researchers have studied the effects of different types of leadership on AO (Hasanvand et al., 2013; Hong, 2017; Mascall et al., 2008; Rutledge, 2010) and how AL impacts AO in other countries (Kulophas et al., 2018; Srivastava & Dhar, 2016). However, the impact of AL on AO has not yet been studied in the United States, much less in Title I schools. Srivastava and Stelson (2020) pointed out that the lack of research on AL's impact on AO has left a gap for future research. Furthermore, Grissom et al., (2021) argue that the field of educational research requires a significant amount of study and investigation into high-quality research practice and methods that provide clear, systematic direction for leadership policy and practice. Thus, the findings of the present study can inform principals in Title I elementary schools about how to be more effective leaders, if perceptions of AL are found to be positively correlated with teachers' AO.

Overview of Research Methodology

Within a large, comprehensive, public school system in the mid-Atlantic region, 31 elementary schools participate in Title I under the "Schoolwide Programs" model (Le Floch et al., 2018), as at least 62.73% of their students receive Free and Reduced Meal Service (FARMS) (xxxxx County Public Schools, 2020; 2021a), the statistic through which poverty is measured in XCPS. My study's population is the 2,124 Title I elementary school teachers in XCPS, though any teacher in their first year with their current principal will be excluded from the study. All eligible teachers in Title I schools were invited to participate in my study, as all teacher email addresses are available on the school websites. No student data were included in my study.

To collect my quantitative data, I emailed all teachers at the Title I schools with a brief description explaining my study's purpose and potential value, as well as a link to a Survey

Monkey, containing the 46-item survey. All elements of the Survey Monkey can be found in Appendices A through F and will be discussed further in the Methodology. Two weeks after the initial email, I sent a follow-up email that requested and encouraged teachers to participate in my study. As a web-based platform, Survey Monkey provides an option to deploy surveys without collecting any individually identifying information. Thus, participants in my study were assured complete anonymity. Further details can be found in the Methodology, as well as in the Data Collection section of the Results and Analysis.

The present, exploratory study used hierarchical multiple regression to better understand how perceptions of principals' AL may impact teachers' AO, academic emphasis, collective efficacy, and trust in students and parents. I used hierarchical multiple regression to better understand the additive predictive power of AL on AO after controlling for other variables in the model. AL is my independent variable and AO and its individual dimensions are my dependent variables. Notably, the AO construct is comprised entirely of the subscales used to determine academic emphasis, collective efficacy and trust in students and parents. While it is atypical to analyze AO, as well as each of the individual constructs, my exploratory study does so purposefully in order to better understand the extent to which AL might impact AO and each of its individual constructs. Furthermore, this study follows previous research (e.g., Chang, 2011, Huang & Yin, 2018; Thien et al., 2021) which demonstrated that AO, as well as its individual dimensions, can be at least moderately predicted by other variables. As such, my study included these variables as controls. They are: (1) Enabling School Structure (ESS) (Beard et al., 2010; Wu et al., 2013); (2) Gender (Arslan, 2013; Chang, 2011; Odanga et al., 2015); (3) Race/Ethnicity (Gershenson et al., 2018); and (4) Total Years of Experience (Chang, 2011; Huang & Yin, 2018; Thien et al., 2021). The "Research Design" and "Instruments" sections of

my Methodology contain further discussion on the reasoning and rationale of my variables, as well as how they will be measured and analyzed.

Using a multiple regression calculator (Soper, 2021), I determined that I needed a sample size of at least 91 in each model, in order to achieve a statistical power level of 80%, with an effect size of 0.15, a probability level of 0.05, and with five predictors (my independent variable and four control variables). A total of 245 teachers participated in my study, more than doubling the number of responses that I needed. After collecting my data, I analyzed it with hierarchical multiple regression to determine what, if any, impact perceived AL had on AO, academic emphasis, collective efficacy, and trust in students and parents, after controlling for predictors of AO (Salkind, 2021).

Additionally, my survey prompted two open-ended questions: (1) “How (if at all) do you think your principal’s leadership impacts your ability to successfully teach and for your students to successfully learn?” and (2) “How (if at all) do you think that your perceptions of your principal's leadership have been influenced by the COVID-19 pandemic?” Data from the two open-ended questions provided me with more insight into the relationship between AL and AO. I analyzed data from the open-ended questions by theme and summarized my findings. While my study was primarily quantitative, I provide qualitative analysis of the open-ended responses in Chapter 5.

Context

The present study occurs in XCPS, a large, diverse public school system in the Mid-Atlantic region. Importantly, this study occurred during the COVID-19 pandemic. The year prior to this study was spent almost entirely virtually, with only some students returning to in-person school from April 2021 to June 2021. Thus, the present study occurred during the first year back

after schools moved to a virtual learning format in March, 2020. Undoubtedly, the COVID-19 pandemic has permeated almost every aspect of teaching and learning, including how teachers may perceive their leaders.

In its countywide demographic data, XCPS reports having 207 schools (of which 135 are elementary) that serve 160,564 students from pre-kindergarten through 12th grade. With regard to demographics, 32.4% of students are Latino, 26.9% are White, 21.4% are Black, 14.1% are Asian, 4.9% are two or more races, 0.2% are American Indian, and 0.1% are Pacific Islander. However, in XCPS's Title I schools, consistent with nationwide trends (Le Floch et al., 2018; Reardon, 2011), the student population tends to be primarily Latino and Black. Despite having a very diverse student population, XCPS's teaching staff in Title I schools is 63.7% White.

As shared in its vision, mission and core values, XCPS's longstanding vision is to inspire learning by providing the greatest public education to each and every student. Its mission is to provide every student with the academic, creative problem solving, and social emotional skills to be successful in college and career. As a whole, XCPS has successfully met its vision and mission, with an 88.7% high school graduation rate, typically sending many of its students to prestigious colleges and universities.

At the elementary school level, XCPS monitors students' academic progress with the Evidence of Learning (EOL) framework. According to the EOL framework developed by XCPS (2021c), academic progress is determined by multiple measures of data, from classroom, district, and external sources. Students who meet at least two of the three criteria demonstrate that they have made satisfactory academic progress. If students earn an A or B average in their math or reading class, they demonstrate EOL for that subject on the classroom measure. For the district measure, if students earn a score of 3, 4, or 5 (out of 5) on the common, quarterly district reading

or math assessment, they demonstrate EOL for that measure. Finally, if students perform at a performance level of 3, 4, or 5 (out of 5) either on the reading or math Measures of Academic Progress (MAP) assessment by the Northwest Evaluation Association (NWEA), or on the Partnership for Assessment of Readiness for College and Careers (PARCC) assessment, they demonstrate EOL for the external measure.

As shown in XCPS's *Schools at a Glance* document, many of XCPS's elementary schools typically perform very well compared to other school systems in the state and compared to nationwide trends. Yet, the same has not been true for XCPS's 31 Title I schools. As shown on the next page in Table 1, levels of student achievement in Title I elementary schools is significantly lower than that of non-Title I elementary schools (Performance Matters Unify, 2021). The 2018-2019 school year data reflects student achievement data in XCPS prior to the COVID-19 pandemic. As a result of the COVID-19 pandemic, student achievement data from the 2019-2020 school year is not available. The 2020-2021 school year data reflects XCPS's most recent student achievement data, which has clearly been negatively impacted by the COVID-19 Pandemic. Nevertheless, the data continues to reflect troubling trends in student achievement between Title I schools and non-Title I schools. There is clearly a need for student achievement within Title I schools in XCPS to improve.

Table 1

Percentage of XCPS Elementary School Students Demonstrating EOL from the 2018-2019 and 2020-2021 School Years.

2018-2019 School Year	Demonstrated EOL in Math	Demonstrated EOL in Reading
Total	69%	69%
Title I Schools	54%	55%
Non-Title I Schools	75%	74%

2020-2021 School Year	Demonstrated EOL in Math	Demonstrated EOL in Reading
Total	49%	43%
Title I Schools	32%	23%
Non-Title I Schools	55%	50%

Quantitative Limitations

The present study has quantitative limitations in its internal, construct, and external validity. With regard to internal validity, the correlational research design is better suited to describe trends found between the variables, rather than provide a rigorous explanation of them (Creswell & Guetterman, 2019). The conclusions drawn between perceptions of AL and teachers' AO (and the components of AO) do not establish a probable cause-and-effect relationship because alternative explanations for the results cannot be dismissed (Maruyama & Ryan, 2014). Despite data analysis revealing the degree of association between AL and AO and its three components, causation cannot be claimed (Creswell & Guetterman, 2019). Additionally, the correlational, survey design provides insight into a snapshot in time. Grissom et al., (2021) explain how longitudinal studies are more effective at identifying the principals' characteristics, skills and behaviors that lead to increased student achievement. Thus, a more robust design would have been longitudinal in order to better measure how AL impacts teachers' AO over a series of years. As the AL construct is developmental in nature, leaders' AL can grow over time (George, 2003; Walumbwa et al., 2008). Future research should investigate how perceptions of

principals' AL may impact teachers' AO, academic emphasis, collective efficacy and trust in students and parents over time.

Despite the Authentic Leadership Questionnaire (ALQ) and the Teacher Academic Optimism Scale – Elementary (TAOS-E) both having strong reliability and validity through multiple operational definitions and from comparisons with similar measurements (Beard et al., 2010; Hoy et al., 2006; Walumbwa et al., 2008), by their design, they measure individuals' beliefs and perceptions. Therefore, as Maruyama and Ryan (2014) explain, although the variables measure the constructs of interest, they may also measure other indiscernible factors of teachers, such as biases, inaccuracies, and subjective perceptions. Further qualitative studies on the relationship between AL and AO (and its three components) would provide the study with higher levels of internal validity, as any insights gleaned would help to better understand the relationship and interaction between teachers' perceptions of AL and their own AO, academic emphasis, collective efficacy, and trust in students and parents.

With regard to external validity, it is critical to note that my data was based on only a subset of elementary Title I teachers within XCPS. Although the survey was sent to every full-time teacher in Title I elementary schools in XCPS, the voluntary and self-selective nature of the study means that it is a convenience sample, which presents a threat to its external validity (Creswell & Guetterman, 2019). The sample in the present study cannot be representative of all teachers in Title I schools across the country, much less all elementary school teachers nationwide. The present study should be replicated numerous times to obtain higher levels of external validity. As the research results cannot be generalized to the populations and settings of interest, the present study has relatively low levels of external validity (Creswell & Guetterman,

2019; Maruyama & Ryan, 2014). The findings of my study should not be generalized to other populations.

Delimitations

Only teachers in Title I elementary schools in XCPS were considered for the present study. All teachers in their first year with their current principal were excluded from participating in my survey. Finally, the findings of the present study are only generalized to populations like those in the present study.

Significance of the Study

The significance of this research includes three important stakeholders within the educational system: students, teachers and principals. Historically, Title I schools are the most challenging, most impacted by poverty, and the lowest achieving (Carver-Thomas & Darling-Hammond, 2017; Simon & Johnson, 2015). Therefore, interventions, strategies and processes that are successful in Title I schools tend to generalize well to other schools. Given that AO is tightly correlated with student achievement (Beard et al., 2010; Mascall et al., 2008; Smith & Hoy, 2007; Srivastava & Dhar, 2016), factors (such as AL) that can benefit AO should be closely monitored and shared widely if found to be effective. If principals are perceived to demonstrate higher levels of AL in Title I schools, resulting in increased teacher AO, comparable results could occur in schools across the nation.

Furthermore, if we learn that AL positively impacts AO, then schools and school systems could focus on fostering authentic leaders and developing their capacity for AL. Thus, my study could better inform and improve principal practices, as demonstrating higher levels of AL could have positive implications (i.e., higher levels of teachers' AO, and indirectly, higher levels of student achievement). Both George (2003) and Walumbwa et al., (2008), view AL as an

ongoing, developmental process that can be grown in leaders. Principals who are self-aware of their own strengths and weaknesses, who make decisions with balanced processing, who have a strong, internalized moral perspective, and who demonstrate transparency in their professional relationships will be more effective leaders (Avolio et al., 2005; Gardner et al., 2005). Leaders who demonstrate higher levels of AL tend to cause employees to be more effective (Leroy et al., 2015; Semedo et al., 2016), creative (Rego et al., 2014; Xu et al., 2017) and optimistic (Stander et al., 2015). With a focus on emphasizing AL through broad strategies such as professional development, hiring practices, and mentoring, schools and school systems can systematically increase the AL of its leaders, thereby indirectly increasing the AO of its teachers and the academic achievement of its students.

Regarding future research, this study should be replicated in a variety of other school contexts to increase the external validity of its findings. Additionally, future studies should be designed such that student achievement could be analyzed along with perceptions of AL and teachers' AO. Doing so would similarly strengthen the present study's findings. Finally, conducting qualitative studies through interviews and focus groups could provide more insight into how and why perceptions of principals' AL positively impact teachers' AO.

Definition of Key Terms

The following terms will assist the reader in understanding the terms used in the research study:

Academic Emphasis

Academic emphasis refers to the extent to which teachers and schools have high expectations for students (Goddard et al., 2000b). Wu et al., (2013) describe how schools demonstrate high levels of academic emphasis when rigorous and achievable goals are set for

students, when the learning environment is orderly, and when students are encouraged to persevere and demonstrate grit.

Academic Optimism

AO refers to the extent to which teachers believe they can effectively teach and their students can effectively learn. The construct combines three, other mutually reinforcing constructs (Wu et al., 2013): academic emphasis, collective efficacy and trust in students and parents.

Authentic Leadership

Walumbwa et al., (2008) define AL as a pattern of leader behavior that draws upon and promotes positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development (p. 94).

Balanced Processing

Balanced processing occurs when leaders objective analyze relevant data and seek out a diverse set of opinions before coming to a decision.

Collective Efficacy

Based on Bandura's (1986, 1977) Social Cognitive Theory, collective efficacy represents the collective judgment and belief of teachers that they can successfully teach and have a positive effect on student achievement (Goddard, Hoy, & Woolfolk Hoy, 2004).

Elementary School

Public schools that serve students in grades pre-kindergarten through fifth grade.

Internalized Moral Perspective

Internalized moral perspective is a process where individuals self-regulate their behavior through their morals and values, rather than allowing outside forces or pressure to decide their behavior (Avolio & Gardner, 2005).

Principal

The highest-ranking administrator in an elementary school, who is responsible for the orderly operation of the school program, provides instructional leadership and support, and assists staff, students and parents in attaining program goals.

Relational Transparency

Kernis (2003) explains that leaders show relational transparency when they share their inner feelings, motives, and perspectives appropriately with their followers. Relational transparency occurs when leaders communicate openly and are real in their relationships with others, increasing trust and commitment as a result (Walumbwa et al, 2008).

Self-Awareness

A leader's self-awareness is a process through which they reflect on their strengths and weaknesses, gaining a better understanding of themselves and how they impact others.

Student Achievement

Student achievement is defined as the proficiency with which students demonstrate understanding of challenging academic standards (Every Student Succeeds Act, 2015).

Teacher

Staff members at elementary schools responsible for instructing students and measuring their academic progress.

Teacher Efficacy

Teacher efficacy is a teacher's belief in their capability to successfully plan, organize and implement "courses of action" that cause their students to learn (Tschannen-Moran et al., 1998).

Title I School

The Title I program provides federal funding to public schools with high percentages of children from families living in poverty, in order to improve their academic achievement (United States Department of Education, 2018). In XCPS, Title I schools are schools who have at least 62.73% of their students receiving Free and Reduced Meal Service.

Trust in Students and Parents

Trust in students and parents measures the extent to which teachers collectively trust students and parents, with trust being defined as, "One's vulnerability to another in terms of the belief that the other will act in one's best interests" (Hoy et al., 2006, p. 429).

Summary

This study sought to document a potential relationship between teachers' perceptions of their principal's AL and their own AO. Using a correlational study design, teachers will take the ALQ (Walumbwa et al., 2008) and the TAOS-E (Beard et al., 2010; Hoy et al., 2006). The results will be analyzed using the jamovi project, version 2.2 (jamovi, 2021). I conducted hierarchical multiple regression to determine whether there was a correlational relationship between teachers' perceptions of their principal's AL and their own AO, academic emphasis, collective efficacy and trust in students and parents. Given that AO is tightly linked with increased student achievement (Beard et al., 2010; Hoy et al., 2006; Srivastava & Dhar, 2016), finding that AL is positively correlated with AO would be particularly noteworthy. My introduction chapter is summarized in Table 2.

Table 2

Introduction Summary Table.

Element	Summary
Purpose of the Study	To investigate the relationship between AL and AO.
Justification	Academic optimism is tightly correlated with student achievement. If perceptions of principals' AL are found to be associated with teachers' AO, then it is possible that increased perceptions of principals' AL could indirectly support student achievement.
Methodology	Hierarchical multiple regression of survey responses from Title I elementary school teachers in XCPS.
Scope	All teachers (with more than one year of experience with their current principal) in Title I elementary schools in XCPS.
Theoretical Framework	Across industries, AL has been found to positively impact employees in a variety of ways. AO has repeatedly been found to be tightly linked with student achievement. In other studies, other forms of leadership were found to be correlated with teachers' AO. However, the relationship between AL and AO has not been thoroughly studied.
Limitations	The correlational design of the study means that results must only be viewed as correlational, not causal. The constructs in my study are perceptual. Therefore, my constructs may also measure other indiscernible factors of teachers, such as biases, inaccuracies, and subjective perceptions. Finally, my convenience sample is not representative of all teachers and my results should not be generalized to other populations.
Potential Contributions	If AL is found to be positively correlated with AO, schools and school systems could consider focusing professional development and leadership development around building principals who demonstrate high levels of AL. Given that successful strategies and processes in Title I schools tend to generalize well, comparable results could occur in schools across the nation.

Organization of Dissertation

Next, the conceptual foundation and previous research basis for this study will be further examined in the literature review in Chapter 2. Afterwards, the present study's methodology is reviewed in Chapter 3. Following that, the quantitative results are analyzed and discussed in

Chapter 4, while the qualitative analysis will be presented in Chapter 5. The present study will conclude with a discussion of its conclusions, implications, and recommendations in Chapter 6.

CHAPTER 2: REVIEW OF LITERATURE

My literature review is guided by my research question: *Within Title I elementary schools in XCPS, how do teachers' perceptions of their principals' authentic leadership (AL) impact their academic optimism (AO), and its three dimensions: academic emphasis, collective efficacy and trust in students and parents?* This chapter examines the theoretical underpinnings and historical context of AL and AO and its three dimensions. The studies and research references throughout this literature review comes from EBSCO Host, accessed through the Beneficial-Hodson Library and Learning Commons of Hood College, as well as from Google Scholar. My searches began more 'big picture,' as I sought to understand the historical contexts from which the constructs emerged. Later, my searches became more specific, honing in on the individual components of each of the constructs. Many original sources related to AL were also cited in Northouse (2018), who dedicated a chapter of his book, *Leadership: Theory and Practice*, towards synthesizing AL. Additional sources were gathered from the references of the seminal works (e.g., Goddard et al., 2000a; Goddard et al., 2000b; Hoy et al., 2006; Tschannen-Moran, 2014) around AO and its dimensions. Finally, I sought out criticisms of the theories upon which my dissertation is based. Searches such as "criticism authentic leadership" and "criticism academic optimism" yielded valuable sources that critique my constructs, providing me with a more well-rounded view of the literature.

I organized my literature review both conceptually and chronologically. In order to properly conceptualize AL and AO, both of which are abstract and complex constructs, I present the background and context from which they arose. By studying their roots, I can better understand how to apply AL and AO in my study. First, I analyze AL, followed by AO and the

three constructs (i.e., academic emphasis, collective efficacy, and trust in students and parents) from which it is comprised.

Authentic Leadership

Early Trends in Leadership Research: A Trait-Based Approach

Researchers have long studied leadership and its impact on individuals and groups (Bass, 2008; Gardner, 1990; Rost, 1991). Over 100 years ago, Mumford (1906) hypothesized that certain individuals possess specific leadership principles which they can apply to motivate others to achieve their aims or ends. Mumford explained that leadership is "one of the most primary as well as one of the most general forms of association… [and] one of the important functions in reciprocal relations" (p. 218). Mumford added that leadership is an instinct found in most groups of animals. In laboratory experiments with chicks, Morgan (1900) found that each brood typically has one or two chicks that are more active, vigorous and intelligent than the others. These chicks are "the leaders of the brood; the others are imitators. Their presence raises the general level of intelligent activity. Remove them and the others show a less active, less inquisitive, less adventurous life. They seem to lack initiative" (p. 191). Topinard (1899) also found that groups of animals, such as elephants and monkeys, have a leader who is stronger, cleverer, and more assertive than the others. Topinard concluded that the leader demands submission from all other members of the group and that the group's success depends almost entirely on how the leader performs. Morgan (1900) summarized his findings by stating that the leader is able to influence all of the others, for good or for bad. Similarly, Groos (1901) studied groups of children and described how a strong-willed, "belligerent spirit" can influence even, "the most docile children to commit deeds in blind obedience which fill their parents with amazement and horror" (p. 339). Thus, Mumford (1906) concluded that all groups, whether

political, occupational, or religious, naturally have leaders who initiate, stimulate, and agitate followers into actions. Thus, for our society to function optimally, organizations need moral and ethical leaders (Avolio et al., 2009; Bass, 2008; Gardner, 1990; Kotter, 1988).

In a seminal review on leadership articles from 1900 to 1990, Rost (1991) found more than 200 unique definitions for leadership. In a similar vein, Stogdill (1974) noted that each new attempt to define leadership seems to offer another unique definition for it. Many leadership studies from the 20th century, in line with Mumford (1906) and Topinard (1899), attempted to define leadership by offering a variety of traits that help leaders find success (Rost, 1991; Stogdill, 1974). Specifically, Bass (2008) pointed out that many scholars who applied a trait approach to leadership tend to identify and analyze the characteristics of well-regarded leaders such as Mahatma Gandhi, Abraham Lincoln, and Joan of Arc. For instance, in giving advice to teachers and administrators, Steinberg (2016) provided examples of the characteristics and traits that made artists like Judy Garland, Ray Charles, and Duke Ellington successful.

Northouse (2018) illustrates how a summary of leadership traits and characteristics identified by researchers over the years have differences and similarities. With regard to differences among critical leadership traits, Stogdill (1948) identified alertness, Mann (1959) focused on masculinity, Lord et al., (1986) noted dominance, Kirkpatrick and Locke (1991) commented on a leader's drive, and Zaccaro et al., (2017) pointed to extraversion, conscientiousness, and emotional stability. At the same time, leadership trait researchers did find some consensus around leadership traits (Rost, 1991). For instance, common leadership traits are intelligence, self-confidence, determination, integrity, and sociability (Bass, 2008; Stogdill 1948, 1974; Zaccaro et al., 2017). However, a trait-based approach to leadership has received a significant amount of criticism over the years (Stogdill, 1948, 1974). Traits are too numerous to

hone in on just a few, do not take context into account, are highly subjective, and are not useful for developing leadership. Furthermore, the diversity in leadership traits make it quite difficult to succinctly define leadership.

Leadership as a Process

Leadership researchers therefore began to study effective leadership as an ongoing-process, rather than as a series of personal characteristics and traits. Some influential researchers offered theories such as path-goal theory (House, 1996; House & Dressler, 1974) and leader-member exchange theory (Anand et al., 2011; Dansereau et al., 1975), while others conceptualized successful leaders as engaging in transformational leadership (Bass & Steidlmeier, 1999; Burns, 1978), distributed leadership (Leithwood et al., 2007), adaptive leadership (Heifetz, 1994; Heifetz et al., 2009), servant leadership (Greenleaf, 1970, 1977) or AL (Avolio et al., 2004; Gardner et al., 2005; George, 2003; Walumbwa et al., 2008). Each leadership theory or process comes with a set of strengths and weaknesses; there is no theory or process that definitively conceptualizes leadership the best (Bass, 2008; Northouse, 2018). Summarizing Rost (1991), Northouse (2018) writes, “After decades of dissonance, leadership scholars agree on one thing: they can’t come up with a common definition for leadership” (p. 4). My study focuses on Authentic Leadership (AL).

Authentic Leadership: Humble Beginnings

Research on AL began as early as the 1960s, when Halpin and Croft (1966), Rome and Rome (1967), and Seeman (1966) posited that an organization’s authenticity was a direct result of the leadership (Gardner et al., 2011). Halpin and Croft (1966) theorized that an organization’s authenticity was a function of its climate and openness, as set by the leadership. Seeman (1966) added that leaders’ authenticity could be measured by how well they could reduce ambivalence

about their leadership role. Meanwhile, Rome and Rome (1967) explained that a hierarchical organization, through its leadership, could be authentic if "it accepts finitude, uncertainty, and contingency; realizes its capacity for responsibility and choice; acknowledges guilt and errors… and responsibly participates in the wider community" (p. 185). Similarly, Henderson and Hoy (1983) viewed AL as the extent to which followers perceive leaders to accept responsibility for actions, outcomes and mistakes and to be non-manipulative of followers. However, while AL research did begin in the mid-20th century, it was an uncommon thread of research (Gardner et al., 2011). The primary research interests in leadership at the time, as aforementioned, tended to focus on trait-based approaches to leadership.

A Demand for Authentic Leadership

Recent societal upheavals have spurred a demand for AL (Ribeiro et al., 2020). Northouse (2018) explains that 'fake news' and fears of foreign influence in presidential elections have created anxiety and uncertainty within society. Similarly, Ribeiro et al., (2020) writes that corporate scandals, failures in the banking industry, and the ethical and financial collapse of various high-profile organizations around the world harmed trust in institutions. Furthermore, Plohl and Musil (2021) and Hardy et al., (2021) describe how throughout the COVID-19 pandemic, misinformation, confusing communications, and conspiracy theories from certain politicians and high-profile individuals caused many people to lose trust and faith in elected politicians and/or scientific experts. Recent traumatic events, such as the murder of George Floyd and the insurrection at the United States Capital further demonstrate the fraying of trust between people living in the United States and American institutions. From a randomly selected and nationally representative sample of 10,618 United States adults, the Pew Research Center (2019) finds that two-thirds of Americans are increasingly losing trust in the federal

government and in each other. There has been a significant increase in interest around AL research, driven by demand for leaders who are trustworthy, honest and able to lead with integrity (George, 2003; Ribeiro et al., 2020).

Although AL has been a popular research area in recent years across a variety of industries (e.g., Avolio et al., 2018; Hong, 2017; Leroy et al., 2015; Rego et al., 2014; Semedo et al., 2016; Srivastava & Stelson, 2020; Xu et al., 2017), authenticity within leadership has been of interest to researchers for quite some time (Avolio et al., 2004; Gardner et al., 2005; Howell & Avolio, 1993). For instance, in their discussions about transformational leadership, Burns (1978) and Bass and Steidlmeier (1999) both emphasized the necessity of leaders to be authentic and morally grounded in their leadership. While Bass and Steidlmeier (1999) urge leaders to be 'authentic transformational' rather than 'pseudo-transformational,' they do not fully explain authentic, other than connecting it to a moral vision. Avolio and Gardner (2005) and Gardner et al., (2020) note that AL and transformational leadership share little in common, as the components of transformational leadership (i.e., idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration) are quite different from the four components of AL, which will be examined in detail below. Nevertheless, as authentic leadership is still in its formative phase of development, it needs to be considered more tentatively. AL continues to be thoroughly researched and will likely change based on new findings from researchers. AL is a complex process that is difficult to characterize and has many different definitions from a variety of perspectives (Chan, 2005).

Approaches to Authentic Leadership

How AL is defined and conceptualized depends on the researchers' perspectives (Chan, 2005). The various approaches to AL include intrapersonal, interpersonal and developmental

perspectives. Intrapersonal viewpoints on AL focus squarely on the leader, incorporating their self-knowledge, self-regulation and self-concept. For instance, Shamir and Eilam (2005) posit that a leader's life-story contributes significantly to how they lead. They argue that insights and self-relevant meanings that leaders attach to their life-stories and life experiences determine their AL. Sparrowe (2005) also takes an intrapersonal approach, describing the narrative process through which leaders develop AL. Within a school context, Begley (2006) proposes an integrative model that centers on principals, explaining AL as the outcome of self-knowledge, sensitivity towards the orientations of others, and technical sophistication. Other scholars, such as Eagly (2005), conceptualize AL as an interpersonal process, viewing AL as relational; that is, how leaders and followers interact together. Eagly (2005) recommends that leadership development programs focus on relational aspects of leadership in order to better support leaders' authenticity. In a similar vein, Beddoes-Jones and Swailes (2015) view self-awareness, ethics, and self-regulation as the three pillars that comprise AL, allowing leaders to build trusting relationships. Additionally, although Branson's (2007) qualitative study of six principals' AL used an intrapersonal perspective through structured self-reflection, Branson concludes that any AL model must also include the interpersonal lens. Without both an intrapersonal and an interpersonal perspective, Branson argues, any AL model would be incomplete.

The developmental perspective is AL's most popular and widely applied approach (Ribeiro et al., 2020). Luthans and Avolio (2003) were among the first researchers to conceptualize AL as a skill that could be grown and fostered over time. Studies that take a developmental approach to AL (e.g., Avolio et al., 2009; Beddoes-Jones & Swailes, 2015; Gardner et al., 2005; Walumbwa et al., 2008), view AL as a process that can be developed, nurtured and grown, rather than as a fixed trait (George, 2003).

George (2003) developed a popular AL model that focuses on its five dimensions (i.e., purpose, values, relationships, self-discipline, and heart) and their related behaviors and traits that individuals need to have in order to be authentic leaders. George (2003) explains that developing AL is a never-ending process that occurs throughout life and reasoned that AL comes from leaders who focus on the five dimensions. Although this theory provides a relatable picture for how people can become authentic leaders, George's (2003) model does not provide a systematic way of measuring a person's AL, necessary for quantitatively measuring AL.

Gardner et al., (2005) conceptualizes an AL model that focuses on how leaders and followers self-regulate and are aware of their own strengths and weaknesses. Meanwhile, Ilies et al., (2005) created a model made up of four components, which focuses on how leaders' authenticity impacts followers' happiness and well-being. Kernis and Goldman (2006) view AL as having four key components: (1) self-awareness; (2) unbiased processing of others attributes; (3) behavior in line with one's true preferences, values and needs; and (4) achieving and valuing truthfulness, honesty and openness in close relationships. However, as many scholars provided theories about how AL might work, Cooper et al., (2005) warns that in order to properly advance AL theory, researchers need to carefully define, measure, and rigorously investigate the AL construct. Walumbwa et al., (2008), who similarly took a developmental approach to AL, took on that task. Extending the work of Avolio et al., (2004), Gardner et al., (2005), Ilies et al., (2005), and Kernis and Goldman (2006), Walumbwa et al., (2008) developed a systematic process to conceptualize, measure and describe AL.

Walumbwa et al.'s (2008) Developmental Approach to Authentic Leadership

Walumbwa et al.'s (2008) approach includes the importance of self-awareness and building self-esteem (Kernis, 2003), emphasizes the role that moral and ethical leadership plays

in authenticity (George, 2003), and focuses on how AL can be developed in leaders (Luthans & Avolio, 2003). Walumbwa et al. (2008) define AL as:

> A pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development (p. 94).

Many studies (e.g., Begley, 2006; Bird et al., 2013; Kulophas et al., 2018; Laschinger & Fida, 2014; Leroy et al., 2015; Ozkan & Ceylan, 2016; Peus et al., 2012; Ribeiro et al., 2020; Srivastava & Dhar, 2016) have adopted Walumbwa et al's (2008) developmental approach to AL because it is systematic, contains a reliable and valid scale to measure AL, and is grounded in theory (Ribeiro et al., 2020). Beddoes-Jones and Swailes (2015) state that among all of the definitions and conceptualizations for AL, Walumbwa et al.'s (2008) model is the most well-known and widely researched. Thus, my study adopted the AL model put forth by Walumbwa et al., (2008), extending the research of Avolio and Gardner (2005), Ilies et al., (2005), and Gardner et al., (2005). Walumbwa et al., (2008)'s model has four components: (1) self-awareness; (2) internalized moral perspective; (3) balanced processing; and (4) relational transparency.

Self-Awareness

Self-awareness summarizes the process through which leaders reflect on their strengths and weaknesses, gaining a better understanding of themselves and how they impact others. Leaders also demonstrate self-awareness when they are aware of and trust their own feelings (Kernis, 2003). When leaders have a strong understanding of themselves and what they stand for, they have a solid base from which they make effective decisions and take clear actions (Gardner et al., 2005). Leaders who have high levels of self-awareness positively impact their followers'

satisfaction, commitment, and perceived team effectiveness. Further, they are also perceived by their followers to be more authentic (Pues et al., 2012; Leroy et al., 2015). Self-awareness has been an important element of AL since Luthans and Avolio's (2003) initial AL definition included it and has appeared in a variety of other models of AL (e.g., Ilies et al., 2005; Gardner et al., 2005). Gardner et al., (2005) even argued that any definition or conceptualization of AL that did not include self-awareness would be incomplete. Additionally, even though Shamir and Eilam (2005) did not view AL as a developmental process, their perspective included how leaders' life-stories impacted their self-awareness.

Internalized Moral Perspective

Internalized moral perspective is a process whereby individuals self-regulate their behavior through their morals and values, rather than allowing outside forces or pressure to decide their behavior (Walumbwa et al., 2008). Leaders with a strong internalized moral perspective lead with their values, ethically and morally. Further, leaders who express a strong internalized moral perspective always make decisions that are consistent with their own values (Avolio & Gardner, 2005; Gardner et al., 2005). Followers see individuals with an internalized moral perspective as authentic because their actions are congruent with their beliefs (Avolio & Gardner, 2005). Similarly, Lambert et al., (2013) found that individuals whose leadership is congruent with their morals, ethics and values tend to increase their followers' optimism.

Balanced Processing

Balanced processing is a self-regulatory behavior that occurs when leaders objectively analyze relevant data before coming to a decision. Leaders who exhibit balanced processing seek others' opinions, including from those who disagree with them (Gardner et al., 2005). They are

seen as authentic because when they make decisions, they are transparent with regard to their own perspectives, while objectively considering the perspectives of others (Avolio et al., 2004).

Relational Transparency

Walumbwa et al., (2008) explained that relational transparency "refers to representing one's authentic self (as opposed to a fake or distorted self) to others" (p. 95). Kernis (2003) explains that leaders show relational transparency when they share their inner feelings, motives, and perspectives appropriately with their followers. Relational transparency occurs when leaders communicate openly and are real in their relationships with others, increasing trust and commitment as a result.

The Authentic Leadership Questionnaire (ALQ)

Walumbwa et al., (2008) conceptualized AL as being composed of four distinct components, all necessary for a leader to be considered authentic. The ALQ has received widespread usage across industries and cultural contexts, showing encouraging results (Gardner et al., 2021) and is consistent with other popular AL measurement tools (Avolio et al., 2018; Neider & Schriesheim, 2011). While elements of Walumbwa et al.'s (2008) model work together, each component dimension also needed to demonstrate evidence of discriminant validity (Walumbwa et al., 2008). To create a measurement tool for AL, the researchers began with deductive and inductive approaches to generate a list of items that could be used to assess how leaders demonstrate AL. In preparation for this task, Walumbwa et al., (2008) conducted an extensive review of the literature on AL theory and development (e.g., Avolio et al., 2004; Avolio & Gardner, 2005; Gardner et al., 2005; George, 2003; Ilies et al., 2005; Luthans & Avolio, 2003; Shamir & Eiliam, 2005). They also gathered qualitative data from focus groups, which included experts in the field and doctoral students who had work experience.

Beddoes-Jones and Swailes (2015) criticized this element of the methodology, explaining that unlike Walumbwa et al.'s (2008) process, their (i.e., Beddoes-Jones and Swailes, 2015) model "was developed and tested using 'real' leaders rather than students… We suggest, therefore, that the resulting model has greater validity and relevance… [than research] derived from student populations with little or no real-world leadership experience" (p. 94). However, it seems that Beddoes-Jones and Swailes (2015) misunderstood the primary purpose of the ALQ (Walumbwa et al., 2008), which is to measure followers' perceptions of their leader's AL. Whereas Beddoes-Jones and Swailes (2015) gathered data from leaders about their own notions of AL, Walumbwa et al., (2008) tested their measure on students who were also working full-time. Thus, scholars should not put too much stock in Beddoes-Jones and Swailes' (2015) criticism of the ALQ.

Walumbwa et al., (2008) developed the Authentic Leadership Questionnaire (ALQ), to explore and validate the assumptions of AL (Avolio et al., 2007). The four dimensions of the ALQ, detailed above, have since been validated, and are positively correlated with outcomes such as performance, organizational commitment, and satisfaction with supervisor performance (Avolio et al., 2007; Walumbwa et al., 2008). Walumbwa et al., (2008) conducted a series of content validity checks which whittled down the list of items from 35 to 16. Then, they gave the ALQ to two separate, randomized samples, one to 224 workers working for a large high-tech manufacturer in the United States and the other to 212 workers of a large, state-owned company in China. Confirmatory factor analyses and subsequent statistical tests, applied separately to each of the samples, demonstrated that the ALQ had strong reliability and validity. Additionally, Caza et al., (2010) found that the ALQ supported measurement equivalence across gender. Furthermore, addressing concerns that Walumbwa et al., (2008) did not report the use of

modification indices when performing confirmatory factor analyses (Crede & Harms, 2015; Neider & Schriesheim, 2011), Avolio et al., (2018) presents updated statistical tests that reports the use of modification indices, as described in statistical textbooks (e.g., Brown, 2015; Maruyama and Ryan 2014). (The three authors on the Avolio et al., (2018) article were also authors on the Walumbwa et al., (2008) study.) The statistical results that Avolio et al., (2018) found based on the work of Walumbwa et al., (2008) reiterated support for its reliability and validity. Results from the statistical analysis conducted by Walumbwa et al., (2008) are shown on the next page. Table 3 represents confirmatory factor analysis results from both samples, while Table 4 represents results from the factor loadings (Walumbwa et al., (2008).

Table 3

Comparison of A Priori Authentic Leadership Questionnaire Factor Structure (Walumbwa et al., 2008, p. 99).

Structure	X^2	df	X^2 / df	ΔX^2	CFI	RMSEA
U.S. sample (n=224)						
One-factor model (all 16 items)	356.78	102	3.50		0.91	0.11
First-order factor model	272.65	96	2.84	84.13*	0.94	0.09
Second-order factor model	234.70	98	2.39	122.08*	0.97	0.05
Chinese sample (n=212)						
One-factor model (all 16 items)	249.79	102	2.45		0.91	0.09
First-order factor model	208.71	96	2.17	41.08*	0.93	0.08
Second-order factor model	176.03	98	1.83	73.76*	0.95	0.06

All chi-square values are significant at $p < 0.001$; the ΔX^2 is in relation to one-factor model.
CFI = comparative fit index; RMSEA = root mean square error of approximation.
* $p < 0.01$ (two-tailed).

Table 4

Authentic Leadership Questionnaire Factor Loadings (Walumbwa et al., 2008, p. 99).

Items	Self-Awareness	Relational Transparency	Internalized Moral Perspective	Balanced Processing
AL1	0.85 (0.71)			
AL2	0.93 (0.70)			
AL3	0.84 (0.69)			
AL4	0.81 (0.67)			
AL5		0.82 (0.63)		
AL6		0.79 (0.66)		
AL7		0.86 (0.64)		
AL8		0.85 (0.78)		
AL9		0.68 (0.71)		
AL10			0.82 (0.64)	
AL11			0.66 (0.62)	
AL12			0.69 (0.68)	
AL13			0.77 (0.74)	
AL14				0.74 (0.68)
AL15				0.87 (0.74)
AL16				0.85 (0.69)

Notes. The factor loadings in parentheses are for the Chinese data. All the factor loadings are significant at $p < 0.001$.

Impacts of Authentic Leadership: Findings with the ALQ

Through the ALQ (Walumbwa et al., 2008), AL has been studied across a variety of industries (e.g., business, education, health care) with promising results for leaders and their followers (Hong, 2017; Laschinger & Fida, 2014; Rego et al., 2014; Ribeiro et al., 2020). About a decade ago, scholars (e.g., Cooper et al., 2005; Gardner et al., 2011) were concerned about the lack of empirical research that could support claims about the positive effects of AL. In recent years, however, numerous studies (e.g., Avolio et al., 2018; Hong, 2017; Kulophas et al., 2018; Laschinger et al., 2015; Leroy et al., 2015; Semedo et al., 2016; Xu et al., 2017) have demonstrated empirical support that perceptions of leaders' AL, measured with the ALQ, have a variety of positive effects. Using the ALQ, studies have demonstrated evidence that AL directly

impacts followers' job performance (Walumbwa et al., 2008; Wang et al., 2014; Wong & Cummings, 2009; Xu et al., 2017), job satisfaction (Azanza et al., 2015; Giallonardo et al., 2010; Jensen & Luthans, 2006; Walumbwa et al., 2008), work engagement (Giallonardo et al., 2010; Stander et al., 2015), feeling of belonging (Wong et al., 2010), and organizational commitment (Jensen & Luthans, 2006; Walumbwa et al., 2008). Additionally, Clapp-Smith et al., (2009), Stander et al., (2015), Wong et al., (2010) and Wong & Cummings (2009) all found that leaders' AL caused followers to have increased trust in the leadership. AL makes followers more creative (Rego et al., 2014; Semedo et al., 2016; Xu et al., 2017), hopeful (Rego et al., 2014; Wang et al., 2014) and optimistic (Stander et al., 2015; Wang et al., 2014). Furthermore, high levels of AL reduce burnout and increase employee retention (Azanza et al., 2015; Wong & Cummings, 2009).

Within schools, studies using the ALQ have found that AL leads to a positive school culture (Horn & Marfán, 2010), more teacher commitment (Quraishi & Aziz, 2018; Srivastava & Dhar, 2019), and higher rates of teacher engagement (Bird et al., 2013; Quraishi & Aziz, 2018). After administering the ALQ to a convenience sample of 86 teachers in Portugal, Bento and Ribeiro (2013) argue that schools with high levels of AL have open school climates that provide access and opportunity to information, resources, and support to all. Although Srivastava and Dhar (2016) used the ALQ to study the impacts of AL on AO in Northern India, and Kulophas et al., (2018) did so in Thailand, the impacts of AL on AO has not yet been investigated in the United States.

Criticisms of Authentic Leadership

AL has received some criticism because it is still developing and has questions that need to be addressed. Gardiner (2011) views AL as deeply problematic because it does not address

issues related to power and privilege and implies that women are more likely to be rated as less authentic due to followers' unconscious biases in a work climate built on male leaders' values. Gardiner (2011) argues that "it is vital to consider how authenticity manifests itself differently depending upon a person's place in the world, and looks at how silence influences notions of autonomy and a person's ability to take up space within the public sphere" (p. 99). Yet, Caza et al., (2010) and Woolley et al., (2011) found that the ALQ did not have statistically significant differences between genders.

Additionally, Gardiner (2011) warns that companies might hire leaders who profess to be, but in actuality are not, authentic. However, Gardiner appears to operate under the assumption that a leader's AL is measured by their own perceptions; when in fact, the ALQ specifically measures followers' perceptions of a leader's AL. Additionally, Gardiner struggles to explain how his primary argument, regarding Irish women's testimony of being afraid to speak in public during ethnic tensions in England in the 1970s, relates to AL. Further, Gardiner does not provide any ideas or solutions for how AL theory could better consider silence and issues related to power and privilege.

Alvesson and Einola (2019) also criticize AL for "scoring higher on appearing good and reflecting people's interest in easy, ideologically appealing solutions than on offering a qualified understanding of organizational life and manager-subordinate relations" (p. 383). Specifically, they state that they are alarmed by how AL appears to be 'excessively positive' and seems to be based on idealized and unrealistic expectations of how organizations function (Alvesson & Einola, 2019). Alvesson and Einola (2019) argue that AL's foundation is not properly anchored in philosophical theories, its four components do not form a solid theoretical construct, that AL is a recycled version of transformational leadership, and that AL "is often unwanted at work and

may distract from what is required to align people and get tasks done" (p. 385). Additionally, Alvesson and Einola (2019) complain that AL is not analyzed by prominent researchers and leadership journals with a proper amount of rigor.

Gardner et al., (2021) replied to Alvesson and Einola's (2019) criticism, sharing areas of both agreement and divergence. Together, they (i.e., Alvesson and Gardner) published their correspondence, to allow readers greater insight into their positions. While acknowledging that AL requires more rigorous review, Gardner et al., (2021) point out that AL has been studied across a diverse set of industries, cultures, and increasingly, through a more extensive set of research methods. Additionally (and rather ironically), Gardner et al., (2021) used quotations and examples from Alvesson's book, *Managerial Lives: Leadership and Identity in an Imperfect World* (Sveningsson & Alvesson, 2016) to provide support for each of the four leadership components developed by Walumbwa et al., (2008). Furthermore, Gardner et al., (2021) clearly distinguished how AL and transformational leadership are entirely distinct constructs. While Gardner and Alvesson end up 'agreeing to disagree' on many of Alvesson and Einola's (2019) criticisms, they do find common ground on other points (Gardner et al., 2021).

The ALQ (Walumbwa et al., 2008) is the most popular, widespread, and applied measurement tool to measure AL (Avolio et al., 2018). Methodologically, Crede and Harms (2015) and Neider and Schriesheim (2011) shared their concerns that Walumbwa et al., (2008) did not report the use of modification indices when performing confirmatory factor analyses. Avolio et al., (2018) explain that although the use of modification indices and not reporting them was common at the time of the Walumbwa et al., (2008) study, best practices have evolved such that researchers should report their use (Brown, 2015). Thus, Avolio et al., (2018) addressed concerns about the methodology of the Walumbwa et al., (2008) study by re-performing the

confirmatory factor analyses without any modification indices. After performing these tests, Avolio et al., (2018) found that the results reaffirmed and reinforced the findings from Walumbwa et al., (2008)'s study. The new results were similar to the initial results.

Academic Optimism

Hoy et al., (2006) conceptualize Academic Optimism (AO) as a combination of three constructs: academic emphasis, collective efficacy and trust in students and parents. Each component of AO, on its own, can predict student achievement and is controlled for SES (Addi-Raccah, 2012; Berebitsky & Salloum, 2017; Forsyth et al., 2011; Goddard et al., 2000b; Goddard et al., 2015; Hoy & Sabo, 1998; Hoy & Tshannen-Moran, 2007). When combined together, the three mutually reinforcing constructs form AO (Hoy et al., 2006; Hoy, 2012; Wu et al., 2013), a strong predictor of student achievement (Beard et al., 2010; Hoy et al., 2007; Hoy et al., 2008; Mascall et al., 2008; Thien & Chan, 2020; Wu et al., 2013). Each component of AO will now be analyzed in depth.

Academic Emphasis

Education in the United States has long been focused on increasing student achievement (Gamage et al., 2009; Grissom et al., 2021). Thus, school leaders engage in continuous school improvement, focusing on increasing student achievement (Goddard et al., 2000b; Hallinger & Heck, 1996; Leithwood et al., 2020). The scholarly focus and the theoretical underpinnings of academic emphasis began in earnest when Edmonds (1979) provided evidence that school leadership can determine school characteristics which directly impact student achievement. Essentially, Edmonds (1979) argued that schools had specific, controllable characteristics, which could determine how well students could learn. Edmonds (1979) found that effective schools "have a climate of expectation in which no children are permitted to fall below minimum but

efficacious levels of achievement" (p. 22) and have a culture that "is orderly without being rigid, quiet without being oppressive, and generally conducive to the instructional business at hand" (p. 22). Edmonds' (1979) findings were generally accepted and supported by subsequent research (Hoy et al., 2006; Leithwood et al., 2008, 2020; Purkey & Smith, 1983; Stringfield & Teddlie, 1991).

Hoy, together with a variety of colleagues, worked extensively on capturing many of Edmonds' (1979) school effectiveness characteristics in a construct they called academic emphasis (Hoy et al., 1991; Hoy et al., 2013; Hoy & Sabo, 1998), which also is often referred to as academic press (Hoy et al., 2006; Murphy et al., 1982; Tschannen-Moran & Gareis, 2015). Hoy et al., (1991) used the 8-item academic emphasis subscale of the Organizational Health Inventory (Hoy et al., 1991) to measure the academic emphasis of the school. Previous research had already demonstrated the reliability and construct validity of the academic emphasis subscale (Hoy et al., 2006; Hoy et al., 2008). Hoy et al., (2006) define academic emphasis as, "the extent to which a school is driven by a quest for academic excellence – a press for academic achievement. High but achievable academic goals are set for students; the learning environment is orderly and serious; students are motivated to work hard; and students respect academic achievement" (p. 427). Murphy et al., (1982) described how the academic emphasis construct combines the written and unwritten policies, practices, expectations, norms and rewards of schools into a construct that can explain student achievement. Additionally, Hoy and Sabo (1998) explained that schools that demonstrate academic emphasis have a strong, cohesive culture that is orderly, responsive to new ideas, and focused on addressing student needs. Similarly, Beard et al., (2010) conceptualize teachers' sense of academic emphasis as the degree to which teachers find ways to engage students in appropriate, academic tasks. Hoy et al., (2013)

found that healthy school climates tend to have a strong academic emphasis and a principal who uses their influence to develop teachers' beliefs that all students can learn and that teachers can successfully impact student learning.

Academic Emphasis' Theoretical Underpinnings

Goddard et al., (2000b) extended Bandura's (1986, 1997) Social Cognitive Theory, arguing that it provides a useful framework for understanding individual and collective behavior and explaining how individual and school-level perceptions of academic emphasis can grow and develop. According to Social Cognitive Theory (Bandura, 1986, 1997), humans have agency over their behaviors and choices. Given that organizations are capable of learning, growing and developing (Bolman & Deal, 2017; Senge, 2006), organizations can also be considered to have agency (Goddard et al., 2000b). Thus, both individuals and organizations have agency over the actions that they take and the decisions that they make. In their Evidence of Learning framework, XCPS explains how schools must make purposeful choices to engage in continuous school improvement. Hallinger & Heck (1996) and Leithwood et al., (2020) demonstrate how successful schools take purposeful actions to meet their organizational goals (i.e., increased student achievement). For instance, Goddard et al., (2000b) posit that schools that value student achievement will choose to purposefully strengthen teacher perceptions of the importance of academic achievement. Thus, as Social Cognitive Theory specifies that individuals' perceptions of their own capabilities influence their actions (Bandura, 1986, 1997), Goddard et al., (2000b) predict that teachers' collective academic emphasis and student achievement would reinforce each other. As Goddard et al., (2000b) write, "Academic emphasis, which helps shape the normative environment of a school, will have a strong influence over teacher behavior and, consequently, student achievement" (p. 689). In a similar vein, based on Social Cognitive Theory

(Bandura, 1993, 1997), Hoy and Woolfolk (1993) found that teachers' perceptions of their own academic emphasis predicted their own self-efficacy.

Goddard et al., (2000b) measured academic emphasis at the school level, deriving their collective academic emphasis construct from the aggregated perceptions of individual teachers about their school's faculty as a whole. In doing so, they followed the guidance of Bandura (1993, 1997) who suggested that collective data can be collected by aggregating individual perceptions to the group level. Their (Goddard et al., 2000b) aggregation of individual perceptions to create a collective perception represents a key aspect of organization analysis. With their assumption that organizations learn, grow, and develop (Bolman & Deal, 2017; Cook & Yanon, 1996; Senge, 2006), Goddard et al., (2000b) "base our notion of organizational learning on the cognitive activity of individual learning; that is, organizations use learning processes akin to those of individuals" (p. 687). Thus, Goddard et al., (2000b) suggest that teachers' individual academic emphasis can permeate throughout the building, shaping the climate of the school. Bolman and Deal (2017) and Senge (2006) explain how organizations are capable of functioning better and learning, achieving outcomes that individuals along could not accomplish. Academic emphasis, measured at the collective level, represents an organizational characteristic that allows schools to achieve better outcomes (i.e., student achievement) (Goddard et al., 2000b; Hoy et al., 2006). Similarly, Lee and Bryk (1989) noted that schools are able to control how much they strive for academic emphasis, concluding that schools that focus more on academic emphasis tend to promote higher levels of academic achievement.

Measuring Academic Emphasis

Hoy et al., (1991) sought to measure school climate, an abstract conceptualization that they hypothesized would be associated with high levels of student achievement. Measuring a

school's climate extended the work of Edmonds (1979), who was one of the first researchers to suggest that schools had tangible characteristics which could determine how well students could achieve. Subsequent research (Grissom et al., 2021; MacNeil et al., 2009; McGuigan & Hoy, 2006; Wu et al., 2013) reinforced the notion that a school climate could directly impact student achievement. However, Hoy et al., (1991) explained that as they set out to measure school climate, there were not many reliable and valid measurement tools that they could use. They did consider using the Organizational Climate Descriptive Questionnaire (OCDQ) developed by Halpin and Croft (1963), which had led to hundreds of studies up to that point (Hoy et al., 1991; Miskel & Ogawa, 1988), and elements of it had been shown to predict school discipline (Nwankwo, 1979) and innovation (Brady, 1988) among other applications (Hoy et al., 1990). However, Hoy et al., (1991) decided that the OCDQ would not be a good fit for their study, because the OCDQ lacks clear logic and is cumbersome (Silver, 1983), is not well-suited for schools with low levels of SES (Miskel & Ogawa, 1988), and does not take students into account when measuring school climate (Hoy et al., 1991).

Hoy et al., (1991) explain that whereas they did retain some elements of the OCDQ (e.g., the 4-point Likert Scale, items that measured whether a school had an open or a closed school climate), they did create their own unique tool. Thus, Hoy et al., (1991) gathered feedback from experts in the field and conducted a series of pilot studies and subsequent factor analyses to sharpen their tool, which they called the Organizational Health Index (OHI). Beginning with 131 unique items, Hoy et al., (1991) ended with 37 items, reporting that each item was clear and concise, reflected school climate, had content validity and discriminatory potential. Their measurement tool was deliberately student-focused and centered around teacher-student interactions (Hoy, 2012). Perhaps, most importantly, Hoy et al., (1991) introduced academic

emphasis, “a critical ingredient of effective schools” (p. 21), to the OHI, based on the work of Bossert et al., (1982), Purkey and Smith (1983), and Edmonds (1979). Indeed, academic emphasis is tightly associated with higher levels of student achievement (Goddard et al., 2000b; Hoy et al., 1990; Hoy et al., 2006; Padilla et al., 2020; Wu et al., 2013). The academic emphasis subtest contained 5 items, with a reliability (alpha) of 0.84. Hoy et al., (1990) found that the OHI was a better predictor of both teacher commitment and student achievement than the OCDQ. The Teacher Academic Optimism Scale – Elementary (TAOS-E), used to measure the AO of individual teachers (Beard et al., 2010; Hoy et al., 2008), uses 4 of the 5 items from the academic emphasis subtest of the OHI (Hoy et al., 1991).

Academic Emphasis’ Impact on Student Achievement

In a variety of studies across a diverse set of school contexts, the academic emphasis of a school has consistently been positively associated with high levels of student achievement (Beard et al., 2010; Forsyth et al., 2011; Goddard et al., 2000b; Hoy et al., 1991; Hoy et al., 2006; Hoy & Sabo, 1998; Tschannen-Moran & Gareis, 2015). For instance, Lee and Bryk (1989) compared Catholic Schools to public schools and found a link between the schools’ academic emphasis and student achievement. Building off of Edmonds’ (1979) successful school characteristics, Lee and Bryk (1989) found that when schools had higher levels of academic emphasis, a higher commitment from teachers, and an orderly environment, the achievement gap between White students and Black and Brown students narrowed. Hoy et al., (1991) found that academic emphasis as a collective property, was positively and directly related to student achievement in high schools. Hoy and Sabo (1998) found similar results in middle schools. Likewise, in their study investigating instructional leadership and academic emphasis, Alig-Mielcarek and Hoy (2005) found that the academic emphasis of the school, rather than

instructional leadership, was the variable that could explain student achievement. In their sample of 45 elementary schools, Goddard et al., (2000b) found that their academic emphasis construct, when measured at the school level through hierarchical modeling, explained 47% of variability in math achievement and 50% of variability in reading achievement between schools.

Academic emphasis is strongly associated with student achievement, even after controlling for students' SES (Alig-Mielcarek & Hoy, 2005; Gray & Kruse, 2016; Hoy et al., 1991; Hoy & Sabo, 1998; Padilla et al., 2020). Lee and Bryk (1989) recommend that academic emphasis is particularly beneficial for students typically served by Title I schools, as academic emphasis has strong potential to reduce achievement gaps within schools (Goddard et al., 2000b; Hoy, 2012; Schwabsky et al., 2019). Within educational literature, there are a variety of constructs similar to academic emphasis, which go by different names, perhaps none more popular than 'high expectations' (McGuigan & Hoy, 2006). Similar conclusions regarding the importance of high expectations have been reached by numerous other researchers studying academic achievement within schools with high levels of poverty (e.g., Title I schools) (Kannapel & Clements, 2005; Picucci et al., 2002; Trimble, 2002). For instance, in a longitudinal study of 31 teachers, Rubie-Davies et al., (2020) found students taught by teachers with high expectations achieved reading growth at higher levels than students taught by teachers with low class-level expectations.

In addition to its impact on student achievement, academic emphasis is also a predictor of successful professional learning communities and is strongly associated with teachers' belief that the principal and school policies support them in their work (Hoy, 2012; Wu et al., 2013) and collegial trust (Gray & Kruse, 2016). Tschannen-Moran and Gareis (2015) recommend that principals work to create a school culture characterized by academic emphasis, which has a

large, direct effect on student achievement, “over and above the negative effects of low SES” (p. 265). Indeed, studies using a variety of methodologies, such as multiple regression (Hoy & Sabo, 1998), structural equation modeling (Alig-Mielcarek & Hoy, 2005), and hierarchical modeling (Goddard et al., 2000), have shown that academic emphasis is a key variable in explaining student achievement (Hoy et al., 2006).

Collective Efficacy

Theoretical Roots

The collective efficacy construct, one of the three that comprise AO, has its roots in the theoretical work of Rotter (1966) and Bandura (1977). Rotter’s (1966) Locus of Control Theory argues that people have different beliefs about their ability to perform certain actions and tasks. Using his Internal-External Locus of Control Scale, a 29-item forced-choice test, Rotter (1966) found that some people possess an internal locus of control, while others have an external locus of control. Rotter (1966, 1990) posited that individuals with an external locus of control tend to believe that the success of their actions depends on luck, fate, or on other people. Simply put, people with an external locus of control tend to feel that things happen to them and view the world as uncontrollable (Berman et al., 1977). However, Rotter (1990) theorized that individuals with an internal locus of control, “expect that a reinforcement or an outcome of their behavior is contingent on their own behavior or personal characteristics” (p. 489). Rotter (1966) discusses how people’s internal or external locus of control can impact their sense of efficacy as it related to their outcome expectations. Rotter (1966, 1990) found that individuals with an internal locus of control tend to be more active, persistent, higher achieving, and have a higher sense of efficacy. Meanwhile, individuals with an external locus of control tend to be passive, give up easily, are lower achieving, and have a lower sense of efficacy.

In their work, on behalf of the RAND Corporation, Armor et al., (1976) and Berman et al., (1977) extended Rotter's (1966) Locus of Control Theory to education. As part of a larger, nationwide study, the RAND researchers sought to identify specific teacher characteristics that could impact the success of reading interventions (Armor et al., 1976) and the successful implementation of new teaching programs (Berman et al., 1977). Both sets of RAND researchers adapted two items from Rotter's (1966) Internal-External Locus of Control Scale to create a teacher efficacy construct (Armor et al., 1976; Berman et al., 1977), defined by Berman et al., as "a belief that the teacher can help even the most difficult or unmotivated students" (p. 136). Armor et al., (1976) found that teachers' sense of efficacy was a powerful predictor of academic achievement and Berman et al., (1977) reported that efficacy showed a strong, positive relationship to all of the dependent variables (e.g., percentage of teacher projects completed; the amount of teacher change; student performance; project continuation). Tschannen-Moran et al., (1998) describes how the teacher efficacy construct, developed by the RAND researchers based on the work of Rotter (1966), was extended and widely tested in the field of educational research. Teachers' sense of efficacy was positively correlated with student achievement (Ashton & Webb, 1986), less feelings of stress (Greenwood et al., 1990) and willingness to continue teaching (Glickman & Tamashiro, 1982).

Social Cognitive Theory

During the time that many of the aforementioned studies explored teacher efficacy as an extension of Rotter's (1966) Locus of Control Theory, Bandura (1977) created his self-efficacy construct based on an experiment with people who had snake phobias. Bandura's Self-Efficacy Theory (1977) later developed into Social Cognitive Theory (Bandura, 1986), a general framework for understanding how humans learn and are motivated to take actions. Just as Social

Cognitive Theory contributed to the theoretical framework of academic emphasis, so too does it provide a basis to conceptualize collective efficacy. According to Social Cognitive Theory, humans make choices and take actions based on a combination of their own personal characteristics (cognitive, emotional and biological states), environmental factors, and their own behavior (Bandura, 1986). Social cognitive theory posits that the foundation of action is people's self-efficacy, their beliefs about their own personal agency (Bandura, 1997). Bandura (1986) explained "self-efficacy" as a person's belief about their capacity to organize and execute the actions required to produce a given level of attainment (Bandura, 1986, 1993, 1997). In simpler terms, Bandura (1977) describes self-efficacy as a person's belief that they can accomplish a task.

Differentiating Social Cognitive Theory from Locus of Control Theory

Throughout the 1970s, 1980s, and 1990s, the field of educational research struggled to determine whether Rotter's (1966) Locus of Control Theory or Bandura's (1986) Social Cognitive Theory best captured and explained efficacy (McGuigan & Hoy, 2006). Unlike Locus of Control (Rotter, 1966), which focuses on a person's belief that they can perform a certain task or action, Bandura's (1986, 1997) Social Cognitive Theory involves a person's outcome expectancy, their estimate of how well they can perform a certain task or action. The perceived, future level of competency, included in Bandura's (1986, 1997) Social Cognitive Theory differentiates it from Rotter's (1966) Locus of Control Theory. Bandura (1997) clarifies that his self-efficacy construct is vastly different from Rotter's (1966) Locus of Control theory. As Tschannen-Moran et al., (1998) explain, "Beliefs about whether one can produce certain actions (perceived self-efficacy) are not the same as beliefs about whether actions affect outcomes (locus of control) … moreover, perceived self-efficacy is a strong predictor of behavior, whereas locus

of control is typically a weak predictor" (p. 211). Thus, over time, when investigating efficacy, researchers gravitated towards Bandura's (1986, 1977) Social Cognitive Theory, rather than Rotter's (1966) Locus of Control Theory (Tschannen-Moran et al., 1998).

Components of Self-Efficacy Theory

According to Bandura (1977, 1997), self-efficacy primarily comes from four sources, in order of greatest to least importance: mastery experiences, vicarious experiences, social persuasion, and affective states. Mastery experiences occur when individuals engage in a task or action successfully. In schools, teachers can have mastery experiences when their attempts at trying new instructional techniques result in increased student learning. Vicarious experiences happen when individuals observe the positive outcomes that occur when others engage in actions and tasks. For instance, a teacher seeing his students positively respond to structured, mathematical discourse, when modeled by an instructional specialist, would gain positive self-efficacy from the vicarious experience. Social persuasion occurs when an individual is encouraged to believe that she can successfully complete a task or an action and achieve the expected results. Receiving a pep talk from a school leader about a behavior management technique, for example, might result in a teacher having increased self-efficacy that she can successfully apply the technique to her practice. Finally, an individual's affective state can influence his self-efficacy, by shifting focus away from the task or action and towards his own emotional state. If a teacher felt motivated or anxious about a particular task or action, his self-efficacy about it might be impacted accordingly (Bandura, 1977, 1993). Thus, an individual's self-efficacy directly impacts the actions they take, the tasks they attempt, the outcomes they expect and their perceptions of obstacles and opportunities.

Underscoring the importance of self-efficacy, Bandura (1993, 1997) describes how individuals are less likely to initiate, persist, and successfully complete actions in areas where they have low levels of self-efficacy. Bandura (1977) explains that self-efficacy helps "determine how much effort people will expend and how long they will persist in the face of obstacles and adverse experiences" (p. 194). Self-efficacy is particular to specific tasks, domains, and contexts. For instance, a person can have high self-efficacy with regard to organizing and running parent-teacher conferences but low self-efficacy with regard to differentiating reading instruction. People with a low sense of self-efficacy may avoid difficult tasks, have a weak commitment to their goals, focus on their own personal failings, and lack grit to overcome challenging situations. On the other hand, people with a high sense of self-efficacy see challenging problems as opportunities for growth, are more persistent and willing to try new things, and quickly recover their self-efficacy following failures (Bandura, 1993, 1997).

A Challenge to Self-Efficacy Theory

In 1984, Eastman and Marzillier challenged Bandura's 1977 Self-Efficacy Theory, alleging that Bandura had improperly tried to separate efficacy from outcome expectations and they also argued that Bandura's conclusions had not been properly evaluated and vetted. Specifically, Eastman and Marzillier (1984) opined that efficacy expectations and expectations of outcomes could not be differentiated and "thus could not be regarded as conceptually different" (p. 215). Additionally, they demanded the 'outcome expectations' be more clearly defined. Additionally, Eastman and Marzillier had concerns with the scale that Bandura used in 1977 to measure the self-efficacy of his participants, who all had phobias of snakes, in performing various tasks involving snakes. Participants indicated their degree of confidence in

successfully completing a series of different tasks involving snakes. Bandura's (1977) scale is shown in Figure 2.

Figure 2.

Bandura's (1977) Self-Efficacy Measurement Tool.

"Rate your degree of confidence by recording a number from 10-100 using the scale given below:

10	20	30	40	50	60	70	80	90	100
quite uncertain				moderately certain					certain

Eastman and Marzillier (1984) alleged that the scale was not clear, because '10' could be interpreted differently for participants. They claimed that some participants might view '10' as very uncertain while others could perceive '10' to be virtually impossible. Additionally, they critiqued the use of a 100-point scale where participants could only select multiples of 10. Additionally, they added that the exclusion of 0 on the scale minimized any potential variance found in the data.

Bandura (1984) replied to the critiques of Eastman and Marzillier (1984) in his aptly titled response, "Recycling Misconceptions of Perceived Self-Efficacy." In his answer, Bandura (1984) explained that Eastman and Marzillier (1984) held misconceptions about perceived self-efficacy which he had already addressed in his 1977 study. Specifically, Bandura (1984) reminded his critics that outcomes are conditional upon the behavior and that Eastman and Marzillier (1984) were misreading the definition of efficacy. Bandura (1984) clarified that, "self-percepts of efficacy thus contribute significantly to performance accomplishments rather than residing in the host organism simply as inert predictors of behaviors to come" (p. 231). Bandura's Self-Efficacy Theory has been generally accepted by scholars and practitioners, and it has been applied and extended across numerous academic fields and industries (Bandura, 1997;

Pajares, 1997; Tschannen-Moran et al., 1998). As such, applications of Bandura's (1977, 1997) Self-Efficacy Theory are appropriate for use within educational research.

Self-Efficacy Theory in Schools

Bandura's (1977, 1997) Self-Efficacy Theory has been of particular interest to the field of educational research, because it is consistently associated with increased student achievement (Berebitsky & Salloum, 2017; Goddard et al., 2004; Ross & Gray, 2006). In the school setting, self-efficacy impacts the choices that teachers and schools make, which directly impacts levels of student achievement (Bandura, 1993; Hoy et al., 2006). Yet, researchers debated and disagreed about how to define and measure teachers' self-efficacy (Goddard et al., 2000a; Pajares, 1997; Tschannen-Moran et al., 1998). For instance, incorporating the items originally included by Armor et al., (1976) and Berman et al., (1977), on behalf of the RAND Corporation in their initial study on teacher efficacy, Gibson and Dembo (1984) developed a 30-item measure which captured two constructs, personal teaching efficacy and general teaching efficacy. Tschannen-Moran et al., (1998) describe how Woolfolk and Hoy (1990) further honed Gibson and Dembo's (1984) teacher efficacy instrument, shortening it to 16-items, due to concerns that upon further analysis, 14 of the 30 items were found to load onto both constructs. Additionally, Gibson and Dembo's (1984) tool was further modified and adapted to measure teacher self-efficacy geared towards specific contexts, such as science instruction (Riggs & Enoch, 1990), classroom management (Emmer & Hickman, 1991), and working with children receiving special education services (Coladarci & Breton, 1997).

Meanwhile, other researchers developed different tools to measure teachers' self-efficacy (Pajares, 1997). For instance, Ashton et al., (1984) proposed a vignette-based, teacher self-efficacy tool that asked teachers to make judgments about hypothetical contexts and Midgley et

al., (1989) created a unique five-item tool to measure teacher efficacy. Bandura (1997) also revealed a Teacher Self-Efficacy Scale which quickly gained popularity (Goddard et al., 2017; Tschannen-Moran et al., 1998). Finally, Tschannen-Moran and Woolfolk-Hoy (2001) modified Bandura's (1997) scale and effectively captured teachers' self-efficacy with their 12-item Teacher Sense of Efficacy Scale (Beard et al., 2010; Tschannen-Moran & Barr, 2004). For all of the aforementioned self-efficacy scales, when teachers have increased self-efficacy, student achievement increases (Bandura, 1997; Goddard et al., 2015; Goddard et al., 2017; Pierce, 2014; Tschannen-Moran & Barr, 2004; Tschannen-Moran & Woolfolk-Hoy, 2001).

Establishing Collective Efficacy as a Construct

Throughout the 1990s, as studies continued to find promising results related to teacher self-efficacy, educational researchers began investigating whether the combined self-efficacy of a school's faculty could be considered an organizational characteristic of the school (Goddard et al., 2000a, 2004; Pajares, 1997). This concept came to be known as collective efficacy, which Bandura (1997) defined as, "the groups' shared belief in its conjoint capabilities to organize and execute courses of action required to produce given levels of attainments" (p. 477). Collective efficacy has significant implications for organizations because of its impact on outcomes at the group level (Walumbwa et al., 2004). In the school setting, collective efficacy differs from self-efficacy because although collective efficacy refers to expectations of the effectiveness of the entire staff, self-efficacy only refers to teachers' expectations about their own effectiveness (Ross & Gray, 2016). Consistent with how a teacher's self-efficacy can predict student achievement (Berman et al., 1977; Goddard et al., 2017; Tschannen-Moran et al., 1998), collective teacher efficacy can explain the varying levels of student achievement at different schools (Goddard et al., 2000a, 2004; Tschannen-Moran & Barr, 2004). Just as teachers have

efficacy beliefs about themselves, so too, do they have efficacy beliefs about the entire faculty (Goddard et al., 2004). Hoy et al., (2013) found that teachers' collective efficacy can be considered as an integral element of a school's culture, with potential to invigorate or dispirit morale. Indeed, teachers' collective efficacy has been found to be an important organizational characteristic that can change over time (Bandura, 1993, 1997; Goddard et al., 2000a, 2004; Hoy et al., 2002; Hoy et al., 2006; Tschannen-Moran & Barr, 2004).

Using Woolfolk and Hoy's (1990) modifications to Gibson and Dembo's (1984) teacher efficacy instrument as a starting point, Goddard et al., (2000a) developed the Collective Efficacy Scale, a 21-item scale. Items in the Collective Efficacy Scale were both worded positively and negatively, to avoid bias, as Woolfolk and Hoy (1990) found that teachers expressed different efficacy beliefs based on whether outcomes were described positively or negatively. Goddard et al., (2000a) chose a group orientation for the items in their scale (e.g., 'Teachers in this school can get through to the most difficult students,' rather than the individual oriented item – 'I am able to get through to the most difficult students') as group-oriented items better reflect individuals' collective experiences. All of the items loaded strongly on the single factor (collective efficacy) and analysis of the scale revealed that it had high internal reliability (alpha = 0.96) (Goddard et al., 2000a). Maruyama and Ryan (2014) and Creswell and Guetterman (2019) explain that construct validity can be established if a new construct relates to other constructs as expected. Thus, the Collective Efficacy Scale, developed by Goddard et al., (2000a) had strong construct validity, as it was positively correlated with Woolfolk and Hoy's (1990) teacher efficacy scale and Bandura's (1997) individual teacher efficacy scale, and had a negative relationship with a scale that measured teachers' feelings of powerlessness (Goddard et al., 2000a).

Bandura (1993) demonstrated that teachers' collective efficacy was related to student achievement, regardless of the SES of the students. Similarly, Goddard et al., (2000a) found that after controlling for SES, collective efficacy was significantly related to student achievement in mathematics and reading. In a diverse sample of 66 middle schools in Virginia, Tschannen-Moran and Barr (2004) demonstrated that teachers' collective efficacy predicted students' writing scores. Further, Hoy et al., (2002) found that in high schools, teachers' collective efficacy had a greater impact on student achievement than did the students' own SES. Meanwhile, Berebitsky and Salloum (2017) found that there was a positive and significant link between the level of collective efficacy in a school and evidence-based, instructional practices that lead to higher level of student achievement.

Later, in establishing AO, the dependent variable of the present study, Hoy et al., (2006) used a 12-item, condensed version of Goddard et al., (2000a)'s Collective Efficacy Scale. Although other measurement tools for collective efficacy are in circulation (Salanova et al., 2003), many researchers whose work involves the collective efficacy construct use Goddard et al., (2000a)'s 12-item, shortened Collective Efficacy Scale (Beard et al., 2010; Berebitsky & Salloum, 2017; Hoy et al., 2006; Srivastava & Dhar, 2016). Conclusively, collective efficacy has been shown to be a strong predictor of student achievement (Bandura, 1993; Berebitsky & Salloum, 2017; Goddard et al., 2015; Tschannen-Moran & Barr, 2004).

Impact of School Leadership on Collective Efficacy

Finally, principals and school leaders have the potential to positively influence teachers' collective efficacy, promoting student achievement (Goddard et al., 2015; Leithwood & Mascall, 2008). Through a variety of leadership behaviors, principals can develop teachers' self-efficacy, improving instruction and increase student learning (Goddard, 2002; Tschannen-Moran & Barr,

2004). For instance, Ross and Gray (2006) found that transformational leadership was positively correlated with teachers' collective efficacy. Although not in a school setting, Walumbwa et al., (2004) similarly found that transformational leadership influenced the collective efficacy and worker satisfaction of bank employees. Regarding other forms of leadership, in a three-year study in two urban districts, Berebitsky and Solloum (2017) found that principals who effective demonstrate distributive leadership directly led to increased collective efficacy among the teachers at their school. Tschannen-Moran et al., (1998) summarized that when principals displayed strong leadership skills and were responsive to teachers' concerns, the collective sense of efficacy in the school increased. Similarly, Goddard et al., (2000a, 2004) found that strong, instructional leadership positively influenced collective efficacy. In a two-year longitudinal study of 93 elementary schools, Goddard et al., (2015) found that principal leadership and teacher collaboration could predict teachers' perceptions of their collective efficacy. They wrote that their results, "confirm that principals' instructional leadership is a significant, positive predictor of collective efficacy beliefs, through its influence on teachers' collaborative work" (Goddard et al., 2015, p. 525).

Impact of Authentic Leadership on Efficacy

There is limited research on the relationship between AL and collective efficacy. Xiong and Fang (2014) found that perceptions of AL, as measured by the ALQ (Walumbwa et al., 2008), resulted in increased collective efficacy, as measured by a 4-item measurement tool developed by Salanova et al., (2003), based on Bandura's (1977, 1997) Self-Efficacy Theory. However, outside of that study, there does not appear to be any other studies that specifically investigate the impact of AL on collective efficacy in schools. Outside of a school setting, in Turkey, Ozkan and Ceylan (2016) found that construction workers' perceptions of their

supervisors' AL were positively correlated with their collective efficacy. Within schools, Bird et al., (2013) found that when superintendents demonstrated 'leadership authenticity,' schools were more likely to use recommended best practices during the school improvement process.

In the field of nursing, Laschinger et al., (2015) studied the impact of AL on a number of variables, including self-efficacy, in 1,009 registered nurses with less than three years of experience. The researchers found that the nurses' perceptions of their supervisor's AL were strongly, positively associated with their self-efficacy at successfully remaining in their job and maintaining strong mental health (Laschinger et al., 2015). Additionally, a number of recent studies investigating the impact of AL on self-efficacy (Laschinger & Fida, 2014; Stander et al., 2015; Wang et al., 2014; Xu et al., 2017) used a construct called Psychological Capital (PsyCap), which measures hope, resiliency, self-efficacy, and optimism (Luthans & Youssef, 2004; Luthans et al., 2007). In studies across a variety of settings and contexts, Laschinger and Fida (2014), Stander et al., (2015), Wang et al., (2014), and Xu et al., (2017) all found that AL is positively correlated with employees' efficacy and increased their PsyCap. However, although employees' commitment and performance can be associated with self-efficacy (Goddard et al., 2004; Pajares, 1997; Srivastava & Dhar, 2016), and despite self-efficacy is one of the four components of PsyCap (Luthans & Youssef, 2005; Luthans et al., 2007; Stander et al., 2015), they remain different and separate constructs and should not be conflated. Thus, while there are promising early results, a gap in the literature exists, as the impacts of AL on collective efficacy and self-efficacy are minimal.

Trust in Students and Parents

What is Trust?

Trust is a vital element in well-functioning organizations, necessary for effective cooperation and communication, and for producing cohesive and productive relationships (Bennis and Nanus, 2007; Gambetta, 1988; Kramer & Tyler, 1996; Kotter, 1988; Rousseau et al., 1998; Tschannen-Moran, 2014). Trust is a critical element in all human learning (Rotter, 1967) and is one of the most essential elements in social interaction (Bryk & Schneider, 2002; Steele & Aronson, 1995). Misztal (2013) describes how trust allows societies and organizations to have predictability, a strong sense of community and makes it easier for people to work together effectively. Trust allows for better communication within organizations, as Zand (1971) found that individuals with high degrees of trust are more likely to share precise and complete data and will be more effective communicators. To be successful, schools, like all organizations, rely on trust to be cooperative, cohesive, efficient, and well managed (Bryk & Schneider, 2002; Forsyth et al., 2011; Leithwood et al., 2004; Tschannen-Moran, 2014). Schools are increasingly needing to be run amid increased and changing demands and environmental pressures (Darling-Hammand, et al., 2010; Grissom et al., 2021), which increasingly require a trusting school environment to be successful (Hoy, 2012; Tschannen-Moran & Hoy, 2000). Supporting this notion, Vodicka (2006) and Goddard et al., (2009) argued that trust is the most essential element in developing a successful learning community. Bryk and Schneider (2002) studied trust in more than 400 Chicago elementary schools for almost a decade. Bryk and Schneider found that principals who fostered a culture of respect, who were skillful and competent in their core job responsibilities, and who lead authentically and with integrity, cultivated higher levels of trust. In turn, schools with higher levels of trust tended to have higher levels of student achievement in reading and math (Bryk & Schneider, 2002). Clearly, to function at their best, schools need their stakeholders to have high levels of trust (Rousseau et al., 1998; Tschannen-Moran, 2014).

Yet, trust is an abstract construct, associated with a wide variety of definitions and meanings, and difficult to study because it is multidimensional and dynamic (Brewster & Railsback, 2003; Bryk & Schneider, 2002; Kramer & Tyler, 1996; Leithwood et al., 2004; Misztal, 2013; Tschannen-Moran, 2014; Tschannen-Moran & Gareis, 2015). For instance, Hosmer (1995) observed that "There appears to be widespread agreement on the importance of trust in human conduct, but unfortunately there also appears to be an equally widespread lack of agreement on a suitable definition of the construct" (p. 380). Deutsch (1958) and Rotter (1967) were among the first researchers to investigate trust as an important, individual and interpersonal characteristic (Tschannen-Moran & Hoy, 2000). Deutsch (1958), noting that many common usages of trust only contain notions of an individual's outcome expectations or feelings of predictability, argued that any trust construct must contain vulnerability, because if and when trust is not fulfilled, the individual "suffers an unpleasant consequence" (p. 265) as a result. Similarly, Zand (1971) described trust as actions taken by individuals take that make themselves vulnerable to others, where the potential penalties of having the trust broken outweighs the potential benefits if the trust is not abused. The idea that trust involves making yourself vulnerable to another is a consistent theme throughout reviews of the literature (Baier, 1986; Bryk & Schneider, 2002; Hoy, 2012; Kramer & Tyler, 1996; Tschannen-Moran, 2014; Tschannen-Moran & Hoy, 2000).

Rotter (1967) conceptualized trust as a generalized personality trait, summarizing that trust can be measured by "the degree to which they [individuals] believe their informants without independent evidence" (p. 651), the expectancy with which an individual relies on another. Ellison and Firestone (1974) also framed trust as what occurs when people place outcomes under the partial or complete control of others, presuming that they will respond and act as expected.

Similarly, Frost et al., (1978) and Gambetta (1988) explained trust as the cooperation that occurs when individuals expect others to behave in a way that is either altruistic or that will benefit them. Combining Deutsch's (1958) focus on vulnerability with Rotter's (1967) emphasis on positive expectations, Forsyth et al., (2011) summarized trust as what occurs when individuals or groups take risks and make themselves vulnerable to others, with full confidence that others will respond in a positive way. As trust is an abstract concept with many possible definitions and conceptualizations (Misztal, 2013; Tschannen-Moran, 2014), Tschannen-Moran and Hoy (2000) viewed it as a series of components.

Components of Trust, According to Hoy and Tschannen-Moran (1999, 2003)

Hoy and Tschannen-Moran (1999, 2003) conducted a factor-analytic study in their comprehensive review of over 150 peer-reviewed articles about trust, which revealed that there are five unique factors of trust. Tschannen-Moran and Hoy (2000) explain that "all of the facets covary together and form a coherent construct of trust" (p. 556). Basing their conceptualization off of Butler and Cantrell (1984)'s five dimensions of trust (i.e., integrity; competence; reliability; benevolence; openness), Tschannen-Moran and Hoy (2000) similarly sought to explain how people (individually or collectively) can earn the trust of others. The work of Hoy and Tschannen-Moran (1999, 2003) would later be refined, developed and honed into the trust in students and parents construct, one of AO's three components (Beard et al., 2010; Hoy, 2012; Hoy et al., 2008), and used in a variety of other studies investigating trust (Forsyth et al., 2011; Goddard et al., 2009; Schwabsky et al., 2019; Tschannen-Moran & Gareis, 2015).

Benevolence. The most common condition of trust is a sense of benevolence, the confidence of the trustor that the trustee will act in ways not to harm the other party (Forsyth et al., 2011; Hoy et al., 2006; Tschannen-Moran & Hoy, 2000). The act of giving trust makes the

individual vulnerable, as trust is the assurance that the other will always act in their best interest. As mentioned previously, vulnerability is a critical and necessary element of trust (Baier, 1986; Deutsch, 1958; Kramer & Tyler, 1996; Tschannen-Moran, 2014; Zand, 1971). In the school setting, trust requires interdependence, where preferred outcomes cannot be achieved without the support and reliance of another (Rousseau et al., 1998; Tscahnnen-Moran, 2014). For instance, principals who engage in shared leadership lose control of the final decision but remain responsible for the outcome (Hoy & Tarter, 1995; Mascall et al., 2008).

Thus, when principals trust those around them to support them in the school improvement process, implementing initiatives in order to increase student achievement, they become vulnerable. Principals who demonstrate genuine care for teachers, students, and parents will earn the trust of their teachers (Tschannen-Moran & Gareis, 2015). Additionally, teachers rely on their trust of their principal when they try new teaching strategies and inevitably make mistakes (Hoy & Sabo, 1998). The individual giving trust is aware of the potential for betrayal and risks incurring harm as a result (Coleman, 1990; Rousseau et al., 1998; Williamson, 1993). Yet, through their benevolence, principals are able to accomplish outcomes that would otherwise not have been possible to achieve independently.

Reliability. At its most fundamental level, trust requires reliability, which combines predictability and benevolence (Forsyth et al., 2011; Hoy, 2012). Although predictability, the consistency of someone's behavior and knowing what to expect from them, is an integral part of trust (Butler & Cantrell, 1984; Gambetta, 1988), it requires vulnerability (Deutsch, 1958). For instance, a principal can expect an unprofessional teacher to reliably be late for work without needing to trust the teacher. Reliability must combine predictability with benevolence (Tschannen-Moran & Hoy, 2000), such as when principals trust teachers to plan and implement a

reading night for the school. In such a situation, the principal is vulnerable to the teachers. Yet, if there is sufficient reliability, the principal will not need to worry about the outcome (Butler & Cantrell, 1984). Due to the predictability, the principal knows that the teachers will come through.

Competence. Trust is built on a foundation of competence, as Hoy (2012) states, "there are circumstances when good intentions are not good enough" (p. 81). Competence is the ability to perform a task as expected, according to mutually agreed upon standards (Tschannen-Moran & Gareis, 2015). When analyzing trust, Baier (1986) emphasized the importance of competence, explaining that when individuals make themselves vulnerable to others, they rely on the others' competence to support and not harm their vulnerability. When individuals depend on another and the situation calls for a specific level of skill, competence is required to fulfill the expectations and develop trust (Tschannen-Moran & Hoy, 2000). In schools, teachers and principals depend on each other's competence to accomplish specific tasks (Tschannen-Moran & Gareis, 2015). Well-intentioned individuals who try their best but do not provide the expected level of competence are likely to not be trusted (Baier, 1986; Butler & Cantrell, 1984). For instance, an earnest and kind principal or teacher who wants to do well, yet is struggling and lacks the requisite level of skill, is unlikely to be trusted (Tschannen-Moran, 2014).

Honesty. Rotter (1967), as mentioned above, explained trust as the extent to which an individual can believe another. Tschannen-Moran and Hoy (2000) extended Rotter's (1967) definition to include that in order for an individual to be trusted, the individual needs to repeatedly convince the other that they are truthful, honest and transparent. Honesty is a critical component of authenticity (Hoy, 2012; Tschannen-Moran & Hoy, 2000), which is linked to increased trust in schools (Beard et al., 2010; Hoy et al., 2006; Tschannen-Moran & Gareis,

2015; Wu et al., 2013). Tschannen-Moran and Gareis describe honesty as being "anchored in moral principles and is cultivated through behaviors that demonstrate integrity of character, authenticity, and accountability for one's actions," (p. 260). Principals and teachers who are truthful, honest and transparent over an extended period of time will likely be more believable, and therefore, more trusted (Rotter, 1967; Tschannen-Moran, 2014). Many researchers view honesty as a vital facet of trust (Baier, 1986; Butler & Cantrell, 1984; Goddard et al., 2001; Misztal, 2013; Tschannen-Moran, 2014).

Openness. Hoy (2012) defines openness as "the degree to which relevant information is shared and actions and plans are transparent" (p. 81). Butler and Cantrell (1984) and Tschannen-Moran and Hoy (2000) would seem to agree, as they explain openness as a process through which people make themselves vulnerable to others through the sharing of pertinent and personal information. Tschannnen-Moran and Hoy (2000) conceptualized openness as causing a reciprocal trust, where both individuals feel vulnerable to each other and thus develop increased trust. Principals gain trust when they are approachable, open to the ideas of others, are transparent with information and provide teachers with influence over organizational decisions (Tschannen-Moran & Gareis, 2015). Smith et al., (2001) found that principals who did not lead with openness and transparency engendered closed climates which were associated with lower levels of faculty trust. Openness increases trust, while secrecy causes distrust (Hoy & Tschannen, 1999, 2003).

Measuring Trust

With trust containing many different definitions and conceptualizations, there naturally came to be a diverse array of scales and tools that captured different elements or dimensions of trust (Hoy, 2012; Tschannen-Moran & Hoy, 2000). For instance, Deutsch (1958) measured trust

as the extent to which individuals would make themselves vulnerable through making a cooperative move in a two-person mixed-motive game. (In a mixed-motive game, both players benefit if they select the cooperative choice and they 'lose' if they both select the uncooperative choice. Yet, if only one player selects the cooperative choice, the other player, who selected the uncooperative choice, exploits the other and earns an even greater benefit). However, Rotter (1967) and other researchers (e.g., Dawes et al., 1990) criticized Deutsch's (1958) method of measuring trust, arguing that people's responses and actions in a competitive game with a very specific context could not be extrapolated out to predict how people interact in their own interpersonal relationships in the real world. Rotter (1967), hoping to measure trust as a personality trait, developed a scale that contained items asking participants to make judgments about types of peoples' (e.g., politicians, parents, etc.) trustworthiness. However, Rotter's (1967) measurement system, like that of Deutsch (1958) did not have strong, predictive power. Thus, scholars interested in studying trust, such as Rempel et al., (1985) and Clark and Payne (1997) began to focus on individuals' perceptions of trust. Other researchers (e.g., Arrow, 1974; Coleman, 1990; Misztal, 2013; Williamson, 1993) studied how trust operates as a collective property (Tschannen-Moran & Hoy, 2000). Kramer and Tyler (1996) demonstrated the importance of collective trust for all organizations. Frequently, each study, whether investigating individual or collective perceptions of trust, viewed trust uniquely and contained a distinct tool or scale to measure trust (Tschannen-Moran & Hoy, 2000).

In a school setting, Hoy and Kupersmith (1985) studied trust as a collective perception, defining it as a group's generalized expectancy that they can rely on other individuals, groups, and organizations, whose words and actions will act in the group's own best interest. They developed an internal measure of collective trust of the faculty that contained three factors: (1)

trust in the principal; (2) trust in colleagues; and (3) trust in the organization. Their collective trust construct focused solely on internal trust, existing within the school building. Hoy and Kupersmith (1985) were unable to link their construct to student achievement, so researchers such as Hoy et al., (2006), Goddard et al., (2001), and Hoy and Tschannen-Moran (2007) turned their attention towards studying the external trust of the school (i.e., oriented towards the students, their families and the community) and its impact on student achievement (Hoy, 2012).

Developing the Collective Trust in Students and Parents Construct

To achieve high levels of student achievement, teachers must form trusting relationships with parents and students (Beard et al., 2010; Bryk & Schneider, 2002; Padilla et al., 2020). Wu et al., (2013) discuss how trust in students and parents can be considered as a collective process. Considering the components of trust, previously described (Hoy & Tschannen-Moran, 1999, 2003) collective trust was defined as, "a state in which groups are willing to make themselves vulnerable to others and take risks with full confidence that others will respond in positive ways, that is, with benevolence, reliability, competence, honesty, and openness" (Forsyth et al., 2011; Hoy et al., 2006; Tschannen-Moran & Hoy, 2000). Wu et al., (2013) concluded that trust in parents and trust in students are equivalent, agreeing with Bryk and Schneider (2002), Goddard et al., (2001), and Smith et al., (2001). Bryk and Schneider (2002) explain that in elementary schools, teachers' trust in students and parents primarily operates through teachers' trust in parents. Nevertheless, Bryk and Schneider (2002) determine that teachers' trust in students tends to be equivalent to teachers' trust in parents.

Measuring Faculty Trust in School: The Omnibus T-Scale

Hoy and Tschannen-Moran (2007) posited that if teachers trusted in their students and parents, student achievement might increase. Hoy (2012) reflects that shifting the direction of

teachers' trust (i.e., away from trusting school as an institution, and towards trusting students and their parents) was a breakthrough moment that allowed Hoy et al., (2006), and Hoy and Tschannen-Moran (2007) to connect levels of trust to increased student achievement. In order to do so, Hoy and Tschannen-Moran (2007) created a pool of items that measured the extents to which teachers trusted their principal, their colleagues, students and their students' parents. They submitted the questions them to a panel of experts for feedback, conducted field tests and pilot studies, and implemented two large-scale studies in order to assess psychometric properties of their scale. After each step, Hoy and Tschannen-Moran (2007) refined their scale, eventually whittling it down from 50-items to 31-items. Hoy and Tschannen-Moran (2007) named their scale The Omnibus T-Scale, and reported that it had strong measures of validity and reliability. Interestingly, the items that measured teachers' trust in students and parents were positively related to student achievement. Yet, in elementary schools, the items that measured teachers trust in parents consistently loaded higher than the items that measured teachers' trust in students (Beard et al., 2010). This would seem to support Bryk and Schneider's (2002) claim that in elementary schools, the relational trust between teachers and students operates primarily through the relational trust between teachers and parents. On Hoy and Tschannen-Moran's (2007) Omnibus T-Scale, the items that were related to teachers' trust in the principal and each other were not related to student achievement. When developing the Teacher Academic Optimism Scale – Elementary (Hoy et al., 2006; Beard et al., 2010), the four items used to measure Trust in Students and Parents were taken directly from The Omnibus T-Scale, based on factor analysis and honing in on only how teachers trusted students and parents (Hoy & Tschannen-Moran, 2007).

Importance of Trust in Title I Schools

Trust is an integral element of a positive school culture (Brewster & Railsback, 2003; Bryk & Schneider, 2002, Goddard et al., 2001; Hoy & Kupersmith, 1985), particularly important in Title I schools (Goddard et al., 2009; Padilla et al., 2020; Tschannen-Moran, 2014) which historically have more challenges and lower levels of student achievement (American Psychological Association, 2017; Reardon, 2011; Carver-Thomas & Darling-Hammond, 2017). Building trust in Title I is particularly important, especially when considering that the majority of students in Title I schools are Black and Brown (Brewster & Railsback, 2003; Le Floch et al., 2018; Padilla et al., 2020). Rhoden (2017) discusses how a lack of trust between Black males and schools has historically resulted in lower outcomes and how with higher levels of trust, Black males' levels of academic achievement can increase. To foster a strong, positive climate, Howard (2013), and Rhoden (2017) demand that schools fix structures within the educational system to better meet the needs of Black and Brown students. For instance, Howard (2013) describes how trust between Black males and schools can be rebuilt if the school works to mentor, nurture, and educate its Black and Brown students. School principals have the most power to impact, improve, and reimagine the school climate (Grissom et al., 2021). Strengthening this point, Carver-Thomas and Darling-Hammond (2017) and Smith and Johnson (2015) found that principals in Title I schools have the most significant impact on school climate, which MacNeil et al., (2009) found to have a significant impact on student achievement. Carver-Thomas and Darling-Hammond (2017) recommend that school systems develop better school leadership capacity in Title I schools for cultivating positive and trusting school climates.

Padilla et al., (2020), in their study of Title I elementary schools in Texas, found that when teachers developed positive, trusting and supportive relationships with parents and students, the schools tended to be successful (i.e., high levels of student achievement).

Additionally, in urban elementary schools, Goddard et al., (2001) used a multilevel model to demonstrate that there is a significant direct relationship between teachers' trust in students and parents and student achievement. Similarly, using path analysis and controlling for measures of school context, Goddard et al., (2009) found that in all public schools in Michigan, trust between teachers and students mediated the relationship between students' SES and their academic achievement. They suggested that future research investigate whether increasing trust in schools could "effectively minimize the academic disadvantage typically associated with poverty and racial composition" (p. 293). A plethora of studies (e.g., Addi-Raccah, 2012; Bryk & Schneider, 2002; Forsyth et al., 2011; Goddard et al., 2001; Goddard et al., 2009; Hoy et al., 2006; Hoy & Tschanenn-Moran, 2007; Rhoden, 2017) found that teachers' trust in students and parents is positively related to student achievement, even when controlling for SES.

Additionally, using the Omnibus T-Scale (Hoy & Tschannen-Moran, 2007), trust in students and parents has been found to be strongly related to staff retention and school functioning (Addi-Raccah, 2012), student-centered teaching and higher levels of commitment (Ngidi, 2012), and increased innovation (Schwabsky et al., 2019). Tschannen-Moran (2014) summarizing the importance of trust, explaining that without it, schools will likely be unable to maintain high levels of academic achievement.

Academic Optimism: Confirming a New Construct

Noting that academic emphasis, collective efficacy and trust in students and parents are "tightly woven together and seem to reinforce each other as they positively constrain student performance," (p. 426), Hoy et al., (2006) conceptualized the AO construct which they demonstrated to be a general latent construct. As detailed extensively in the sections above, the academic emphasis, collective efficacy and trust in students and parents constructs each have

distinct, similar characteristics that distinguish them from other school-based constructs. Specifically, academic emphasis, collective efficacy and trust in students and parents can each, on their own, explain student achievement while controlling for SES. As each of the variables are highly correlated with each other, Hoy (2012) explained that he and his colleagues sought to find a potential underlying property of the three variables. Thus, Hoy et al., (2006) hypothesized that they could be combined into a more general construct, AO, which schools could apply to increase and improve student achievement. Hoy (2012) explains that 'optimism' was the appropriate general construct to combine the three variables because each element implies a sense of hope and the possible. However, there are no optimism-specific items in any of the AO measurement tools (Beard et al., 2010; Hoy et al., 2006; Hoy et al., 2008). Rather, AO is simply a combination of the three variables (academic emphasis, collective efficacy, and trust in students and parents) together (Hoy, 2012).

In their conceptualization of AO, Hoy et al., (2006) and Hoy et al., (2008) described how academic emphasis, collective efficacy and trust in students and parents are three distinct, mutually-reinforcing elements, that each represent a different dimension of AO. Specifically, academic emphasis represents the behavioral element of a school, as teachers push for specific behaviors at school. Collective efficacy, teachers' beliefs about their ability to effectively teach and for their students to successfully learn, is the cognitive component of AO. Finally, trust in students and parents is the affective component of AO, representing teachers' emotional state.

Hoy et al., (2006) explain how each component of AO is mutually reinforcing:

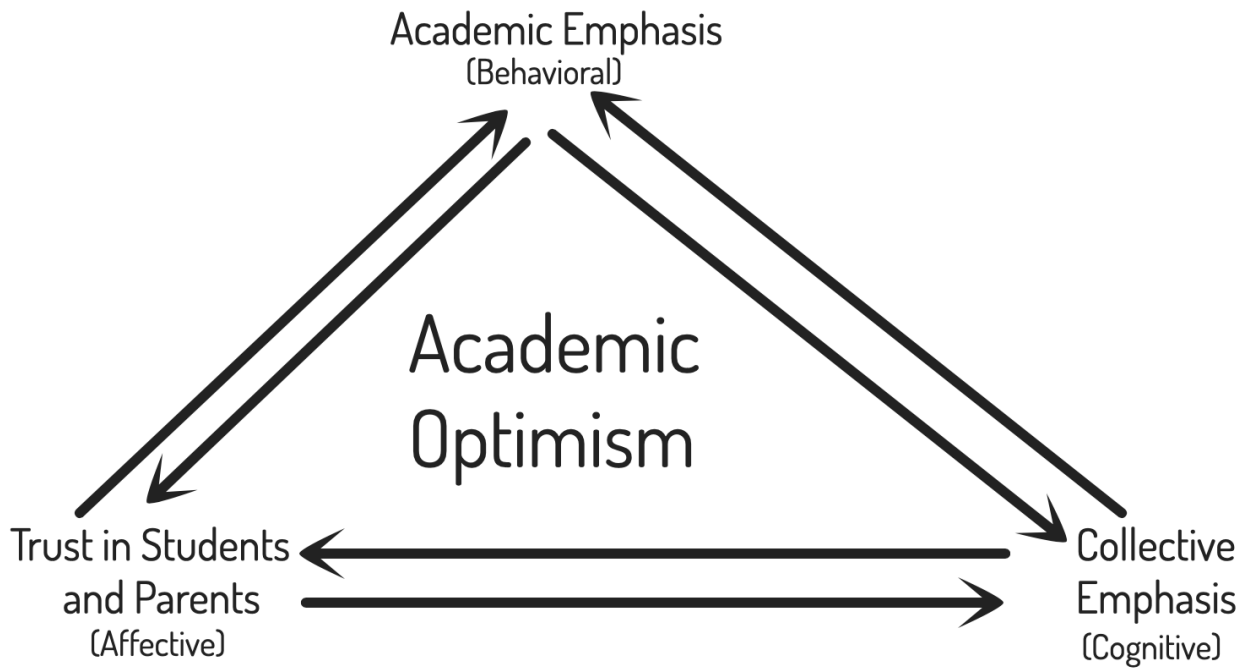
> Faculty trust in parents and students encourages a sense of collective efficacy, and collective efficacy reinforces and enhances trust. Similarly, when the faculty trusts parents, teachers can insist on higher academic standards with confidence that they will

not be undermined by parents, and high academic standards in turn reinforce faculty trust. Finally, when the faculty believes it has the capability to organize and execute actions that will have positive effects on student achievement, academic achievement is emphasized, and academic emphasis in turn reinforces a strong sense of collective efficacy (p. 431).

Each element of AO supports the others in creating a culture of AO in schools. The mutually-reinforcing interactions of AO's three components are represented below in Figure 3.

Figure 3.

The Mutually-Reinforcing Interactions between the Three Components of Academic Optimism.



Hoy et al., (2006) measured academic emphasis using the academic emphasis subscale of the Organizational Health Inventory (Hoy et al., 1991), which had an alpha coefficient of 0.84, (Hoy & Tarter, 1997). Perceptions of collective efficacy were measured with the Collective Efficacy Scale developed by Goddard et al., (2000a, 2004), which had an alpha coefficient of 0.91. Teachers' trust in students and parents was measured with the Omnibus Trust Scale (Hoy

& Tschannen-Moran, 2007), which had an alpha coefficient of 0.94. Additionally, each of the measurement scales that Hoy et al., (2006) used have strong construct and predictive validities, as detailed above in each constructs' section in the literature review.

Hoy et al., (2006) administered the TAOS-E to 3,400 teachers from 146 elementary schools in Ohio. When analyzing their data, Hoy et al., (2006) found that each element of AO had good reliability, as academic emphasis had an alpha coefficient of 0.85, collective efficacy had an alpha coefficient of 0.92, and trust in students and parents had an alpha coefficient of 0.93. Using first- and second-order factor analyses, Hoy et al., (2006) found that the three components of AO work together in a unifying fashion, forming AO. Further, they found their measurement tool, when applied at the school level of analysis to be a valid and reliable scale to measure AO. In a subsequent study of 96 different schools, after controlling for SES, Hoy et al., (2006) found that through structural equation modeling, AO accounted for 67% of the variance in student achievement for math and science, and for 54% of the variance in student achievement for reading, social studies, and writing.

Academic Optimism of Individual Teachers

Other early studies using AO (e.g., Mascall et al., 2008; Smith & Hoy, 2007) similarly analyzed data at the collective, school level, just as Hoy et al., (2006) had done. However, Hoy et al., (2008) and Beard et al., (2010) both demonstrated that AO could also be used at the individual, teacher level. Hoy et al., (2008) combined the academic emphasis subscale of the Organization Health Index (Hoy et al., 1991), the Collective Efficacy Scale (Goddard et al., 2000a, 2004) and the Omnibus Trust Scale (Hoy & Tschannen-Moran, 2007), into a 71-item survey, which was given to a randomized sample of 205 third and fourth grade teachers in Ohio. Using factor analyses, Hoy et al., (2008) found that AO accounted for 67% of the variance in

student achievement. However, the 205 surveys that Hoy et al., (2008) received back were fewer than the more than 350 surveys that they sent out. Although they sent multiple copies of the survey and gave multiple reminders, it is possible that the length of the survey resulted in a lower than anticipated response rate (Hoy et al., 2008).

Beard et al., (2010) pared down the three scales and developed the 11-item TAOS-E, which can be viewed in its entirety in Appendix D. Over the course of two pilot studies, Beard et al., (2010) used exploratory factor analyses to keep items that had high loadings (above 0.80) and that formed alpha coefficients with reliabilities above 0.80. In a convenience sample of 260 elementary school teachers in Ohio, representing rural, urban and suburban settings and 14 different school districts, Beard et al., (2010) found that the TAOS-E had significant factor loadings and strong goodness of fit indices. For instance, the Chi-Square test result was 38.118 ($p = 0.329$), which was not significant and thus, indicative of a good model fit. Other measures such as Root Mean Square Error of Approximation (0.0176) and non-normed fit index (0.996), Root Mean Square Residual (0.0219), and Goodness of Fit Index (0.974) all offered evidence that academic emphasis, collective efficacy and trust in students and parents at the individual level, could be combined to create AO, which could also be measured at the individual level. Furthermore, the TAOS-E was found to be a valid and reliable measurement tool for individual teachers' AO (Beard et al., 2010; Hoy, 2012). A variety of other studies (e.g., Forsyth et al., 2011; Kirby & DiPaola, 2011; Wu et al., 2013) found similar findings, demonstrating the promise held by AO. However, Anwar (2014) found that the TAOS-E, when translated into Urdu, did not have sufficient reliability. After revising the TAOS-E, Anwar (2014) developed a 25-item scale that had good reliability, with an alpha coefficient of 0.91.

Controlling for Academic Optimism

Given AO's positive impact on student achievement, researchers (e.g., Hasanvand et al., 2013; Hong, 2017; Mascall et al., 2008; Rutledge, 2010; Wu & Sheu, 2015) have sought to identify how schools can increase the AO of its staff. Wu and Sheu (2015) used hierarchical regression analyses on a sample of 3,672 teachers from 326 middle schools in Taiwan, and found that a school's resources has very minimal impact on the teachers' AO. Wu and Sheu (2015) explain that "this result alleviates the concern that AO was determined by the school resources. In other words, the preexisting condition of a school is not a key factor that determined AO. There are still many things that educational leaders can do to make a difference in academic optimism" (p. 670).

At the same time, Beard et al., (2010) and Wu et al., (2013) successfully identified that an enabling school structure (ESS) can predict the AO of teachers. Hoy et al., (2013) describe enabling school structure as a leadership hierarchy that facilitates teachers' work, rather than hinders it, as well as a system of rules, policies, and procedures that guide problem solving, rather than punishing failure. Principals that cultivate a more enabling school structure influence teachers to have more AO. In a study of 72 elementary school teachers enrolled in graduate-level courses, Beard et al., (2010) found that ESS moderately predicts AO ($r = 0.30$, $p < 0.01$). Wu et al., (2013) found similar results ($r = 0.21$, $p < 0.05$) in a sample of 1,571 elementary school teachers in Taiwan.

Although there are not many studies that have analyzed how teachers' gender and years of experience impact their AO, Thien et al., (2021) found that teachers' gender and years of experience could also predict AO. Specifically, in 18 secondary schools in Malaysia, Thien et al., (2021) found that the impact of distributed leadership on AO was stronger for teachers who are

male and for teachers who have more than ten years of teaching experience. Similarly, in a study in Taiwan, Chang (2011) also found that male teachers and more experienced teachers reported higher perceptions of their own AO. Experienced teachers also, in a study conducted by Huang and Yin (2018), were found to have higher levels of self-efficacy as they gained more years of experience. However, the researchers also found that teachers' perceptions of their own self-efficacy declined as they approached retirement.

With regard to collective efficacy, one of the three dimensions that comprise AO, the literature is split as to how it may be impacted by teachers' gender. While Odanga et al., (2015) and Klassen and Chiu (2010) found that male teachers tend to have higher levels of self-efficacy than female teachers, Arslan (2013) found the opposite, explaining that female teachers have higher levels of self-efficacy than male teachers. Meanwhile, Alenezi (2019) found that gender does not influence self-efficacy in a statistically significant manner!

Teachers' race and ethnicity has not been thoroughly studied in the context of how AL may impact AO. Yet, Gershenson et al., (2018) and Carver-Thomas and Darling-Hammond (2017) explain that teachers' race and ethnicity can predict a variety of educational outcomes and factors. However, there is currently a gap in the literature as it relates to how teachers' race and ethnicity may influence their AO.

Studying how Leadership Impacts Academic Optimism

While studies have found that distributed leadership (Hasanvand et al., 2013; Mascall et al., 2008; Thien et al., 2021) and transformational leadership (Hong, 2017; Rutledge, 2010) positively impacted AO in schools, the impact of AL on AO has not yet been systematically studied. Although Srivastava and Dhar (2016) and Kulophas et al., (2018) both found promising results when studying the impact of AL on AO in Northern India and Thailand, respectively, the

impacts of AL on AO has not yet been investigated in the United States or within Title I schools in the United States. In their bibliometric analysis of AO, Srivastava and Stelson (2020) recommend that researchers study AO in more diverse ways, in order to better understand how schools can develop teachers who are more academically optimistic. Furthermore, Grissom et al., (2021) argue that the field of educational research requires a significant amount of study and investigation into high-quality research practice and methods that provide clear, systematic direction for leadership policy and practice.

Regarding AL in general, however, empirical studies in the business world found that perceptions of leaders' AL positively impacted followers' collective efficacy (Xiong and Fang, 2014), trust in the leader (Clapp-Smith et al., 2009; Wong et al., 2010) and optimism (Stander et al., 2015; Wang et al., 2014). Given that AL is associated with a variety of positive impacts across industries and fields (Laschinger et al., 2015; Wang et al., 2014), the impact that AL could have on AO in Title I elementary schools is worth studying. If principals in Title I schools who demonstrate higher levels of AL increase the AO (and its dimensions) of their staff, it is highly likely that the teachers' increased AO will increase student achievement. Celebi et al., (2020) describe how teacher perceptions of their principal's leadership can influence and reinforce the principal's practices. Thus, if principals are made aware that teachers respond positively to high levels of AL, principals might be more likely to demonstrate higher levels of AL. Additionally, if AL is found to be positively correlated with AO, schools and school systems can focus their leadership development programs and processes around developing authentic leaders. Academic interventions, strategies and processes that are successful in Title I schools tend to generalize well to other schools (Padilla et al., 2020; Reardon, 2011). Comparable results could occur in

schools across the nation. Table 5, below, summarizes the key literature that influenced and informed my study.

Table 5

Selected Major Works that Influenced this Study

Study	Research Field	Research Contributions
Goddard et al., 2000b	Academic Emphasis	Academic emphasis can reduce student achievement gaps
Hoy et al., 1991	Academic Emphasis	Developed Organizational Health Inventory for schools, containing an academic emphasis subscale
Lee & Bryk, 1989	Academic Emphasis	Found link between academic emphasis and student achievement
Beard et al., 2010	Academic Optimism	Modified the TAOS-E in order to better measure the AO of individual teachers
Hoy et al., 2006	Academic Optimism	Confirmed the AO construct, combining academic emphasis, collective efficacy and trust in students and parents
Hoy et al., 2008	Academic Optimism	AO accounted for 67% of the variance in student achievement
Mascall et al., 2008	Academic Optimism	Found that AO in teachers can cause higher levels of student achievement
Avolio et al., 2018	Authentic Leadership	Provides updated statistics that reinforce and support the use of the ALQ in research
Gardner et al., 2020	Authentic Leadership	Provides more precise definitions of AL that differentiate it from other forms of leadership
Luthans & Avolio, 2003	Authentic Leadership	Conceptualized AL as a skill that can be developed over time
Walumbwa et al., 2008	Authentic Leadership	Developed the ALQ, a reliable and valid tool to measure perceptions of AL
Bandura, 1977	Collective and Self-Efficacy	Establishes research base for Self-Efficacy Theory

Bandura, 1997	Collective and Self-Efficacy	Introduces concept of collective efficacy within organizations
Goddard et al., 2000a	Collective and Self-Efficacy	Developed Collective Efficacy Scale
Hoy et al., 2013	Collective and Self-Efficacy	Collective efficacy of teachers impact student achievement
Bryk & Schneider, 2002	Trust in Students and Parents	In a 10-year longitudinal study, found that trust is a critical component of successful schools,
Hoy & Tschannen-Moran, 2007	Trust in Students and Parents	Teachers' external trust in a school (e.g., of parents) has an impact on student achievement, while internal trust (e.g., of the principal) does not
Tschannen-Moran & Hoy, 2000	Trust in Students and Parents	Schools require a trusting environment in order to be successful
Tschannen-Moran, 2014	Trust in Students and Parents	Summarizes the individual components of trust and explains how trust is necessary for students to maximize potential

CHAPTER 3: RESEARCH METHODOLOGY

My study used an exploratory, non-experimental, cross-sectional research design to better understand the relationship between teachers' perceptions of principals' authentic leadership (AL) and their own academic optimism (AO), and the three components of AO, within Title I elementary schools in a large, comprehensive, public school system in the mid-Atlantic region. Authentic leadership, as measured by the ALQ (Walumbwa, et al., 2008), is positively correlated with variables such as trust, optimism, and hope across a variety of industries and fields (Ribeiro et al., 2020; Wang et al., 2014) and AO has repeatedly been found to predict student achievement, regardless of students' socioeconomic status (Forsyth et al., 2011; Hoy et al., 2006; Mascall et al., 2008; Oldac & Kondakci, 2019). As AO combines three other mutually reinforcing constructs: academic emphasis, collective efficacy and trust in students and parents (Hoy et al., 2006), I investigated how teachers' perceptions of their principals' AL impacted AO, as well as the three, individual dimensions of AO. My study's research question, after controlling for demonstrated and potential predictors of AO, is:

Within Title I elementary schools, how do teachers' perceptions of their principals' authentic leadership impact their academic optimism and its individual components (i.e., academic emphasis, collective efficacy, and trust in students and parents?

After controlling for demonstrated and potential predictors of AO, my study's hypotheses are:

H 1. *In Title I elementary schools, teachers' perceptions of their principals' authentic leadership have a positive association with their academic optimism.*

H 2. *In Title I elementary schools, teachers' perceptions of their principals' authentic leadership have a positive association with their academic emphasis.*

H 3. *In Title I elementary schools, teachers' perceptions of their principals' authentic leadership have a positive association with their collective efficacy.*

H 4. *In Title I elementary schools, teachers' perceptions of their principals' authentic leadership have a positive association with their trust in students and parents.*

Authentic leadership is an area of leadership research that has been associated with a variety of positive impacts on variables across industries such as job satisfaction (Azanza et al., 2015), work engagement (Giallonardo et al., 2010), commitment (Stander et al., 2015), optimism (Wang et al., 2014), trust (Wong & Cummings, 2009), creativity (Semedo et al., 2016) and hope (Rego et al., 2014). Although researchers such as Hasanvand et al., (2013), Mascall et al., (2008) and Rutledge (2010) study the impacts of various forms of leadership on teachers' AO, the impact of AL on AO has not yet been thoroughly studied. My study's findings can inform principals in Title I elementary schools about how to be more effective leaders through demonstrating that AL positively impacts teachers' AO. Celebi et al., (2020) describe how teacher perceptions of their principal's leadership can influence and reinforce their principal's practices. If principals in Title I schools who demonstrate higher levels of AL increase the AO (and its dimensions) of their teachers, it is highly likely that the teachers' increased AO will increase student achievement. Academic interventions, strategies and processes that are successful in Title I schools tend to generalize well to other schools. Comparable results could occur in schools across the nation.

The methodology chapter is divided into ten sections that address the research design, population and sample design, informed consent, data collection, instruments, participant protection, the pilot study, data analyses, limitations and a summary.

Research Design

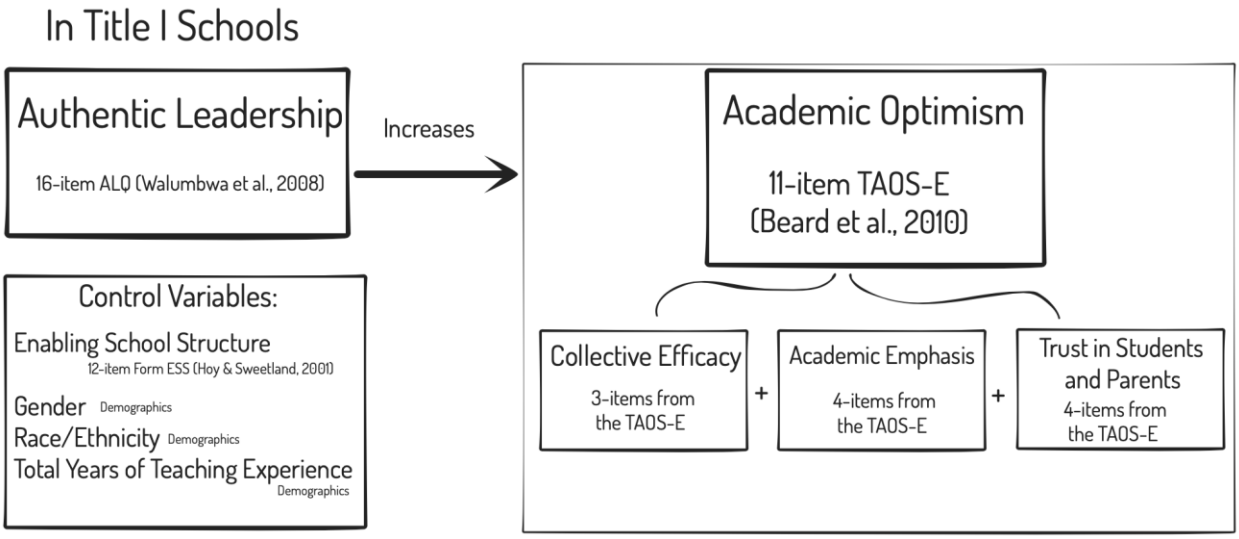
My research focuses on how AL impacts AO and its individual dimensions: academic emphasis, collective efficacy and trust in students and parents. The goal of my research is to discover and describe any trends that may arise and demonstrate a relationship in the data (Creswell & Guetterman, 2019). My study used a 46-item survey questionnaire (44 closed and two open-ended questions) distributed via Survey Monkey to a convenience sample of Title I elementary school teachers to collect data on two key constructs, AO (four dependent variables) and AL (one independent variable), and four control variables. The resulting cross-sectional data was analyzed using hierarchical multiple regression to identify the extent to which teachers' perceptions of their principals' AL can predict variation in their own AO, academic emphasis, collective efficacy, and trust in students and parents. I used hierarchical multiple regression to better understand the additive predictive power of AL on AO after controlling for other variables in the model.

Authentic leadership is my independent variable and academic optimism, academic emphasis, collective efficacy, and trust in students and parents are my dependent variables. Notably, the AO construct is comprised entirely of the subscales used to determine academic emphasis, collective efficacy and trust in students and parents. While it is atypical to analyze AO, as well as each of the individual constructs, my exploratory study does so purposefully in order to better understand the extent to which AL might impact AO and each of its individual constructs. Furthermore, this study follows previous research (e.g., Chang, 2011, Huang & Yin, 2018; Thien et al., 2021) which demonstrated that AO, as well as its individual dimensions, can be at least moderately predicted by other variables. For instance, Beard et al., (2010) and Wu et al., (2013) found that an enabling school structure (ESS) can predict AO. Therefore, my study will control for ESS.

As teachers' gender and years of experience can also be predictors of AO (Thien et al., 2021), and as teachers' race and ethnicity can impact a variety of variables (Gershenson et al., 2018), they are also controlled for in my study. Further details on my control variables can be found in the Instruments section of the Methodology. Figure 4 shows my conceptual framework once again, this time representing how my study's variables will be measured. I present my quantitative results in Chapter 4 and I discuss my findings in Chapter 6.

Figure 4.

Conceptual Framework of the Variables and Their Instruments.



Additionally, I sorted and analyzed data from the two open-ended questions and present these by theme in Chapter 5. The open-ended analysis helped me gain more insight into the relationship between AL and AO and the broader context during which my study occurred. Specifically, my first open-ended question asked teachers to describe their perceptions for how their principal's leadership impacted their ability to successfully teach and for their students to successfully learn. Data from the first question were sorted and analyzed three ways: (1) According to whether each response had a positive, neutral, negative or no perception of the principal's leadership; (2) According to each of the four components of AL (i.e., Self-

Awareness; Internalized Moral Perspective; Balanced Processing and Relational Transparency); and (3) According to leadership themes that arose in the responses. My second open-ended question asked teachers to discuss how (if at all) the COVID-19 pandemic impacted their perceptions of their principal's leadership. I sorted and analyzed the data according to how the respondents shared that the pandemic impacted their perceptions of their principal's leadership: (1) positively; (2) negatively; (3) neutrally; and (4) no impact. A complete discussion of my qualitative findings can be found in Chapter 5.

Instruments

To collect my data, I compiled instruments found to be valid and reliable measures for my variables into a Survey Monkey, which had six sections and can be found at the end of the dissertation in Appendices A through F. The sections of the Survey Monkey were: (1) An Informed Consent front-page, providing a detailed description of the purpose and procedures of the study, accompanied by a short, recorded video where I introduced myself, described my study's purpose and potential value, and explained how representation from all Title I schools would help strengthen my study's findings; (2) The 16-item ALQ, developed by Walumbwa et al., (2008); (3) The 12-item Enabling School Structures Survey (Form ESS), developed by Hoy and Sweetland (2001); (4) The 11-item TAOS-E originally developed by Hoy et al., (2006) and further honed by Beard et al., (2010); (5) two open-ended questions; and (6) Demographic information (i.e., gender, race/ethnicity, years of teaching experience).

Authentic Leadership is my study's independent variable. It was measured with the 16-item ALQ, developed by Walumbwa et al., (2008), and shown to be reliable and valid in numerous studies (Avolio et al., 2007, 2009; Walumbwa et al., 2008). Walumbwa et al., (2008) and Rego et al., (2014) found that the ALQ had a Cronbach's Alpha of 0.94 and Xiong et al.,

(2014) found the Cronbach's Alpha to be 0.96. Mind Garden, the organization that has ownership of the ALQ (Walumbwa et al., 2008) provided me with permission to convert the ALQ into an online survey for the purpose of my research. On the ALQ, I changed gendered wording (i.e., 'he or she') to 'they,' in order to be more inclusive and in line with APA format, 7th edition. For further, specific details regarding the instruments' reliability and validity, please see The Authentic Leadership Questionnaire (ALQ) and the Academic Optimism: Confirming a New Construct subsections of the Literature Review.

Academic Optimism, and its three dimensions (i.e., academic emphasis, collective efficacy, and trust in students and parents) represent my study's four dependent variables. AO was analyzed as a whole construct through the 11-item TAOS-E, originally developed by Hoy et al. (2006) and validated for analysis at the individual level by Beard et al., (2010). Additionally, the three, individual dimensions of AO will be analyzed as well. The TAOS-E measures the academic emphasis dimension with 4-items, the collective efficacy dimension with 3-items, and the trust in students and parents dimension with 4-items. Beard et al., (2010) found the Cronbach's Alpha of AO to be 0.74, Wu et al., (2013) found it to be 0.82 and Kulophas et al., (2018) found it to be 0.84. With regard to the individual dimensions of AO, researchers (e.g., Beard et al., 2010; Srivastava & Dhar, 2016; Wu et al., 2013) have consistently found academic emphasis, collective efficacy and trust in students and parents to have acceptable reliabilities, greater than 0.8. Wayne Hoy provides the TAOS-E (Beard et al., 2010; Hoy et al., 2006) for free on his personal website for use in research.

With regard to control variables, Beard et al., (2010) ($r = 0.30$, $p < 0.01$) and Wu et al., (2013) ($r = 0.21$, $p < 0.05$) both found that enabling school structure (ESS) moderately predicts teachers' AO. Hoy et al., (2013) describe ESS as a leadership hierarchy that facilitates teachers'

work, rather than hinders it, as well as a system of rules, policies, and procedures that guide problem solving, rather than punishing failure. Hoy and Sweetland (2001) developed the 12-item Form ESS to measure teachers' perceptions of an enabling school structure and found it to have a Cronbach's Alpha greater than 0.90. Beard et al., (2010) calculated the Form ESS to have a Cronbach's Alpha of 0.92 and Wu et al., (2013) found it to be 0.93. The Form ESS has been consistently found to be valid and reliable (Hoy et al., 2013; Hoy & Sweetland, 2001; Wu et al., 2013). Wayne Hoy provides the Form ESS for the purpose of research, on his personal website.

Thien et al., (2021) found that teachers' gender and years of experience can predict AO. Additionally, Gershenson et al., (2018) indicated that teachers' race and ethnicity can impact a variety of educational outcomes. Participants inputted their demographic data (e.g., their gender identity, race/ethnicity, and years of experience) in the Survey Monkey instrument.

Thus, my survey combines the ALQ, the TAOS-E, and the Form ESS into a Survey Monkey instrument that totals 39 closed items. Additionally, my survey also captures demographics data, as well as two open-ended questions, that ask participants to respond to two prompts: "How (if at all) do you perceive that your principal's leadership impacts your ability to successfully teach and for your students to successfully learn?" and "How (if at all) do you think that your perceptions of your principal's leadership have been influenced by the COVID-19 pandemic?" The first question allowed me to gain more insight into any potential relationship between AL and AO and the second question provided me with further insight into the broader context (i.e., the COVID-19 pandemic) during which my study occurred. I analyzed data from the open-ended question by theme and summarized my findings. My qualitative analysis of the two open-ended questions is found in Chapter 5, separate from my quantitative analysis, which is

presented in Chapter 4. In total my survey contains 46 items (39 items from the ALQ, the TAOS-E, and the Form ESS, two open-ended responses, and five demographic items).

Population and Sample Design

My study takes place in XCPS, a large, diverse public school system in the Mid-Atlantic region. My study's population is the 2,124 elementary school teachers in XCPS who teach at its 31 Title I elementary schools, defined by XCPS as schools that have at least 62.73% of its students receive Free and Reduced Meal Service.

All teachers in Title I schools were invited to participate in my study via email through the XCPS system. However, the final sample excludes data from teachers who are in their first year with their current principal. Hence, the final sample will be comprised of Title I elementary school teachers who have taught for more than one year in their current school with the same principal. This constitutes a convenience sample in that selection for inclusion in the study is limited to only one county's public school system selected due to the researcher's access to the participants. The sample is not a random selection of all elementary school teachers at Title 1 schools in the United States and so the results from this study may not be representative of all such teachers.

Using a multiple regression calculator (Soper, 2021), I determined that I needed a sample size of at least 91 for each full model containing five predictors, in order to achieve a statistical power level of 80%, with an effect size of 0.15, a probability level of 0.05.

Participant Protection and Institutional Review Board Approval

By nature, all responses submitted through the Survey Monkey are anonymous, as no names, account names, email addresses, or internet protocol addresses were captured by my tool. It is highly improbable to match a survey response to an individual teacher. Data were analyzed

in aggregate, such that no individual participant or groups of participants could be identified. Any information and other records related to the study were only accessible to me, my dissertation committee, and members of the institutional review boards (IRB), which provided oversight for the protection of human research volunteers.

This study's survey required approval by both the Hood College IRB as well as by XCPS's IRB. First, I obtained IRB approval from Hood College on October 29, 2021 without any substantial changes. After obtaining approval from Hood College, I submitted to XCPS's IRB for approval, which I received on December 14, 2021. XCPS did not request any edits to my study. Both IRB approvals are found in Appendices G and H. To maintain confidentiality, I have redacted identifiable elements of XCPS's IRB approval, such as the actual name of XCPS, its logo, and the names of associate superintendents and schools.

Pilot Study

As I previously stated in the Population and Sample Design section above, my study's population is the 2,124 Title I elementary school teachers in XCPS. I choose to focus on Title I schools, rather than all elementary schools within XCPS, in order to better focus my study and limit the amount of statistical noise that may arise in my data set. Title I schools tend to share common characteristics, and have historically been the most challenging, the most impacted by poverty, and the lowest achieving (Carver-Thomas & Darling-Hammond, 2017; Simon & Johnson, 2015). Interventions, strategies and processes that are successful in Title I schools tend to generalize well to other schools (Padilla et al., 2020; Reardon, 2011). While AO is controlled for SES, there is nothing about any of my variables, instruments, or items that are Title I-specific. Therefore, before administering my survey, I conducted a pilot study at the non-Title I elementary school where I currently work, in order to proactively troubleshoot any issues or

problems that could have arisen. There was no crossover between the population of my pilot study and the population of Title I elementary school teachers in XCPS.

I invited all teachers at my non-Title I elementary school to take the full survey through a Survey Monkey link (Appendices A through F). I also added an open-ended question where teachers could offer feedback or suggestions about my instrument, with the intention of using feedback from my pilot study to make clarifications and adjustments prior to administering my study to Title I elementary school teachers in XCPS. Sixteen teachers at my school completed my pilot study and found that my instrument worked as intended, taking about ten minutes to complete my survey. After the pilot study, I did not make any significant changes to my Survey Monkey instrument.

Informed Consent

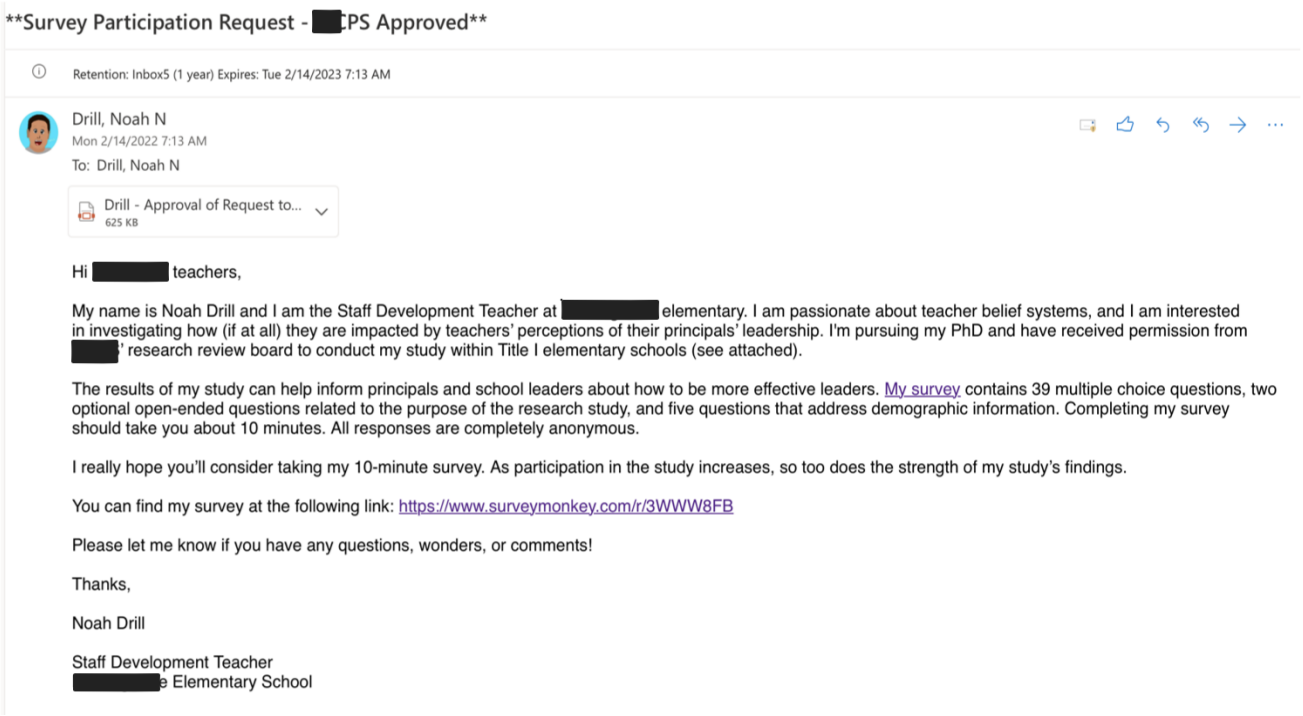
In order to participate in my study, all participants completed an informed consent document, the first section of the Survey Monkey. The informed consent form provided a detailed description of the purpose and procedures of my study. Additionally, it was accompanied by a link to a short, recorded video where I introduced myself, described my study's purpose and potential value, and explained how representation from all Title I schools would help strengthen my study's findings. Participation in the study was completely voluntary and participants could have withdrawn their consent and ended their engagement with the study at any time without consequence. As the Survey Monkey did not capture any personally-identifying information, all responses were fully anonymous. I did not anticipate any risks or discomforts associated with my study and participants did not receive any direct benefits as a result of their participation. A copy of the informed consent form can be found in Appendix A.

Data Collection

Prior to initiating my survey, while waiting for IRB approval, I compiled a Google Sheets list with 31 tabs (one for each school) that contained all teacher email addresses at each Title I elementary school in XCPS. As all XCPS teacher email addresses are available on the school websites, I was able to access the directories, containing each teacher's name, email address and title. Using my familiarity with the XCPS system, I took care to only include teachers (as administrators and support staff are not part of my study's population) and copied and pasted them all into my Google Sheets list. On Monday, February 14, 2022, I sent 31 separate emails (one per school) with all teachers from that school blind copied on the email. I introduced my study and myself, as the researcher, explained its importance, and requested their participation. Figure 5 is a screenshot of my initial email that I sent to all Title I elementary school teachers in XCPS.

Figure 5.

Initial E-mail to Title I Elementary School Teachers in XCPS.



Survey Participation Request - [redacted]PS Approved

Retention: Inbox5 (1 year) Expires: Tue 2/14/2023 7:13 AM

Drill, Noah N
Mon 2/14/2022 7:13 AM
To: Drill, Noah N

Drill - Approval of Request to...
625 KB

Hi [redacted] teachers,

My name is Noah Drill and I am the Staff Development Teacher at [redacted] elementary. I am passionate about teacher belief systems, and I am interested in investigating how (if at all) they are impacted by teachers' perceptions of their principals' leadership. I'm pursuing my PhD and have received permission from [redacted]' research review board to conduct my study within Title I elementary schools (see attached).

The results of my study can help inform principals and school leaders about how to be more effective leaders. My survey contains 39 multiple choice questions, two optional open-ended questions related to the purpose of the research study, and five questions that address demographic information. Completing my survey should take you about 10 minutes. All responses are completely anonymous.

I really hope you'll consider taking my 10-minute survey. As participation in the study increases, so too does the strength of my study's findings.

You can find my survey at the following link: https://www.surveymonkey.com/r/3WWW8FB

Please let me know if you have any questions, wonders, or comments!

Thanks,

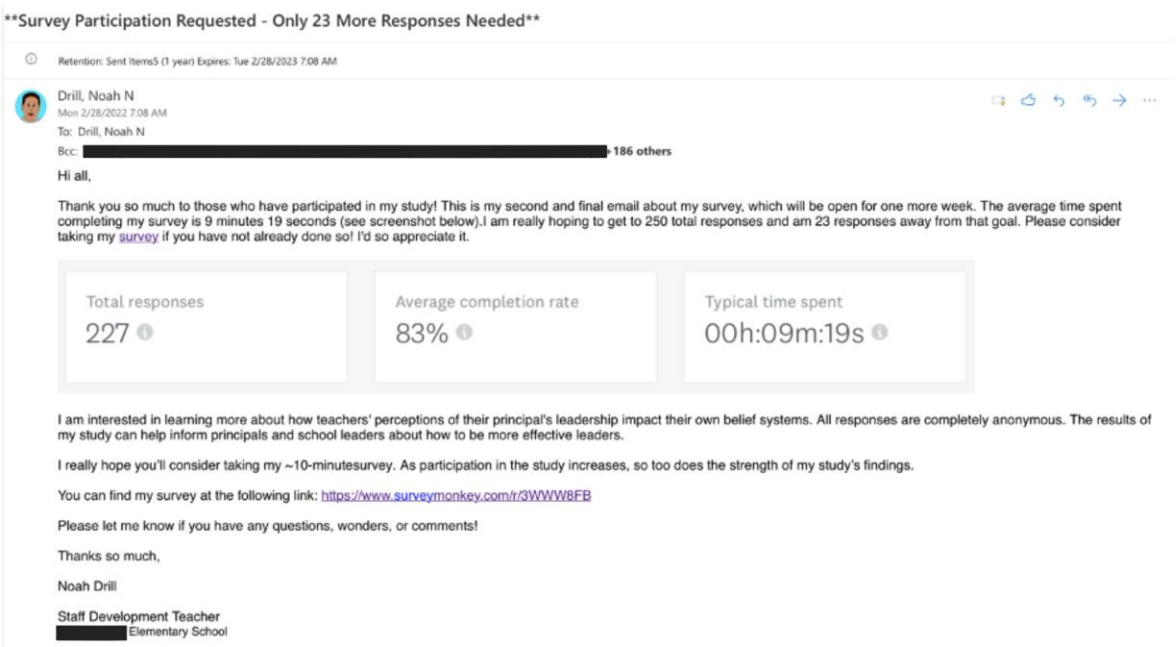
Noah Drill

Staff Development Teacher
[redacted]e Elementary School

Two weeks later after my initial email, I had 227 total responses, 154 of which met criteria for inclusion in my study. Additional details about the criteria necessary for inclusion in my study are described in the Data Preparation section, which immediately follows this section. I sent a follow-up email to teachers, asking for their participation, as shown in Figure 6. In my follow-up email, I encouraged teachers to participate in my study and stressed how additional responses would strengthen my findings and increase their impact. As a result of my follow-up email, I received 127 more responses, 91 of which met criteria for inclusion. I closed my survey three weeks after I initially opened it. In total, I received 354 responses, 245 of which met all criteria for inclusion.

Figure 6.

Follow Up E-mail to Title I Elementary School Teachers in XCPS.



Survey Participation Requested - Only 23 More Responses Needed

Retention: Sent Items5 (1 year) Expires: Tue 2/28/2023 7:08 AM

Drill, Noah N
Mon 2/28/2022 7:08 AM
To: Drill, Noah N
Bcc: [redacted] 186 others

Hi all,

Thank you so much to those who have participated in my study! This is my second and final email about my survey, which will be open for one more week. The average time spent completing my survey is 9 minutes 19 seconds (see screenshot below).I am really hoping to get to 250 total responses and am 23 responses away from that goal. Please consider taking my survey if you have not already done so! I'd so appreciate it.

Total responses	Average completion rate	Typical time spent
227	83%	00h:09m:19s

I am interested in learning more about how teachers' perceptions of their principal's leadership impact their own belief systems. All responses are completely anonymous. The results of my study can help inform principals and school leaders about how to be more effective leaders.

I really hope you'll consider taking my ~10-minutesurvey. As participation in the study increases, so too does the strength of my study's findings.

You can find my survey at the following link: https://www.surveymonkey.com/r/3WWW8FB

Please let me know if you have any questions, wonders, or comments!

Thanks so much,

Noah Drill

Staff Development Teacher
[redacted] Elementary School

Data Preparation

After I closed my survey, I downloaded all of the 354 survey responses from Survey Monkey into a .csv file, which I then imported into jamovi, version 2.2. After eliminating 75

incomplete survey responses, I also deleted responses from 29 teachers who indicated that they were in their first year with their current principal and from two teachers who were not currently teaching at a Title I school (my population included a few teachers who split their time between multiple schools). Then, following the guidance of Meade and Craig (2012), I performed a visual inspection of the data to identify signs of unfocused survey participants (e.g., answering "strongly agree" to all responses in a section). As the Form ESS contains several items that are reverse scored, I paid extra close attention to answer patterns within that subsection to make sure that each participant was focused on the survey and not just clicking through. Based on my visual inspection, none of the remaining survey responses seemed to reflect participants who were unfocused. Thus, of the 354 responses that I received on Survey Monkey, 248 initially met criteria for inclusion. However, following data eligibility testing (which will be described in detail in Chapter 4), three responses were found to be statistical outliers and needed to be removed from the data set. Thus, my final data pool contained 245 responses. Table 6, on the next page, demonstrates the steps that each response needed to follow in order to merit inclusion into my study.

Table 6.

Required Steps to Merit Inclusion into Study.

Step	Number of Surveys Remaining	Number of Surveys Disqualified	Total Surveys Disqualified
1) Complete informed consent	354	0	0
2) Complete ALQ	306	48	48
3) Complete Form ESS	293	13	61
4) Complete TAOS-E	291	2	63
5) Complete demographics	279	12	75
6) Completed at least one year with current principal	250	29	104
7) Teach at Title I school	248	2	106
8) Data are eligible for use in hierarchical regression	245	3	109

Data Analyses

My research study primarily follows a quantitative path that utilized the jamovi project, version 2.2 (jamovi, 2021) to analyze the data after they were imported from the Survey Monkey. First, I calculated the range, standard deviation, mean, skewness and kurtosis for all of my continuous variables: (1) AL, the independent variable; (2) AO and its three dimensions (e.g., academic emphasis, collective efficacy, and trust in students and parents), the dependent variables; and (3) ESS, the continuous control variable.

Data were examined to determine the frequency and distribution of outliers and normality of distribution and parametric test assumptions were performed by visual inspection and by comparison to statistical indices. I conducted bivariate correlation analyses to assess the strength and direction of linear relationships between pairs of variables (e.g., AL, AO and

enabling school structure) resulting in Pearson's *r*. Then, I used hierarchical multiple regression, controlling for ESS, gender, race and years of teaching experience to determine how AL may impact AO and its three, individual dimensions (Salkind, 2021). Given that AO has been tightly linked with increased student achievement (Hoy et al., 2006; Beard et al., 2010; Srivastava & Dhar, 2016), finding that AL positively impacts AO would be particularly noteworthy. Finally, data from my two open-ended questions were analyzed and discussed in Chapter 5, separate from my quantitative analysis. Table 7, on the next page, provides a general overview regarding instruments, units of measure, and applied statistical tests.

Table 7

Variables, Measures, and Statistical Tests of My Study

Variable Set	Variable Type	Instrument	Data	Units of Measure	Statistical Tests
Demographic	Control	Participant demographics	Gender, race, total years of teaching experience	Categorical, ordinal	Descriptive
Enabling School Structure	Control	Form ESS	Scale	Continuous	Descriptive, Bivariate correlation analyses, Hierarchical multiple regression
Authentic Leadership	Independent	Authentic Leadership Questionnaire	Scale	Continuous	Descriptive, Bivariate correlation analyses, Hierarchical multiple regression
Academic Optimism (Academic emphasis, collective efficacy, and trust in students and parents)	Dependent	Teacher Academic Optimism Scale - Elementary	Scale	Continuous	Descriptive, Bivariate correlation analyses, Hierarchical multiple regression

Limitations

My study has certain limitations. With regard to external validity, it is critical to note that my study's data were gathered from a subset of elementary Title I teachers within XCPS. Although the survey was sent to every full-time teacher in Title I elementary schools in XCPS, the voluntary and self-selective nature of the study means that it was a convenience sample, which presented a threat to its external validity (Creswell & Guetterman, 2019). The sample did not and cannot represent all teachers in Title I schools across the country, much less all elementary school teachers nationwide. The findings from the present study cannot be generalized to other populations (Creswell & Guetterman, 2019; Maruyama & Ryan, 2014).

Additionally, the cross-sectional survey design was better suited to describe trends found between the variables, rather than provide a rigorous explanation of them (Creswell & Guetterman, 2019). The conclusions drawn between perceptions of AL and teachers' AO are only a snapshot in time and do not establish a probable cause-and-effect relationship because all other alternative explanations for the results cannot be dismissed even with the inclusion of certain control variables in the analysis (Grissom et al., 2021; Maruyama & Ryan, 2014). In addition, the cross-sectional nature of the data meant that the condition of time sequencing necessary for stating causal relationships was not met. Despite data analysis revealing the degree of association between AL and AO, causation cannot be claimed (Creswell & Guetterman, 2019), hence impacting the study's internal validity.

Despite the ALQ and the TAOS-E both having strong reliability and validity through multiple operational definitions and from comparisons with similar measurements (Beard et al., 2010; Hoy et al., 2006; Walumbwa et al., 2008), by their design, they measure individuals' beliefs and perceptions. Therefore, as Maruyama and Ryan (2014) explain, although the

variables measure the constructs of interest, they may also measure other indiscernible factors of teachers, such as biases, inaccuracies, and subjective perceptions. Hence, even with psychometric studies documenting the reliability and validity of each of my measures, there may be measurement error impacting the construct validity of the study.

Summary

The purpose of my study was to investigate what, if any, impact teachers' perceptions of their principal's AL have on their own AO, academic emphasis, collective efficacy and trust in students and parents within Title I elementary schools. The participants in my study are Title I elementary school teachers in XCPS, a large, diverse school system in the mid-Atlantic region. All data were captured anonymously via Survey Monkey and analyzed with the jamovi project, version 2.2. Before engaging in my study, participants were informed about the study procedures and indicated consent on the first section of the Survey Monkey. Afterwards, participants completed the ALQ, the Form ESS, the TAOS-E, two open-ended questions, and demographic items. The 46-item survey was pre-evaluated by colleagues and took about ten minutes to complete.

CHAPTER 4: RESULTS AND ANALYSIS

In Chapter 4, I analyze and describe the data I collected regarding the relationship between teachers' perceptions of their principal's authentic leadership and their own academic optimism. This quantitative analysis chapter will be organized in the following manner: First, I offer a brief summary of my study and review my research question and hypotheses. Then, I provide results from data eligibility tests, preliminary data analyses, and descriptive statistics. Afterwards, I present my statistical analysis answering my research question. Please note that my qualitative analysis from my study's two open-ended questions will be presented and discussed in Chapter 5, the Findings.

Introduction

Educational reforms, initiatives and mandates have long focused on the pursuit of increased student achievement (Gamage et al., 2009; Grissom et al., 2021). Although school principals play a vital role in improving student achievement, their actual impact is secondary to that of teachers (Bandura, 1993; Hallinger & Heck, 1996; Leithwood et al., 2020). Thus, it is important to identify variables that principals can influence, which in turn also influence students (Mascall et al., 2008). In this study, the leadership of principals is measured through the lens of perceived authentic leadership (AL), an exciting area of research that emphasizes genuine and 'real' leadership. Across industries (e.g., business, nursing, education), researchers have found strong correlations between the AL of leaders and positive employee factors such as optimism, trust, efficacy, job satisfaction and hope (Kulophas et al., 2018; Laschinger et al., 2015; Semedo, et al., 2016; Xu et al., 2017). The Authentic Leadership Questionnaire (ALQ), developed by Walumbwa et al., (2008), is a validated measurement scale for perceived AL, which has received widespread usage across industries and cultural contexts, showing encouraging results (e.g.,

increased commitment, creativity, job satisfaction, etc.) for employees (Avolio et al., 2007; Gardner et al., 2021).

Using the ALQ, this study investigated how teachers' perceptions of their principals' AL impacted their own academic optimism (AO), which is comprised of three constructs: academic emphasis, collective efficacy, and trust in students and parents (Beard et al., 2010; Hoy et al., 2006). Each construct, on its own, is tightly correlated with student achievement, even after controlling for students' socioeconomic status (Forsyth et al., 2011; Hoy et al., 2006; Mascall et al., 2008; Smith & Hoy, 2007). When combined, the three mutually-reinforcing constructs form academic optimism (AO), the permeated belief of a teacher that academic achievement is important, that teachers can effectively increase student achievement, and that students and parents are trusted partners in the learning process (McGuigan & Hoy, 2006). Researchers such as Beard et al., (2010), Smith and Hoy (2007), and Wu et al., (2013) have all found that teachers' AO are positively correlated with student achievement across subject areas (e.g., math, science, reading) and across school settings (e.g., elementary, middle and high schools). However, in this study, student data are not included. Rather, this study focused on the relationship between teachers' perceptions of their principals' leadership and teachers' own AO.

Summary of Methodology

My study used an exploratory, nonexperimental, cross-sectional survey design to better understand the extent to which teachers' perceptions of principals' authentic leadership (AL) impact their academic optimism (AO) within Title I elementary schools in a large, comprehensive, public school system in the mid-Atlantic region. My study addresses the research question, summarized in Table 8 (and previously introduced in Chapters 1 and 3), and used a hierarchical multiple regression with a convenience sample of 245 teachers. Within this

context, AL was found to be positively correlated with teachers' AO, collective efficacy and trust in students and parents after controlling for teachers' gender, race/ethnicity and years of experience. AL was not found to have a meaningful, statistical relationship with academic emphasis.

Table 8.

Research Question and Hypotheses.

Research Question	Hypothesis
RQ. Within Title I elementary schools, how do teachers' perceptions of their principals' authentic leadership impact their academic optimism, and its individual components (i.e., academic emphasis, collective efficacy, and trust in students and parents)?	H 1. In Title I elementary schools, teachers' perceptions of their principals' authentic leadership have a positive association with their academic optimism. H 2. In Title I elementary schools, teachers' perceptions of their principals' authentic leadership have a positive association with their academic emphasis. H 3. In Title I elementary schools, teachers' perceptions of their principals' authentic leadership have a positive association with their collective efficacy. H 4. In Title I elementary schools, teachers' perceptions of their principals' authentic leadership have a positive association with their trust in students and parents.

Characteristics of Participants

All Title I elementary school teachers in XCPS (n=2,124) were invited to participate in my study, conducted via a Survey Monkey. Of the 354 teachers who opened my survey, 245 participants met all criteria for inclusion (i.e., they fully completed the survey, teach at a Title I elementary school in XCPS, are not in their first year with their current principal, and their response data were not statistical outliers). The sample in my study represents 11.5% of the study's population, and well above the minimum of 91 participants that I needed in order to

achieve a statistical power level of 80%, with an effect size of 0.15, and a probability level of 0.05 (Soper, 2021).

Criteria for excluding survey responses in the final sample are as follows. A total of 75 participants were removed because of incomplete demographic data which was requested at the end of the survey. I removed 35 respondents who completed the entire survey. The majority of these participants (29 of the 35) needed to be removed because they were in their first year with their current principal. Two of the participants indicated that they were not currently teaching at a Title I school (some teachers split their time between two schools and the survey asked them to consider the school where they spend the majority of their time). One participant was excluded because they were the only individual identifying as neither male nor female, yielding an "other" gender category too small for inclusion in further analyses. Finally, while performing data eligibility testing for use in hierarchical multiple regression, three responses were found to be significant, statistical outliers on the low end for AO and needed to be removed from my data pool. Two of the three outliers were also statistical outliers for collective efficacy and one was also an outlier for trust in students and parents. Specific details related to the three outliers can be found within the Data Eligibility section of Chapter 4. Of the 34 survey participants that were excluded from the data analysis, 32 were female (94%) and two were male (6%). Three of the participants were Black (9%), one was Asian (3%), one was Latina (3%), one was Multi-Racial (3%), and 28 were White (82%). With regard to experience, 15 had taught for less than five years (44%), six had been teaching between five and fifteen years (18%), and 13 had taught for more than fifteen years (38%).

Table 9, below, provides detailed demographics (i.e., gender, race/ethnicity, and years of experience) of the participants in my study. Of note, I coded teachers' years of experience according to how XCPS collects and reports this data.

Table 9.

Frequency of Teachers' Gender, Race/Ethnicity and Years of Experience (n = 245).

Demographic	Count	% of Total
Gender		
Male	31	12.7%
Female	214	87.3%
Race/Ethnicity		
Asian or Pacific Islander	11	4.5%
Black or African American	29	11.8%
Hispanic or Latino	12	4.9%
Other	7	2.9%
White or Caucasian	174	71.0%
Multi-Racial	12	4.9%
Experience		
Less Than 5 Years	45	18.4%
5 Years – 15 Years	98	40.0%
More Than 15 Years	102	41.6%

Next, I compared the demographics of my study's sample (the 245 teachers who completed my survey) to my study's population (the 2,124 Title I elementary school teachers in XCPS). Demographic data for my sample was calculated through the jamovi statistical software, version 2.0 (the jamovi project, 2021) and demographic data for the population was compiled from XCPS's Schools at a Glance document, and can be found in Table 10.

Table 10.

Comparison of Sample Demographics to the Population Demographics.

Demographic	Percentage of Sample	Percentage of Population
	Gender	
Female	87.3%	89.1%
Male	12.7%	10.9%
	Race/Ethnicity	
Asian or Pacific Islander	4.5%	6.3%
Black or African American	11.8%	15.1%
Hispanic or Latino	4.9%	12.5%
White or Caucasian	71.0%	63.7%
Multi-Racial	4.9%	2.4%
Other	2.9%	N/A[a]
	Experience	
Less Than 5 Years	18.4%	22.6%
5 Years – 15 Years	40.0%	38.9%
More Than 15 Years	41.6%	38.6%

[a] On their Schools at a Glance document, XCPS did not offer "Middle Eastern or North African" or "Native American or Alaskan Native" (recoded as "other") as a response option.

Compared to the population of my study (i.e., Title I elementary school teachers in XCPS), teachers who are Hispanic are underrepresented in my study (by 7.6%) and teachers who are White are overrepresented in my study (by 6.9%). All other demographic data (i.e., gender, race/ethnicity, and years of experience) are within 5% of what was expected, based on the demographics of the population of Title I elementary school teachers in XCPS. While not a random sample, the high response rate from the entire population (11.5%) and the relatively similar demographics between my convenience sample and my study's population, provides some support for generalizing this study's findings to that of all Title I elementary school teachers in XCPS.

Variables Used in the Study

The variables used for analysis are summarized in Table 11. Figure 4, located in the Research Design section of the Methodology in Chapter 3, conceptualizes how the variables in my study interact.

Table 11.

Summary of Variables Used for Study Analysis.

Variable Name	Variable Type	Level of Measure	Survey Questions[a]
Academic Optimism (AO)	Dependent	Scale	30 – 40
Academic Emphasis	Dependent	Scale	37 – 40
Collective Efficacy	Dependent	Scale	30 – 32
Trust in Students and Parents	Dependent	Scale	33 – 36
Authentic Leadership (AL)	Independent	Scale	2 – 17
Enabling School Structure (ESS)	Control	Scale	18 – 29
Gender	Control	Categorical	43
Race/Ethnicity	Control	Categorical	44
Years of Experience	Control	Categorical	46

[a] Survey questions are found in Appendices A through F

Whereas AO, and its three components, and AL are discussed extensively throughout my dissertation, enabling school structure (ESS) has not had the same treatment. Hoy et al., (2013) describe ESS as a leadership hierarchy that facilitates teachers' work, rather than hinders it, as well as a system of rules, policies, and procedures that guide problem solving, rather than punishing failure. As described in the "Controlling for Academic Optimism" section within the Literature Review, Beard et al., (2010) ($r = 0.30$, $p < 0.01$) and Wu et al., (2013) ($r = 0.21$; $p <$

0.05), found that ESS moderately predicts the AO of teachers. Therefore, ESS was included within my study as a control variable, as it has a history of predicting the AO of teachers.

Regarding the calculation of the variables used in my study, and following the guidance of Walumbwa et al., (2008), authentic leadership (AL) was measured by taking the mean of the 16 items comprising the Authentic Leadership Questionnaire (ALQ). Similarly, ESS was found by calculating the mean of the 12-item Form ESS. However, prior to finding the mean of ESS, survey items 19, 21, 24, 25, 26 and 28 were all reverse scored (e.g., on the item "in this school, red tape is a problem," a response of "1 – Never" would be scored as a 5). Scale scores for academic emphasis, collective efficacy and trust in students and parents were calculated following the procedures developed by Hoy et al,. (2006) and refined by Beard et al., (2010). Further details about how scale scores were calculated for AO and its three, individual components can be found in the subsequent section, "Descriptive Statistics."

Regarding the model coefficients, run as part of the hierarchical multiple regression, I needed to select a reference level for the categorical variables (i.e., gender, race, years of experience category). For each, I created dummy variable within jamovi, version 2.2 (jamovi, 2021) and set the reference level to be the category that occurred most frequently. Gender is a two-category dummy variable with female as the reference group. Race/ethnicity is a six-category dummy variable with White as the reference group in the regression models. Of note, after consultation with my committee, I combined race/ethnicity responses of "Middle Eastern or North African" (n=6) and "Native American or Alaskan Native" (n=1) together into a new category called "other". This avoided having an ethnic category (i.e., "Native American or Alaskan Native") with only one participant and strengthened the other ethnic category (i.e., "Middle Eastern or North African") by increasing its *n* value. Additionally, any responses that

indicated more than one race/ethnicity were coded into another new category called "multi-racial" (n=12). Finally, years of experience can also predict the AO of teachers (Thein et al., 2021). I analyzed teachers' years of experience as a three-category dummy variable, coded in alignment with XCPS's categorization within their "Schools at a Glance" documents. Specifically, the three categories are: (1) teachers with less than five years of experience; (2) teachers with between five and fifteen years of experience; and (3) teachers with more than fifteen years of experience. The reference category is teachers with more than 15 years of experience.

Data Eligibility Testing

The data collected in my study meets data eligibility requirements for use of hierarchical multiple regression as a means of analysis. The appropriateness of data for multiple regression is based on assumptions of: (1) sufficient sample size; (2) no significant outliers; (3) lack of multicollinearity; (4) normality; (5) linearity between the independent and dependent variable; and (6) homoscedasticity of residuals (Rajaretnam, 2016; Salkind, 2021). Given the cross-sectional nature of the data, using the Durbin-Watson Test for autocorrelation would not be appropriate or necessary (Maruyama & Ryan, 2014).

Sample Size

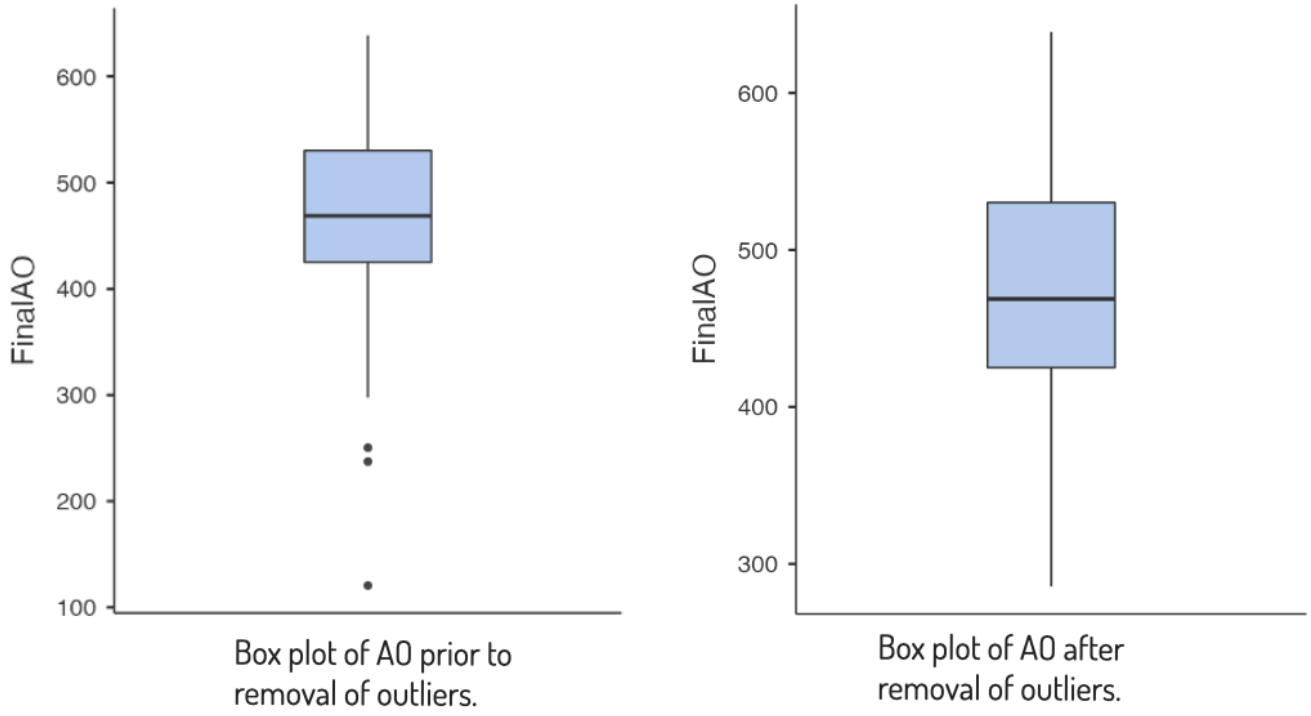
Using a multiple regression calculator (Soper, 2021), I determined that I needed a sample size of at least 91 for each model, in order to achieve a statistical power level of 80%, with an effect size of 0.15, a probability level of 0.05, and with five predictors (my independent variable, and four control variables). The final sample size of 245 teachers is almost triple the number of responses that I needed.

No Significant Outliers

During my initial data analysis, I found 3 outliers in the data for academic optimism (AO), each of which were on the lower extreme. Using the box plot for AO, found below in Figure 7, I determined that all of the 3 outliers had AO scores lower than 300. Thus, I sorted through my data and removed the three data points whose AO variable was less than 300. Once I removed the 3 outliers, as shown in Figure 7, no significant outliers remained.

Figure 7.

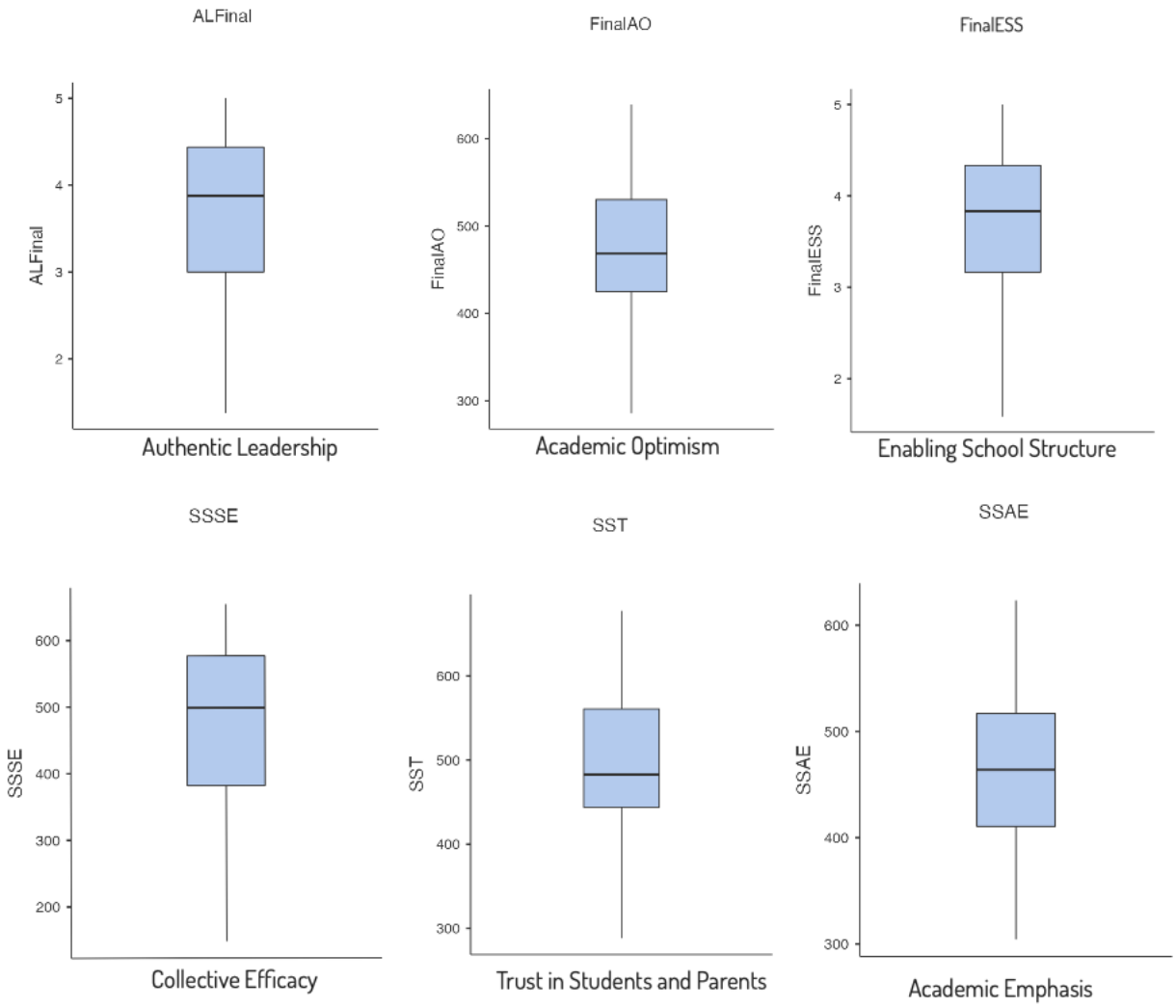
Boxplot of AO Before and After Removal of Outliers.



Additionally, after removing the three outliers, as shown on the next page in Figure 8, all of my scale variables are devoid of outliers.

Figure 8.

Boxplots of Each Scale Variable.



Additionally, I also assessed potential outliers for influence using Cook's Distance, as multiple regression is sensitive towards any potential outliers (Salkind, 2021). Given that all of Cook's Distance values are well below the threshold of 1.0, outlier bias does not appear to be an issue with my revised data set (Rajaretnam, 2016). Table 12, on the next page, provides Cook's Distance data for each of the four dependent variables. All remaining data eligibility tests were run using data with the three outliers removed.

Table 12.

Cook's Distance for Each Dependent Variable.

Dependent Variable in the Model	Cook's Distance		
	Mean	Median	SD
Academic Optimism	0.00416	0.00149	0.00660
Academic Emphasis	0.00456	0.00160	0.00984
Collective Efficacy	0.00408	0.00152	0.00774
Trust in Students and Parents	0.00429	0.00153	0.00754

Multicollinearity

Multicollinearity occurs when independent and/or control variables are highly correlated (r = 0.7 and above) with each other (Rajaretnam, 2016). Table 13 displays correlation coefficients in a matrix for authentic leadership (AL), enabling school structure (ESS), academic optimism (AO), academic emphasis (AE), collective efficacy (CE), and trust in students and parents (TSP).

Table 13.

Correlation Matrix of Variables Using Pearson's r

Variable	AL	ESS	AO	AE	CE	TSP
AL	-----					
ESS	0.829 ***	-----				
AO	0.248 ***	0.238 ***	-----			
AE	0.118	0.063	0.766***	-----		
CE	0.226 ***	0.244 ***	0.857***	0.464***	-----	
TSP	0.242 ***	0.252 ***	0.708***	0.335***	0.440***	-----

Notes. * p < 0.05. ** p < 0.01. *** p < 0.001

Unsurprisingly, AO has very high correlations with its three components. Additionally, the individual components of AO have elevated levels of correlation with each other (albeit, not

above 0.7). As has been discussed extensively, AO occurs when the constructs of academic emphasis, collective efficacy and trust in students and parents are combined together. Given that the scales used to measure the individual components of AO are entirely subsumed within the AO construct, the high levels of correlation are to be expected. Given that AO and its three individual components are not used to predict each other, these higher levels of correlation are not problematic in this exploratory study.

Surprisingly, however, the *r* value between the independent variable, authentic leadership (AL), and the control variable, enabling school structure (ESS) is very high, suggesting multicollinearity (0.829; $p < 0.001$). This correlation is of significant concern. Authentic Leadership and ESS seem to have similar strength across each of the dependent variables and neither AL nor ESS are correlated with AE. This provides further evidence that AL and ESS have similar predictive properties in relation to each of the dependent variables.

I used hierarchical regression to determine the impact of ESS on my study. For each dependent variable in my study, I created a hierarchical regression with three models. The first model only included demographics data. My second model includes the demographics data and ESS. Finally, the third model includes the demographics data, AL and ESS. As shown below in Table 14, on the page that follows, ESS does not substantially impact the *r* value of the full model and removing it eliminates concerns of multicollinearity between ESS and AL.

Table 14.

Hierarchical Regression of Each Dependent Variable, Supporting the Removal of ESS From the Model.

Model	Variables Included	R	B (of model and DV)
	Dependent Variable: Academic Optimism		
1	Demographics	0.240	489.62
2	Demographics and ESS	0.320**	410.90
3	Demographics, AL and ESS	0.341**	412.14
	Dependent Variable: Academic Emphasis		
1	Demographics	0.214	456.11
2	Demographics and ESS	0.219	434.31
3	Demographics, AL and ESS	0.247	435.80
	Dependent Variable: Collective Efficacy		
1	Demographics	0.241	501.76
2	Demographics and ESS	0.326**	375.98
3	Demographics, AL and ESS	0.335**	377.21
	Dependent Variable: Trust in Students and Parents		
1	Demographics	0.257*	510.98
2	Demographics and ESS	0.346***	422.41
3	Demographics, AL and ESS	0.358***	423.40

Notes. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$ for changes in *r* across models.

To my knowledge, no previous studies had included both AL and ESS together. Given their multicollinearity, it seems that this is for the best. The items on the ALQ measure teachers' perceptions of the actions and behaviors of the individual principal (e.g., "my leader says exactly what they mean"; "my leader seeks feedback to improve their interactions with others"; and "my leader makes decisions based on their core values"). Meanwhile, the items on the Form ESS center on teachers' perceptions of the impact of administrative rules in their school (e.g., "administrative rules help rather than hinder"; "in this school, red tape is a problem"; "administrative rules in this school are substitutes for professional judgment"). Although unexpected, the multicollinearity between AL and ESS in problematic. Perhaps this similarity is

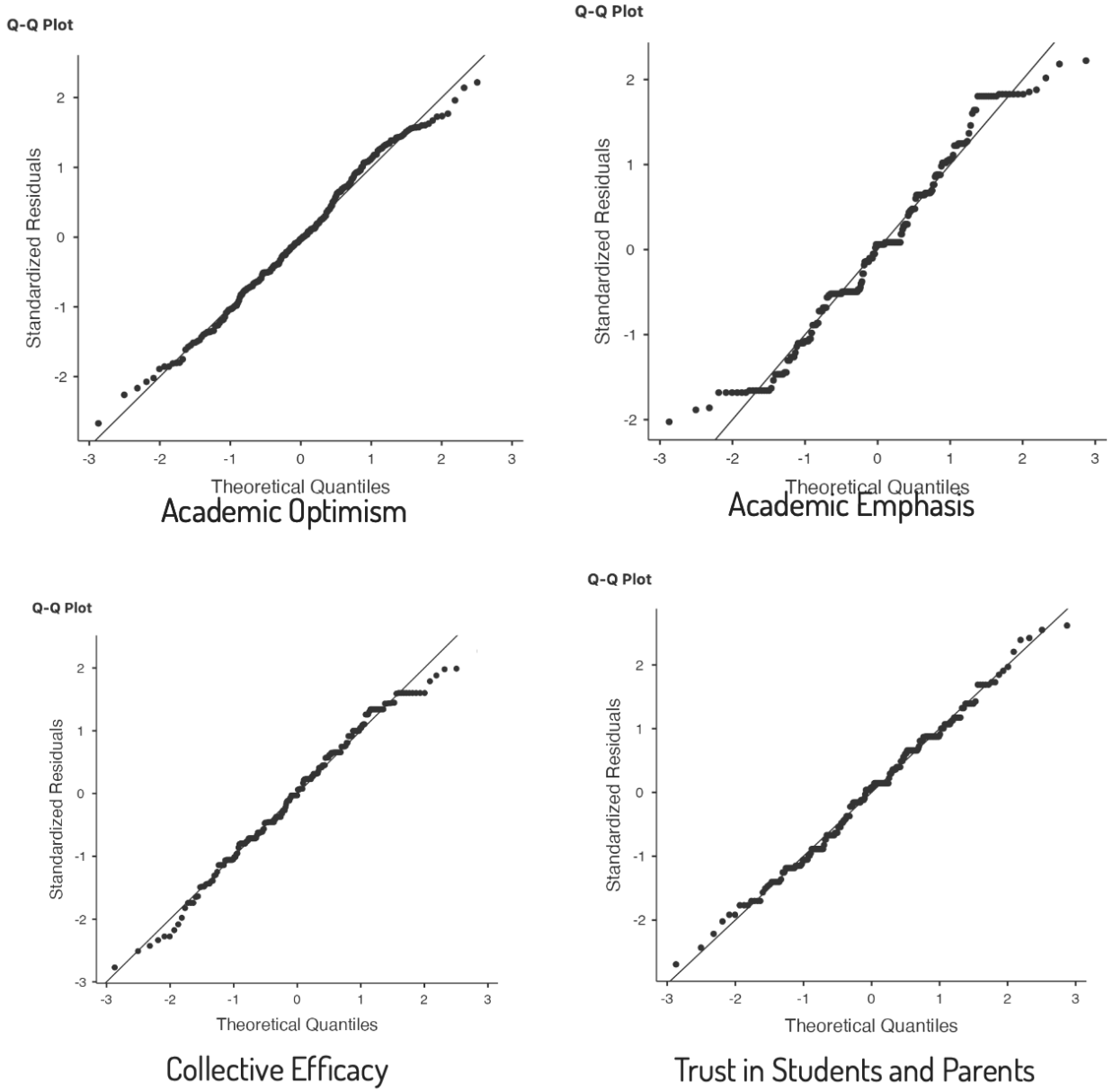
due to how both AL and ESS focus on how teachers perceive that their school's leadership impacts them. Thus, based on my consultations with my study's methodologist and statistician, the results of my hierarchical regression and my analysis of how ESS impacts the data, I decided to exclude ESS from my final analysis. Removing ESS from my study resolved concerns related to multicollinearity in my study. At the same time, without ESS in my model, I must now explain my study without one of the control variables that was proposed for the study.

Normality

Data that are appropriate for analysis via hierarchical multiple regression should have residuals that are normally distributed about the predicted dependent variable scores. First, I assessed normality based on a visual inspection of the Q-Q plot for AO, academic emphasis, collective efficacy, and trust in students and parents, as shown in Figure 9 on the next page. The visual inspection of the Q-Q plots for AO, collective efficacy and trust in students and parents indicate that the points are sufficiently aligned along the diagonal to suggest normality is sufficient for further analysis via multiple regression. However, the Q-Q plot for academic emphasis shows some higher residuals.

Figure 9.

Q-Q Plots for Each of the Dependent Variables.



Next, I assessed normality through analysis of kurtosis and skewness data points, shown in Table 15. The kurtosis and skewness data provide further evidence of normality of each of the scale variables, as they all fall between -1 and 1 (Creswell & Guetterman, 2019). Furthermore, as also shown in Table 15, I conducted three tests (i.e., Shaprio-Wilk, Kolmogorov-Smirnov, and

Anderson-Darling) to assess whether my data had residuals that were normally distributed about the predicted dependent variable scores. If the significance is greater than 0.05, the data is normal. Significances less than 0.05 represent data sets that significantly deviate from a normal distribution. AO, collective efficacy and trust in students and parents appear to be normally distributed. The data model for academic emphasis, according to the normality tests and the Q-Q plot, deviate significantly from a normal distribution. Thus, the resulting data from the academic emphasis must be interpreted with caution.

Table 15.

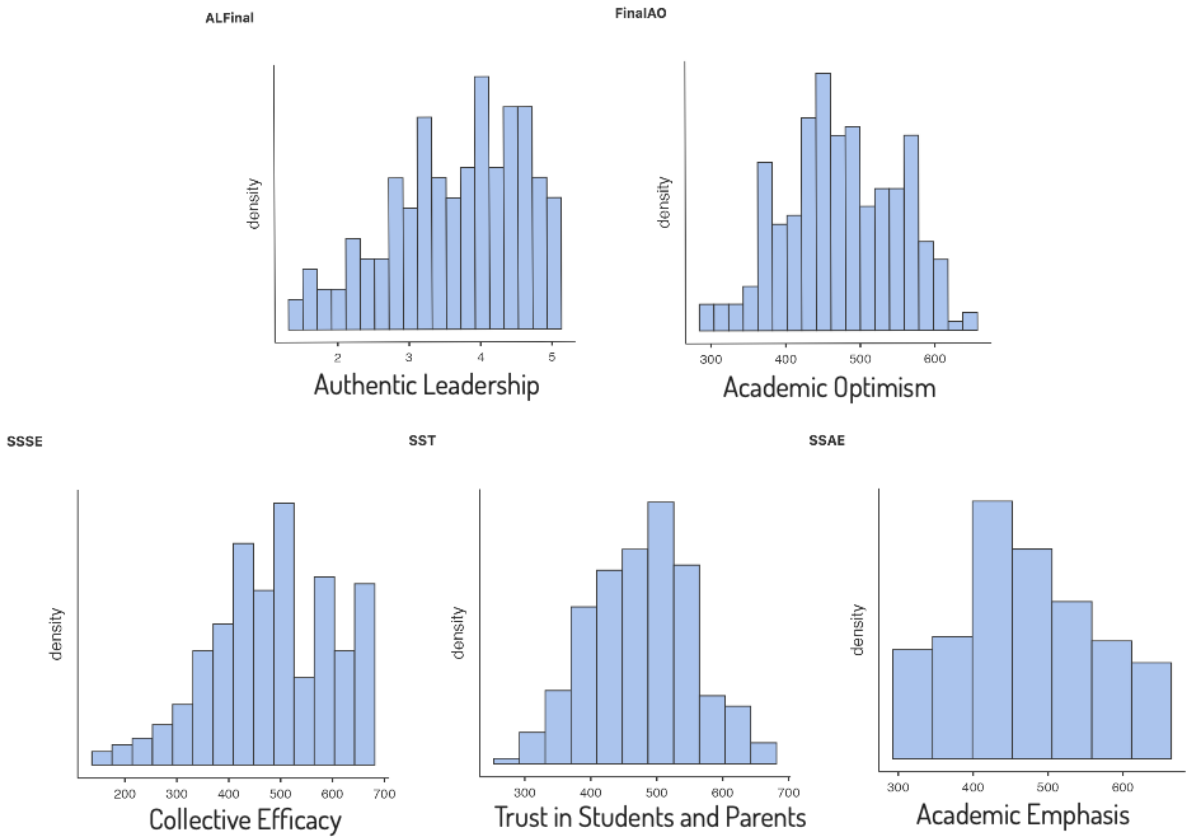
Normality Tests for Each Dependent Variable.

	Kurtosis	Skewness	Shapiro-Wilk	Kolmogorov-Smirnov	Anderson-Darling
Academic Optimism	-0.077	-0.613	0.144	0.726	0.148
Academic Emphasis	0.156	0.821	0.005	0.570	0.030
Collective Efficacy	-0.314	-0.394	0.109	0.708	0.324
Trust in Students and Parents	0.003	-0.333	0.561	0.868	0.515

Finally, I assessed normality via visual inspection of the histograms of each scale variable, found on the next page in Figure 10. The densities of the histograms suggest normality in my scale variables.

Figure 10.

Histograms of each scale variable.

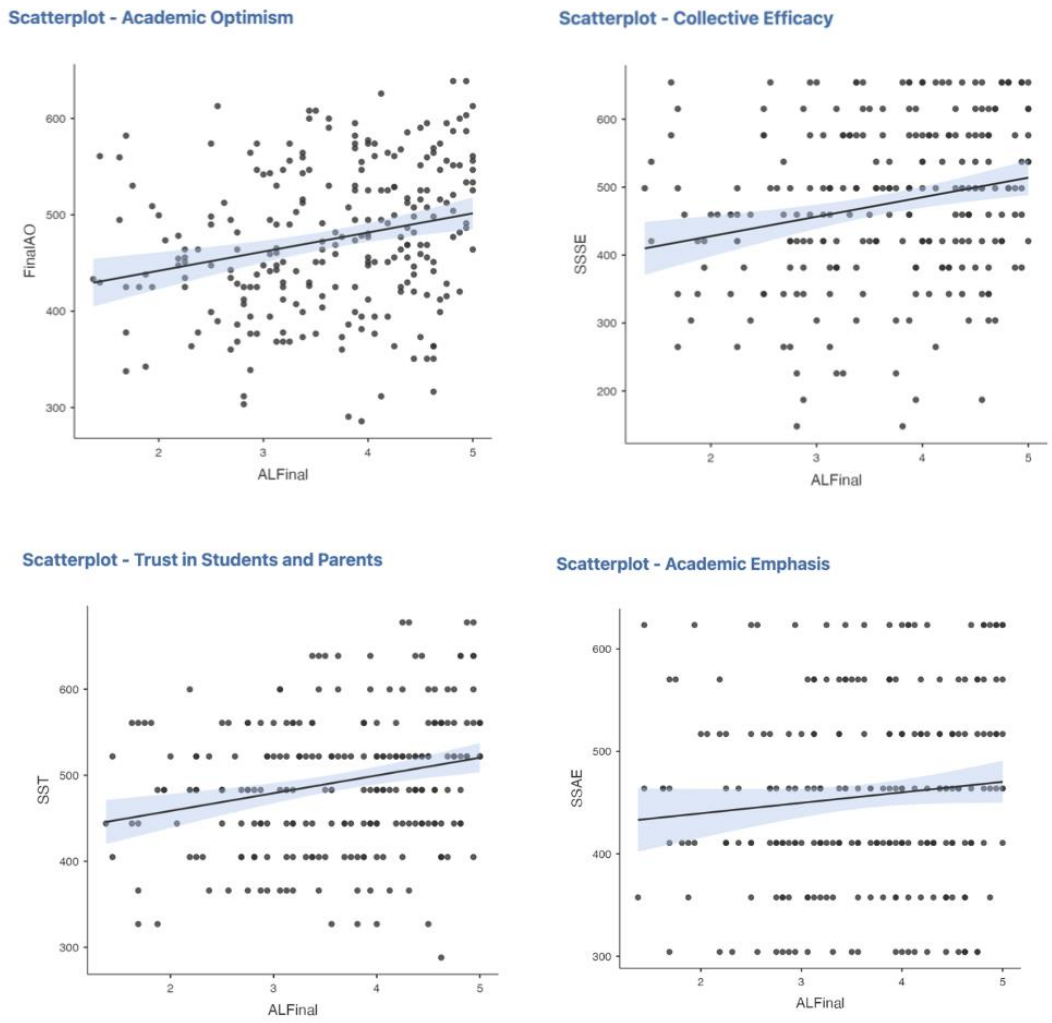


Linearity

To be eligible for hierarchical multiple regression, the independent (IV) and dependent (DV) variable should have a linear relationship. As shown in Figure 11 on the next page, teachers' perceptions of their principal's AL have a linear relationship with each of the dependent variables. However, the correlations indicated previously in Table 13 indicate that there is not a statistically significant relationship between AL and academic emphasis. Although there is a linear relationship shown in the scatterplot, the relationship is weak and non-significant. Hence, although I continue to examine the relationship between AL and academic emphasis for theoretical purposes, I do not expect AL to have a significant relationship to academic emphasis in the full regression model.

Figure 11.

Scatterplots Demonstrating Linear Relationship Between IV and DV, with Standard Error.



Homoscedasticity of Residuals

Homoscedasticity occurs when the variance of the residuals about predicted dependent variable scores are the same for all predicted scores. When the standard deviations of a dependent variable are non-constant when monitored over different values of an independent variable, heteroscedasticity occurs. I conducted three heteroscedasticity tests (i.e., Breusch-Pagan, Goldfeld-Quandt, and Harrison-McCabe) for each of my dependent variables. As all of my dependent variables had significance levels above the threshold ($p < 0.05$), my data

demonstrated homoscedasticity of residuals. Table 16 contains the results of the three heteroscedasticity tests, showing that my data has homoscedasticity and are appropriate for hierarchical multiple regression.

Table 16.

Heteroscedasticity Tests for Each Dependent Variable.

	Breusch-Pagan	Goldfeld-Quandt	Harrison-McCabe
Academic Optimism	0.400	0.314	0.328
Academic Emphasis	0.960	0.263	0.290
Collective Efficacy	0.556	0.264	0.270
Trust in Students and Parents	0.876	0.535	0.503

Additionally, I assessed homoscedasticity by visual inspection of the residual plots of authentic leadership (AL), as shown on the next page in Figure 12. As the plots indicate consistent residual error distribution for AL, my data suggest homoscedasticity. Similarly, I assessed homoscedasticity of the four dependent variables by visual inspection of the residual plots as shown in Figure 13. Once again, the residual plots appear to have consistent residual error distribution across all four dependent variables.

Figure 12.

Homoscedasticity of Residuals for Authentic Leadership.

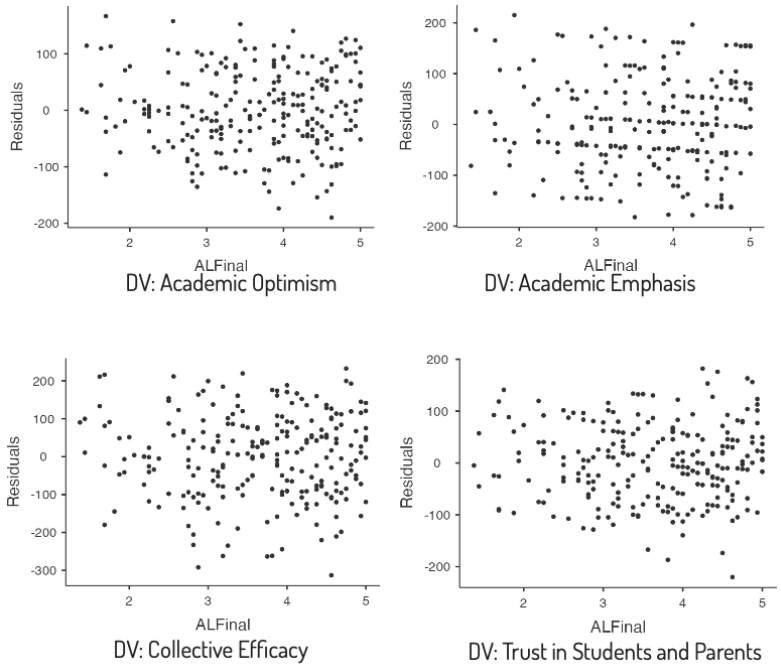
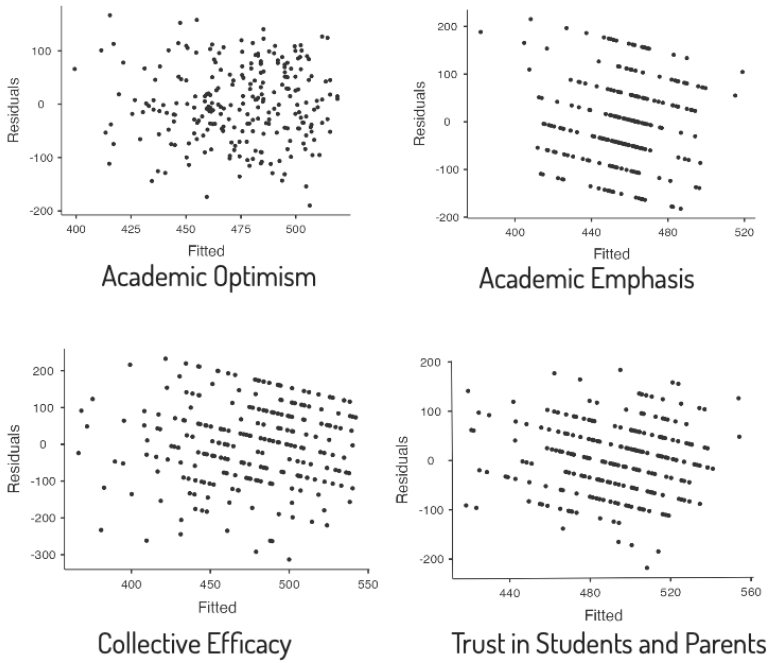


Figure 13.

Homoscedasticity of residuals for dependent variables.



Internal Reliability

Given that all of my independent and dependent variables are perceptual constructs, their strong internal reliability is critical to my study. Maruyama and Ryan (2014) explain that internal reliability provides an estimate about the influence of random errors on the results and offers insight into how well the items that compose the construct are really measuring the same construct. They report that the preferred measure of internal consistency is often referred to as Cronbach's Alpha (Cronbach, 1951). Therefore, I ran Cronbach's Alpha on the independent variable, authentic leadership (AL), as well as the dependent variables, academic optimism (AO), academic emphasis, collective efficacy, and trust in students and parents. Results of at least 0.7 suggest strong evidence of intercorrelation within each factor that comprised each variable (Creswell & Guetterman, 2019). Authentic leadership had strong levels of internal reliability and AO had an acceptable level of internal reliability, as shown in Table 17.

Table 17.

Internal Reliability of My Study's Variables.

Variable Name	Cronbach's Alpha
Authentic Leadership	0.962
Academic Optimism	0.764
Academic Emphasis	0.578
Collective Efficacy	0.637
Trust in Students and Parents	0.728

Interestingly, two of the three individual components of AO (i.e., academic emphasis and collective efficacy) had weaker levels of internal reliability. Trust in students and parents, on the other hand, had an acceptable level of internal reliability. Potential results involving collective efficacy should be considered with caution due to its low level of internal validity. Academic emphasis did not have an acceptable Cronbach's Alpha and should be interpreted with caution.

Nevertheless, Taber (2018) does argue that constructs with a Cronbach's Alpha score of less than 0.7 can still merit investigation and analysis, particularly in exploratory studies, such as this one.

In an attempt to increase the internal reliability of my constructs, I ran reliability analysis tests for all of my scale variables using the jamovi software, version 2.2, to determine what Cronbach's Alpha would be if an item were dropped. Table 18 summarizes how dropping an item would impact the Cronbach's Alpha of each scale.

Table 18.

Scale Variables; Reliability Analysis with an Item Dropped

Cronbach's Alpha, Dropping an Item	ALQ (AL)	TAOS-E (AO)	Academic Emphasis	Collective Efficacy	Trust
No items dropped	0.962	0.764	0.578	0.637	0.728
Item 1	0.960	0.749	0.490	0.490	0.600
Item 2	0.959	0.734	0.624	0.526	0.693
Item 3	0.959	0.734	0.473	0.602	0.675
Item 4	0.962	0.742	0.463	---	0.699
Item 5	0.962	0.756	---	---	---
Item 6	0.959	0.742	---	---	---
Item 7	0.960	0.739	---	---	---
Item 8	0.960	0.750	---	---	---
Item 9	0.960	0.747	---	---	---
Item 10	0.959	0.750	---	---	---
Item 11	0.961	0.762	---	---	---
Item 12	0.959	---	---	---	---
Item 13	0.959	---	---	---	---
Item 14	0.959	---	---	---	---
Item 15	0.958	---	---	---	---
Item 16	0.958	---	---	---	---

Notes. The ALQ has 16 items and the TAOS-E has 11 items, of which 4 correspond to academic emphasis, 3 correspond to collective efficacy and 4 correspond to trust in students and parents.

Removing items from the AL, AO, collective efficacy or trust in student and parents would have either had no impact or would have degraded the scale's Cronbach's Alpha. Removing AE2 would have improved the Cronbach's Alpha of academic emphasis from 0.578 to 0.624. However, doing so would have deviated from the established scales developed by Hoy

et al., (2006) and Beard et al., (2010). Furthermore, while removing AE2 would improve the Cronbach's Alpha of the academic emphasis construct, it does not meaningfully impact the significance of the construct.

As Table 19 shows, bivariate correlations between AL and academic emphasis (within the context of the whole model) do not change when AE2 is included (r = 0.237) compared to when AE2 is excluded (r = 0.237). Also, AL does not have a significant relationship to academic emphasis in the full regression model regardless of whether the academic emphasis construct includes AE2 (p = 0.119) or excludes AE2 (p = 0.160). Therefore, to maintain fidelity to the established scales, I kept AE2 and did not drop it from my data, keeping the academic emphasis construct intact, as developed by Hoy et al., (2006) and Beard et al., (2010).

Table 19.

Comparison of Academic Emphasis when AE2 is Included and Excluded in the Construct.

	Academic emphasis, AE2 included	Academic emphasis, AE2 excluded
Cronbach's Alpha	0.578	0.624
Pearson's r	0.237	0.237
Unstandardized Coefficient to AL	10.22 (p = 0.119)	8.99 (p = 0.160)

Interestingly, when Beard et. al., (2010) calculated Cronbach's Alpha for the three components of AO, they also found that trust in students and parents had a higher internal reliability than the other two components. Table 20, on the page that follows, compares the Cronbach's Alpha of my study to that of Beard et al., (2010). Although the internal reliability scores of the constructs in my study were lower than that of Beard et al., (2010), they do follow the same patterns that were found by Beard et al., (i.e., regarding internal reliability scores, academic emphasis was the lowest and trust in students and parents had the highest).

Table 20.

Cronbach's Alpha of Academic Optimism's Individual Components.

Construct	My Study	Beard et al., (2010)
Academic Emphasis	0.578	0.71
Collective Efficacy	0.637	0.73
Trust in Students and Parents	0.728	0.79

Descriptive Statistics

The AL variable is calculated based on five-item Likert scales, with responses scored one through five. Academic optimism and its three, individual components were developed by Hoy et al., (2006) and later refined by Beard et al., (2010). The Academic Emphasis and Trust in Students and Parents subtests were based on a five-item Likert scale, with responses scored one through five. The Collective Efficacy subtest, however, was based on a nine-item Likert scale, with responses scored one through nine. From a representative sample of elementary school teachers in Ohio, Beard et al., (2010) developed a standardized process, illustrated in Table 21, to calculate standard scores for teachers' academic emphasis, collective efficacy and trust.

Table 21.

Calculating Standard Scores for the Three Components of Academic Optimism.

Component	Mean	Standard Deviation	Cronbach's Alpha	Formula to Calculate Standard Score
Collective Efficacy	7.68	0.856	0.73	[100(CE – 7.68) / 0.856] + 500
Trust in Students and Parents	3.86	0.642	0.79	[100(T – 3.86) / 0.642] + 500
Academic Emphasis	4.42	0.470	0.71	[100(AE – 4.42) / 0.470] + 500

Notes. Mean, Standard Deviation, and Cronbach's Alpha values come from the work of Beard et al., (2010) and can also be accessed on Wayne Hoy's personal website.

Score distributions for each of the three subtests (i.e., CE, T and AE) follow a normal distribution, with a mean of 500 and a standard deviation of 100. Hoy (2012) explains that after administering the TAOS-E, researchers can calculate a teacher's AO score by finding the mean of the scale scores for the three subtests. Similar to the CE, T and AE subtests, AO scores follow a normal distribution, with a mean of 500 and a standard deviation of 100.

Descriptive statistics for the scale variables in my study are reported in Table 22 below. The mean and standard deviations for academic emphasis (SSAE), trust in students and parents (SST), collective efficacy (SSSE), and academic optimism (FinalAO) in my study were all close, yet slightly below, the mean and standard deviations that Beard et al., (2010) found. Additionally, mean and median response values were generally similar, supporting further analysis.

Table 22.

Descriptive Statistics for Scale Variables.

Variable	Mean	SD	Min	Max
Authentic Leadership	3.65	0.919	1.38	5.00
Academic Optimism	474	75.8	273	639
Academic Emphasis	455	93.7	304	623
Collective Efficacy	476	117	148	654
Trust in Students and Parents	493	78.2	288	678

Statistical Analysis

As detailed in the Data Eligibility Testing section, I conducted preliminary analyses to ensure that there were no violations of the assumptions of the sample size, no outliers, multicollinearity, normality, linearity, and homoscedasticity. Then, I used hierarchical multiple regression while controlling for teachers' gender, race/ethnicity, and years of experience, to examine the influence of teachers' perceptions of their principal's authentic leadership on AO and its three individual components. For each of my control variables, I selected the most

commonly occurring response as my reference level. Therefore, female teachers are the reference level for gender; teachers who are white are the reference level for race/ethnicity; and teachers with more than 15 years of experience are the reference level for years of experience. While enabling school structure was theorized to be a relevant control variable, it was not included in the analyses given its multicollinearity with the independent variable, AL.

My study's research question was, "Within Title I elementary schools, how do teachers' perceptions of their principals' authentic leadership (AL) impact their academic optimism (AO), and its individual components (i.e., academic emphasis, academic emphasis, collective efficacy, and trust in students and parents)?" The sections that follow present the findings for each of my four hypotheses, which answer my study's research question.

H 1. Authentic Leadership and Academic Optimism.

I hypothesized that in Title I elementary schools, teachers' perceptions of their principals' authentic leadership are positively correlated with their AO, a summated scale that includes the three subindices, academic emphasis, collective efficacy, and trust in students and parents.

I used hierarchical multiple regression to assess the ability of authentic leadership to predict academic optimism, after controlling for the influence of race, gender, and years of experience. Preliminary analyses were conducted to ensure no violation of the assumptions of the sample size, multicollinearity, no outliers, normality, linearity, and homoscedasticity. Results from the analysis are shown in Table 23. Model 1 shows that the control variables explain approximately 5.7% of the variation in AO, $r^2 = 0.0574$. The addition of AL in Model 2 shows that the full model is responsible for explaining approximately 11.6% of the variance in AO, $r^2 = 0.1157$, F (9, 235) = 3.42, $p < 0.001$, with AL responsible for explaining approximately 5.8%, or

half, of that overall variation change, r^2 change = 0.0583, p < 0.001. A complete discussion of my finding's implications can be found in Chapter 6.

As shown in Model 2, AL was a statistically significant predictor of AO (beta = 20.05, p < 0.001). Additionally, teachers with less than five years of experience had significant, lower levels of AO than teachers with more than 15 years of experience (b = -35.90, p < 0.01). Gender and race/ethnicity were not significant predictors of AO. My hypothesis 1 for my study's research question is supported.

Table 23.

Hierarchical Regression Model Coefficients – Academic Optimism

	Model 1 (Control Variables Only)		Model 2 (Controls & AL)	
Predictor	b	SE	b	SE
Intercept	489.62***	8.12	416.05***	20.28
Independent Variable				
Authentic Leadership	-	-	20.05***	5.09
Gender				
Male	-19.80	14.88	-22.59	14.46
Race				
Asian or Pacific Islander	8.58	23.45	9.73	22.76
Black or African American	1.38	15.22	-1.95	14.80
Hispanic or Latino	0.29	22.78	-1.39	22.11
Other	-42.08	29.39	-44.24	28.54
Multi-Racial	20.47	22.67	17.88	22.01
Years of Experience				
Less Than 5 Years	-39.35**	13.88	-35.90**	13.50
5 – 15 Years	-14.57	11.10	-12.82	10.79
R^2	0.0574		0.1157	
Change R^2	-		0.0583 ***	

Notes. N = 245. * p < 0.05. ** p < 0.01. *** p < 0.001

The reference level for Gender is "Female." The reference level for Race is "White or Caucasian." The reference level for Years of Experience is "More Than 15 Years."

H 2. Authentic Leadership and Academic Emphasis

My second hypothesis was that in Title I elementary schools, teachers' perceptions of their principals' AL are positively correlated with their academic emphasis.

Table 24 shows the hierarchical regression model results between AL and academic emphasis. Model 1 shows approximately 4.6% of the variation in AE can be explained with inclusion of the control variables, gender ($p > 0.05$), race ($p > 0.05$) and experience ($p < 0.05$). Inclusion of AL in Model 2 does not significantly change the predictive power of the model (r^2 change = .0104, $p > 0.05$). AL is not a statistically significant predictor of AE in the full model ($b = 10.48$, $p > 0.05$). The only significant predictor of AE in the full model is years of experience with teachers with less than 5 years of experience having significantly lower levels of AE than those with more than 5 years of experience ($b = -34.29$, $p < .05$).

These results should be interpreted in the context of the academic emphasis construct showing no significant bivariate correlation with AL ($r = 0.118$, $p > 0.05$, Table 13), demonstrating issues with normality (Figure 9; Table 15) and having low levels of internal reliability with this sample (Alpha = 0.578, Table 17). There is not a statistically significant relationship between AL and academic emphasis in this analysis. My hypothesis 2 for my study's research question is not supported.

Table 24.

Hierarchical Regression Model Coefficients – Academic Emphasis

	Model 1 (Control Variables Only)		Model 2 (Controls & AL)	
Predictor	b	SE	b	SE
Intercept	456.11***	10.1	417.66***	25.90
Independent Variable				
AL	-	-	10.48	6.50
Gender				
Male	18.57	18.5	17.11	18.46
Race				
Asian or Pacific Islander	-11.09	29.2	-10.48	29.06
Black or African American	33.65	18.9	31.91	18.89
Hispanic or Latino	-4.75	28.3	-5.62	28.23
Other	-34.58	36.6	-35.71	36.44
Multi-Racial	3.61	28.2	2.25	28.10
Years of Experience				
Less Than 5 Years	-36.09*	17.3	-34.29*	17.24
5 – 15 Years	2.18	13.8	3.09	13.77
R^2	0.0458		0.0562	
Change R^2	-		0.0104	

Notes. N = 245. * p < 0.05. ** p < 0.01. *** p < 0.001

The reference level for Gender is "Female." The reference level for Race is "White or Caucasian." The reference level for Years of Experience is "More Than 15 Years."

H 3. Authentic Leadership and Collective Efficacy

I hypothesized that teachers' perceptions of their principals' AL are positively correlated with their collective efficacy. I used hierarchical multiple regression to assess the ability of AL to predict collective efficacy, after controlling for race, gender, and years of experience. I conducted preliminary analyses to ensure no violation of the assumptions of sample size, multicollinearity, outliers, normality, linearity, and homoscedasticity. These results are shown in Table 25. Model 1 shows the control variables explain approximately 5.8% of the variation in collective efficacy, $r^2 = 0.0583$. The inclusion of AL in Model 2 shows that the full model explains approximately 10.9% of the variance in collective efficacy, $r^2 = 0.1090$, with AL

responsible for explaining approximately 5.1%, or half, of that overall variation, r^2 change = 0.0507, $p < 0.001$. A complete discussion of my finding's implications is found in Chapter 6.

AL was a statistically significant predictor of collective efficacy ($b = 28.86$, $p < 0.001$). Additionally, male teachers ($b = -48.16$, $p < 0.05$) and teachers with less than five years of experience ($b = -45.91$, $p < 0.05$) had significant, lower levels of collective efficacy than the reference level. Race/ethnicity was not a significant predictor of collective efficacy. Despite a reliability of less than 0.7, the collective efficacy construct can still merit further study and investigation (Taber, 2018). My hypothesis 3 for my study's research question is supported.

Table 25.

Hierarchical Regression Model Coefficients – Collective Efficacy

	Model 1 (Control Variables Only)		Model 2 (Controls & AL)	
Predictor	b	SE	b	SE
Intercept	501.76***	12.5	395.84***	31.45
Independent Variable				
AL	-	-	28.86 ***	7.90
Gender				
Male	-44.15	23.0	-48.16*	22.42
Race				
Asian or Pacific Islander	39.73	36.2	41.38	35.29
Black or African American	-10.41	23.5	-15.20	22.94
Hispanic or Latino	0.965	35.2	-1.44	34.28
Other	-43.08	45.4	-46.18	44.24
Multi-Racial	23.64	35.0	19.91	34.13
Years of Experience				
Less Than 5 Years	-50.87*	21.4	-45.91*	20.93
5 – 15 Years	-29.51	17.1	-26.99	16.72
R^2	0.0583		0.1090	
Change R^2	-		0.0507 ***	

Notes. N = 245. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

The reference level for Gender is "Female." The reference level for Race is "White or Caucasian." The reference level for Years of Experience is "More Than 15 Years."

Finally, Pearson's *r* value for the relationship between AL and collective efficacy (r = 0.330, p = 0.001) reflects a moderate, positive relationship (Creswell & Guetterman, 2019; Rajaretnam, 2016). Although my hypothesis is supported, results should be interpreted with caution, as the internal reliability of the collective efficacy construct was relatively weak (Alpha = 0.637). Nevertheless, Taber (2018) argues that constructs with sub-0.7 reliabilities can still merit further study and investigation, particularly in exploratory studies such as this one.

H 4. Authentic Leadership and Trust in Students and Parents

My fourth and final hypothesis was that in Title I elementary schools, teachers' perceptions of their principals' authentic leadership are positively correlated with their trust in students and parents. I used hierarchical multiple regression to assess the ability of authentic leadership to predict trust in students and parents, after controlling for the influence of race, gender, and years of experience. Preliminary analyses were conducted to ensure no violation of the assumptions of the sample size, multicollinearity, no outliers, normality, linearity, and homoscedasticity. Results from the analysis are shown in Table 26 on the next page. Model 1 shows that the control variables explain approximately 6.6% of the variation in trust in students and parents, $r^2 = 0.0663$. The addition of AL in Model 2 shows that the full model is responsible for explaining approximately 12.5% of the variance in trust in students and parents. Authentic leadership, specifically, was responsible for explaining about 5.9%, or almost half, of that overall variation, r^2 change = 0.0590, $p < 0.001$. A complete discussion of my finding's implications can be found in Chapter 6.

As shown in Model 2, authentic leadership was a statistically significant predictor of trust in students and parents (b = 20.80, $p < 0.001$). Additionally, male teachers (b = -36.72, p = 0.014) and teachers with less than five years of experience (b = -27.51, p = 0.048) had

significant, lower levels of trust in students and parents than the reference level. Race/ethinicity was not a significant predictor of trust in students and parents. My hypothesis 4 for my study's research question is supported.

Table 26.

Hierarchical Regression Model Coefficients – Trust in Students and Parents

	Model 1 (Control Variables Only)		Model 2 (Controls & AL)	
Predictor	b	SE	b	SE
Intercept	510.98***	8.33	434.64***	20.80
Independent Variable				
AL	-	-	20.80 ***	5.22
Gender				
Male	-33.82*	15.27	-36.72*	14.83
Race				
Asian or Pacific Islander	-2.91	24.07	-1.72	23.34
Black or African American	-19.12	15.62	-22.57	15.17
Hispanic or Latino	4.64	23.38	2.90	22.68
Other	-48.58	30.17	-50.82	29.26
Multi-Racial	34.16	23.26	31.48	22.57
Years of Experience				
Less Than 5 Years	-31.09*	14.25	-27.51*	13.85
5 – 15 Years	-16.37	11.39	-14.56	11.06
R^2	0.0663		0.1253	
Change R^2	-		0.0590 ***	

Notes. N = 245. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

The reference level for Gender is "Female." The reference level for Race is "White or Caucasian." The reference level for Years of Experience is "More Than 15 Years."

Summary

My study investigated the relationships between teachers' perceptions of their principal's AL and their own AO (as well as academic emphasis, collective efficacy, and trust in students and parents – the three individual components that comprise AO).

Out of a population of 2,124 Title I elementary school teachers, my study obtained 245 responses that met all criteria for inclusion. Additionally, with the exception of Hispanic teachers who were underrepresented, and White teachers, who were overrepresented, all other demographic data of my sample was within 5% of my study's population.

Prior to conducting statistical analysis to answer my research question, I made sure that all of the data would be eligible for multiple regression using jamovi, version 2.2. Authentic leadership, academic optimism, collective efficacy and trust in students and parents lacked multicollinearity (after removing ESS, as previously detailed in the "Multicollinearity" subsection), did not have significant outliers (after removing three), had a relatively normal distribution, had linear relationships between the independent and dependent variables, and had appropriate homoscedasticity of residuals. Once appropriateness for hierarchical multiple regression was established, I used the jamovi software to run the regressions, model coefficients, and calculate r and r^2 values. Although academic emphasis did not meet all of the criteria for inclusion, I included it in my analyses due to my study's theoretical framings. Table 27, on the next page, summarizes the findings of my study.

Table 27.

Summary of Quantitative Findings.

Dependent Variable	b	r^2 Change [a]	Finding
Academic Optimism (H1)	20.05 ***	5.8% ***	H1 is supported. AL is a significant predictor of AO.
Academic Emphasis (H2)	10.48	1.0%	H2 is not supported. AL is not a significant predictor of academic emphasis.
Collective Efficacy (H3)	28.86 ***	5.1% ***	H3 is supported. AL is a significant predictor of collective efficacy. Interpret with caution due to low Alpha of collective efficacy construct (0.637). Nevertheless, the construct still merits investigation and study (Taber, 2018).
Trust in Students and Parents (H4)	20.80 ***	5.9% ***	H4 is supported. AL is a significant predictor of trust in students and parents.

[a] "r^2 change" refers to the amount of change in the r^2 value from Model 1 (control variables only) to Model 2 (when AL was added in), as shown in Tables 23 through 26. The r^2 change value represents how much more AL contributes to the predictive power of the model.

* $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

The research question and its four hypotheses are found towards the beginning of the Results and Analysis, in Table 8. My data provides supporting evidence for three of my four hypotheses (i.e., H1, H3 & H4). As shown above in Table 27, AL is a significant predictor of AO and two of its individual components (i.e., collective efficacy and trust in students and parents).

CHAPTER 5: FINDINGS

My study was designed for me to analyze the potential relationship between teachers' perceptions of their principal's authentic leadership (AL) and their own academic optimism (AO). Given that AO is tightly linked with student achievement (Forsyth et al., 2011; Hoy et al., 2006; Wu et al., 2013), variables that can increase teachers' AO could likely strengthen student achievement as well. While the quantitative elements of my study measured how variation in AL can predict AO and its three components, my study's two qualitative items provided data to inform the relationship between and the nature of AL and AO.

The first open-ended question centered on how teachers perceived that their principal's leadership impacts their ability to successfully teach and for their students to successfully learn. Data from the first open-ended question were sorted, analyzed and reported out in three different ways: (1) according to my positive-negative analysis of the responses; (2) according to the four components of authentic leadership (AL); and (3) according to leadership themes that arose in the responses. I first present analysis of the first open-ended question, and then I report out major themes that emerged from the second open-ended question which focused on if and how teachers felt their perceptions of their principal's leadership were impacted by the on-going COVID-19 pandemic. In Chapter 6 which follows, I write about the findings, the lessons learned, and potential next steps for practice and research.

Two Open-Ended Questions

I asked participants to respond to two open-ended questions: "How (if at all) do you think your principal's leadership impacts your ability to successfully teach and for your students to successfully learn?" and "How (if at all) do you think that your perceptions of your principal's leadership have been influenced by the COVID-19 pandemic?" The first question allowed me to

gain more insight into any potential relationship between AL and AO and the second question provided me with further insight into the broader context (i.e., the COVID-19 pandemic) during which my study occurred. I analyzed data from the open-ended questions and summarized my findings below.

How (if at all) do you think your principal's leadership impacts your ability to successfully teach and for your students to successfully learn?

Of the 245 survey responses that I received, 178 (72.7%) answered the first open-ended question. I analyzed data from the first open-ended question in three different ways. In each case, after providing my initial thoughts and identifying potential themes, I crosschecked my coding with colleagues at my current school and my methodology with my committee members.

Positive-Negative Assessment Analysis. When I reviewed the responses to the first open-ended question, I noticed that some of them provided a clear, positive assessment of their principal's leadership, while others supplied a clearly negative assessment of their principal's leadership. Additionally, while some of the responses indicated that their principal's leadership did impact their ability to successfully teach and for their students to successfully learn, they were neither positive or negative. Finally, some responses explicitly stated that the participant believed that their principal's leadership had no impact on their belief systems. After noting my initial thoughts regarding whether each response was positive, negative, neutral or no impact, I shared my notes with my principal at the school where I currently teach. My principal provided me with her thoughts. We agreed on all of the 178 responses. Thus, I felt confident that I had coded my responses in a logical and reasonable way. Next, I identified patterns between how teachers assessed their principal's AL and how their responses on the first open-ended question were coded. Table 28, below, demonstrates how teachers' AL compares to their assessment of

their principal's AL. Table 28 is a frequency table, with intervals based on AL's mean (M = 3.65) and standard deviation (SD = 0.925).

Table 28.

Positive-Negative Assessment Analysis of Teachers' Responses on the First Open-Ended Question, Sorted by Final AL Score (Mean 3.64; SD 0.925)

AL Score	Total Responses	Positive Assessments of Leadership	Neutral Assessments of Leadership	Negative Assessments of Leadership	Principal's Leadership has No Impact
< 1.790	10	0%	20%	80%	0%
1.790 – 2.715	29	7%	24%	66%	3%
2.716 – 3.639	47	30%	11%	55%	4%
3.640 – 4.565	58	71%	12%	12%	5%
> 4.565	34	94%	3%	0%	3%
Total	178	89	22	60	7

Notes. Percentages refer to the percentage of responses from a particular score interval that were coded as positive, neutral, negative or no impact. For instance, 55% of the 47 responses whose AL score was between 2.716 and 3.639 were coded as negative. Additionally, as AL scores are calculated on a scale of 1-5. It is not possible for a teacher to have a final AL score more than two standard deviations above the mean.

Exactly half of the survey responses indicated that the principal's leadership positively impacted teachers' AO. Examples of responses coded as positive include: (1) *My principal always considers what is best for students when making decisions and leading. This positively impacts my ability to successfully teach and for students to successfully learn.*; (2) *My principal lets his staff know that he trusts us to make informed decisions about our students. He lets us know that our opinions are valued and important, since we are with the students every day. We*

know that he has our best interests at heart.; (3) *He sets high expectations and follows through, I try to do the same.*; and (4) *Administrative rules in this school enable authentic communication between teachers and administrators.*

I labeled the 22 responses that did not give an indication of positivity or negativity as neutral. These responses (e.g., *It depends on what direction they want the school to go in*; *A great deal*; *I do believe that my principal's leadership impacts my teaching a lot.*) often indicated that there is a relationship between their principal's leadership and their own belief systems, without making it clear whether the response was positive or negative.

Sixty participants responded that their perceptions of their principal's leadership negatively impacted them. Some of their responses include: (1) *When my principal is rigid in her ways of doing things, this impacts my ability to think "outside of the box" and explore different teaching methods to meet my students needs outside of what is expected from our students.*; (2) *My principal's leadership sometimes creates a mistrustful environment that makes it confusing and difficult to know what the expectations are. The end result is fear of being in trouble instead of being able to make decisions in the best interest of students.*; and (3) *I feel like teachers' needs are overlooked. Trust is a problem. It's hard to do your job when you don't trust your admin*[sic].

Seven study participants (3.9%) indicated that their perceptions of their principal's leadership did not have an impact on their own belief systems (e.g., *I don't think the leadership impacts my ability to teach; Not that much*; *The principal's leadership doesn't impact my ability to successfully teach and for my students to successfully learn.)* These seven responses appear to challenge my hypothesis that there is a positive relationship between teachers' perceptions of their principal's AL and their own AO.

Analysis According to the Four Components of AL. Next, I sorted, organized and coded my data according to the four components of AL (Walumbwa et al., 2008). Similar to how I analyzed each response as positive, negative, neutral or no impact, I crosschecked my coding with colleagues at my current school. My methodology for coding and sorting my data was also supported by the members of my committee. Table 29, on the next page, demonstrates the number of responses that aligned with one or more of AL's four components: (1) self-awareness; (2) internalized moral perspective; (3) balanced processing; and (4) relational transparency. Self-awareness refers to how well leaders reflect on their strengths and weaknesses, gaining a better understanding of themselves and how they impact others (Avolio & Gardner, 2005). Internalized moral perspective is a process where individuals self-regulate their behavior through their morals and values, rather than allowing outside forces or pressure to decide their behavior (Avolio et al., 2018). Leaders who exhibit balanced processing seek others' opinions, including from those who disagree with them. They are seen as authentic because when they make decisions, they are transparent with regard to their own perspectives, while objectively considering the perspectives of others (Gardner et al., 2011). Kernis (2003) explains that leaders show relational transparency when they share their inner feelings, motives, and perspectives appropriately with their followers. For further discussion about authentic leadership and its four components, please refer to the Authentic Leadership section of the Literature Review.

Of the 178 responses to the first open-ended question, 88 touched on one of AL's four components. Of the 88 responses, six referenced two of AL's four components. 90 responses (50.6%) did not reference any of AL's four components.

Table 29.

Number of Responses per Component of Authentic Leadership

Component of AL	Number of Responses
Self-Awareness	29
Internalized Moral Perspective	26
Balanced Processing	17
Relational Transparency	24

For each component of AL, survey responses to the open-ended question contained both positive and negative examples of it. Sample items (positive and negative) for each AL component are found below and on the page that follows in Table 30.

Table 30.

Teachers' Positive and Negative Assessments of Their Principal's Leadership by AL Component.

Positive Examples	Negative Examples
Self-Awareness	
As a special education teacher, my principal admits that he is not knowledgeable of different strategies that might be used in the classroom and with students. He trusts those on my team and the work that we do with students. He asks clarifying questions to understand. He advocates to include my students with the rest of the school.	Communication is often a problem with this dynamic... it is clear that the students and more importantly the parents of the students receive more of the support than I do as a teacher... Decisions are made based on what the administration says is the best option, often without consulting the teachers.
The principal sets the tone for the building and creates a culture that either helps and hinders teachers' efforts.	My administrator has a good vision for our school and its students however, she lacks good communication skills, she lacks empathy, she lacks a positive personality, she doesn't seem to like the kids or the teachers which really affects staff morale.
Internalized Moral Perspective	
We are a pilot school for structured literacy, which is science-based and threatens many teachers, especially those who have taught more than 10 years. I respect my principal's backing the science of reading.	My principal constantly encourages feedback, but speaking up in opposition to her beliefs gets you nowhere but on her bad side… She is open to listening to teachers, but is almost never swayed by what she hears. All this

	impacts students because of our low staff morale and lack of staff cohesion.
My principal inspires me in her equity lens and her humility to do minor tasks if necessary.	The principal does not walk her talk consistently
Balanced Processing	
She listens and shows understanding. She also comes back and talks about any problems, and tries to fix them or show the others' perspective	My principal fails to ask for input beyond her limited scope of what she wants to hear. Morale is super low. I'm a team leader who doesn't have the opportunity to share my expertise. There is little dialogue. Teachers are shamed and reprimanded based on student data without discussion.
My principal is open to new ideas and is very supportive of what I do in my classroom.	Within our school it is one way or the incorrect way. Little room for professional discussion.
Relational Transparency	
It all comes from her. She is who we go to in times of need, in times of comfort, success, achievement, etc. Her ability to lead directly impacts her teachers.	His interpersonal behavior hinders autonomy and job satisfaction and creates a stressful environment for everyone.
The fact that my principal believes in me, supports me, and encourages me is a HUGE deal! She fosters that with all of the staff. It allows us to feel comfortable enough to take risks and do what's best for our scholars!	Admin implements behavior plans and discipline without the input of teachers. Admin breaks rules for students, while teachers must follow [XCPS] policies.

When coding data from the first open-ended question, "How (if at all) do you think your principal's leadership impacts your ability to successfully teach and for your students to successfully learn?" according to the components of AL, the conceptual framework of my study (Figure 1, found in Chapter 1) appears to be reinforced. Teachers who perceived that their principals demonstrate positive examples of AL components wrote about the positive impacts on their students and on their teaching. Similarly, teachers who felt that their principals demonstrate

negative examples of the AL components describe the obstacles and challenges that they and their students face as a result.

Sorting by Leadership Characteristics. While I coded the data from the first open-ended question, I noticed a trend in the responses. Specifically, when describing their principal's leadership, many responses centered around their principal's leadership traits that teachers felt positively or negatively impacted their teaching and their students' learning. Based on these responses, it seems that some teachers in my study perceived that their principals demonstrate AL when they build trust, raise morale, develop teachers' self-efficacy, are supportive, are fair and have high expectations. Similarly, responses were negative about their principals when these traits were lacking. Table 31 contains the number of responses that mentioned each of the traits. Some responses referenced multiple traits and other responses did not reference any leadership traits. Afterwards, I provide a few examples of responses that described positive and negative examples of the trait.

Table 31.

Number of Responses that Referenced Leadership Traits

Leadership Trait	Number of Responses
Supportive	38
Trust	32
Morale	27
High Expectations	24
Self-Efficacy	19
Fairness	9

The leadership trait that received the most responses was "supportive," which was mentioned and referred to 38 times. Some teachers perceived that their principal's support made them better able to successfully teach and for their students to successfully learn. Statements such as: (1) *He lets us know that our opinions are valued and important, since we are with the*

students everyday, (2) *My principal supports me and encourages me which helps me teach my students and helps them learn,* and (3) *My principal has created a student and staff centered environment where both feel supported and empowered to do their jobs. Supporting staff allows staff to better serve students* support this notion. At the same time, teachers who perceive principals as not supportive reported that their leader got in the way of their success. For instance, one respondent wrote that: *Too often we see administrators who only demand high test scores and other difficult tasks without giving any guidance or coaching. Too often a principal is in their office dealing with other issues and lose touch with the realities of the classroom. On top of this, principals still do not allocate appropriate coaching support or most importantly understanding of the needs of teachers.* Similarly, another teacher shared that: *The lack of strong leadership and established procedures hinders my ability to successfully teach my students. Students (rightfully) perceive that their concerns and wellbeing are unimportant due to the lack of consequences for serious behaviors (bullying, sexual harassment, physical battery). The school leadership team handicaps teachers' abilities to manage behaviors through their commitment to being "friends" with all students rather than being perceived as disciplinarians or authorities worthy of respect.*

I found that 32 responses referred to the importance that trust has on their teaching. For instance, one response explained the importance that trust has on her ability to grow: *I think you have to believe in the principal and know that they understand what you are dealing with especially within an impoverished school. I need to know that my principal believes in and is invested in my students in order for me to trust them. Once the trust is established then, it is easier to develop a dynamic professional relationship that enables me to grow.* Similarly, another teacher wrote that: *I have been at my title 1 elementary school for over 20 years (same*

one), and the leadership is KEY! Teachers and staff take their lead from the top, and when your administration trusts you and helps you, everyone wins! Finally, a third response focused on how she appreciates her principal's trust: *I appreciate my principal's leadership - she is there for you whenever you need, but she also has the confidence in letting us make the best decision for our students.*

Similarly, 27 responses focused on how the principal's leadership impacts the morale of the school. Whether the principal impacts morale positively or negatively, in their responses, teachers perceived that their morale directly relates to the success of their students. For instance, as two respondents wrote: *The principal sets the tone for the building and creates a culture that either helps and hinders teachers' efforts*; and *I think the biggest impact that the principals leadership has is on moral [sic]. The moral [sic] of the school impacts teachers' motivation and belief in their own teaching abilities.* Some teachers perceived that their principal has negatively impacted staff morale: *We are not allowed to be innovative or try new ideas. We have to do it the way we always have...which isn't working!* Another teacher felt similarly: *This has been a particularly challenging year--teachers have been instructed to strictly follow pacing guides and teach the Benchmark Advance Curriculum with fidelity. This has resulted in a huge decrease of teacher autonomy, trust, and innovation in the building.* When a principal cultivates positive morale, however, there can be very positive effects on teachers, as one teacher wrote: *Strong friendly leader. Shows she cares and leads by example… helps me perform at my best*.

Principals who demonstrate high expectations were seen by 24 teachers as critical to the functioning of the school (e.g., *By setting standards and expectations high and holding teachers to them*; *He sets high expectations and follows through, I try to do the same*; and *Out* [sic] *principal has high expectations for students and staff. Leadership choices are made based on*

these beliefs and expectations. Staff development opportunities are available to help us grow and move students forward). Meanwhile, principals who fail to set clear and rigorous expectations are perceived to be detrimental to the functioning of the school. This is illustrated by responses such as: *My principal's leadership sometimes creates a mistrustful environment that makes it confusing and difficult to know what the expectations are. The end result is fear of being in trouble instead of being able to make decisions in the best interest of students* and *Some of the expectations in the school hinder me from encouraging my students to grow academically as well as in their growth mindsets… I've also noticed that the admin like to talk a lot about the data from testing or classroom data. However, they have rarely shown or encouraged teachers how to actually use the data. We seem to just get data for the sake of collecting it, but not use it for student growth.*

At the same time, 19 teacher responses centered around their feelings of self-efficacy. As teachers explained in their responses, they gained more confidence when their principal empowered them: (1) *I think my principal's leadership allows me to have the freedom and autonomy of my classroom which allows me to find creative was to help my students become successful*; (2) *Yes, it empowers me to take risks and to learn from my successes and my short comings;* (3) *The principal has a huge affect on my ability to successfully teach. Our principal shows great trust and confidence in my professional judgment and that in turn allows me to be confident in the decisions I am making and how they are best for my students;* (4) *My principal's leadership enhances teacher ability to successfully teach. Students learning and well-being are always number one in all her decisions. And she helps us and pushes us to always do our best and to reach out of our comfort zone to always grow professionally.*

Finally, nine of the responses touched on perceptions of fairness. Interestingly, only one of the responses that touched on fairness viewed their principal in a positive light: *I think my principal is fair and allows teachers autonomy as we operate within the parameters of expectations.* While one response was neutral, the other seven responses perceived the principal as unfair and as negatively impacting the school. As an example, one teacher wrote that: *My principal only listens to a select few people who make all the decisions without any input from those the decisions will affect. New and fresh ideas are looked down upon, and by being that myopic, any (foreseeable), road blocks become fires that have to be put out. This then effects administrations' ability to follow through on anything related to the students and the teachers.* Another teacher reported that: *The inability of my principal to allocate responsibilities to other school leaders (AP, Staff Development, Reading Specialists, etc.) often makes my job as a teacher more difficult and unfair.*

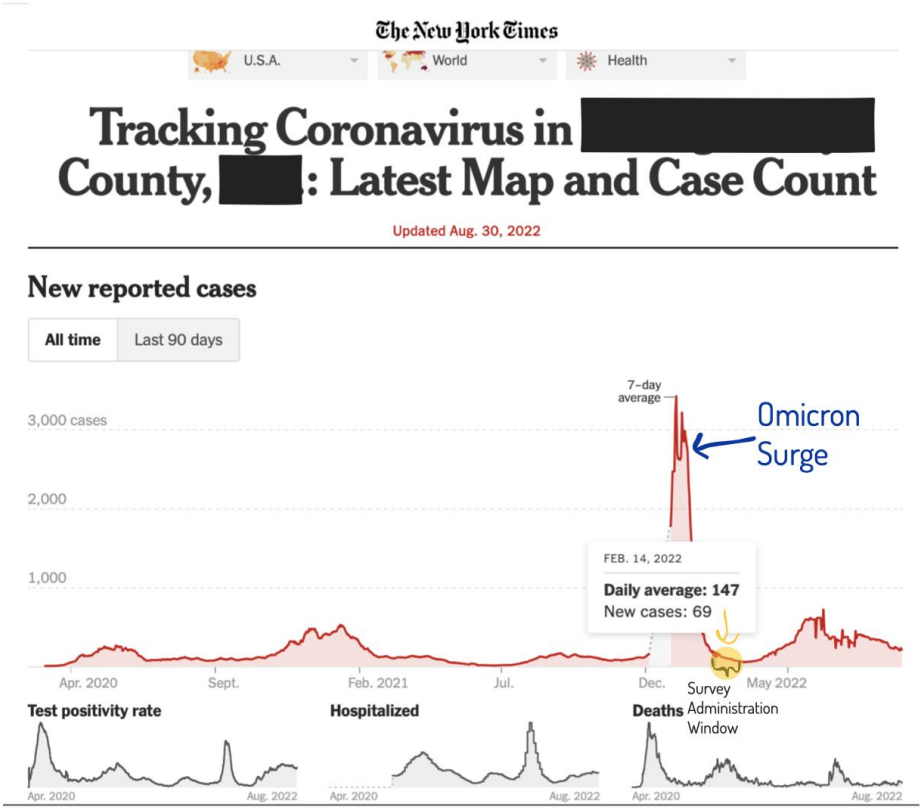
Summary of the First Open-Ended Question. When teachers perceived that their principal's leadership positively impacts their ability to successfully teach and for their students to successfully learn they were significantly more likely to have provided a higher AL score for their principal's leadership. Additionally, despite the question not mentioning AL, almost half of responses referenced or described one or more of the four components of AL. Finally, the responses also identified a series of leadership characteristics whose presence (or lack of presence) in the principal's leadership practice impacted how teachers perceived their principal's leadership.

Next, I will discuss data from the second open-ended question, which focused on how the COVID-19 pandemic may have influenced teacher perceptions of their principal's leadership. Specifically, I administered my survey after the Omicron surge in early 2022. During the

Omicron wave, XCPS schools experienced acute COVID-related challenges, such as shortages of bus drivers and teachers due to illness and infection levels greater than 5% in school buildings. Teachers took my survey about a month after COVID data had more or less returned to pre-Omicron-surge levels. Figure 14, below, is a screenshot from the New York Times (2022), demonstrating COVID levels within Xxxxx County during and immediately prior to the administration of my survey to teachers in XCPS. When considering the data in my study, it is critical to consider the context during which my study was conducted.

Figure 14.

COVID Levels in Xxxxx County During and Prior to My Survey's Administration Window.



How (if at all) do you think that your perceptions of your principal's leadership have been influenced by the COVID-19 pandemic?

Of the 245 survey responses that I received, 181 (73.9%) answered the second question. However, I excluded 3 responses from the data because they were irrelevant or did not answer the question. Specifically, the 3 responses that I removed were: (1) *great perception*; (2) *I make sure to question decisions if it does not make sense or sound right*; and (3) *I'm not really sure I can evaluate this question fairly*. Additionally, I also removed four other responses because the teachers shared that they were in their second year with their current principal (and did not experience the principal's leadership prior to the COVID-19 pandemic), and thus, were not able to answer the question (e.g., *Not sure because I wasn't with her before covid hit*). Therefore, after excluding the seven responses, I had 173 responses.

When analyzing data to the second open-ended question, I sorted them according to how the participants perceived that their principal's leadership was influenced by the COVID-19 pandemic. Table 32 shows the breakdown of the 173 responses. Responses coded as neutral indicated that there was a relationship between COVID-19 and the teacher's perceptions of their principal. Responses coded this way were either clearly neutral or I was not able to determine if they were positive or negative.

Table 32.

Participant Perceptions of how the COVID-19 Pandemic Influenced their Principal's Leadership

Perception	Number of Responses	Percentage of Total
COVID-19 had a Positive Influence on Leadership	59	34.1%
COVID-19 had a Negative Influence on Leadership	45	26.0%
Response to Question Was Neutral or Unclear	30	17.3%
COVID-19 did not Influence Perceptions of Principal	39	22.5%

Note. The percentages sum to 99.9% and not 100% due to rounding.

COVID-19 had a Positive Influence on Leadership. Representing 34.1% of all responses, 59 teachers reported that COVID-19 had a positive influence on their perceptions of their principal's leadership. The data suggest that teachers appreciated principals who communicated transparently, were supportive, prioritized student and staff safety, and stayed engaged with the school. For instance, one teacher reported that, *My perceptions have been positively influenced. My administration always made decisions to prioritize student and staff safety. They interpreted policies in reasonable ways and maintained open communication with us at all times.* Another teacher shared that her principal *is always the last to leave the building. COVID has made her take safety for all very serious*. Similar responses included respondents who wrote that *My principal has always put children first but I think the pandemic has caused the principal to consider teachers feelings and self care more than before. The principal wants to make sure we are ok which in turn will also help our students* and *I have seen another layer to my principal in the way he has cared for staff and put families (staff and students) first. He has advocated for our community to make sure families have what they need and for our staff so that we feel safe in the building. He has continued to involve staff in the decision making and planning around procedures.*

Focusing on themes of authentic leadership, teachers who felt positively about their principal's leadership reported that their principal became more relatable and genuine. Examples of these themes include responses like *I have seen a different side of leadership in general, and I think covid has made our leader a little more of "person"*; *Quite a bit. The pandemic has really called on principals to be human, rise above administrative roles, and really delve into a range of roles. In my opinion, he's great at reading a situation and figuring out what is best for all*

parties; and *He continued his beliefs and support of his staff through the pandemic. He was always there for us before and continued to be through this difficult time*.

COVID-19 had a Negative Influence on Leadership. At the same time, 45 teachers representing 26.0% of the total responses, reported that COVID-19 had a negative influence on their perceptions of their principal's leadership. Most responses centered on how the principal's actions made teachers feel negatively. Five responses that represent the variety of ways that principals' actions made teachers perceive their leadership negatively include: (1) *Sometimes what she says is not what she has done*; (2) *She wasn't a dynamic leader before COVID and her weaknesses were more evident throughout the pandemic. We often didn't have clear communication on procedures and processes. She did not show compassion or empathy for staff who were dealing with covid issues in their own families. She did the minimum but expected the maximum from staff*; (3) *It was too overwhelming for her to handle effectively*; (4) *I think her style has been influenced by the pandemic. She's been completely overwhelmed and has passed that on to teachers. Lack of empathy above her has lead to her lack of empathy for teachers. There is Blame and Shame and no true discourse*; and (5) *Covid has brought out another side of our principal that many people feel unhappy with*.

Interestingly, some responses shared that the pandemic has negatively influenced teachers' perceptions through no fault of the principal. Some responses that fit this pattern focused on the extra responsibilities placed on principals that took them away from their job. For example, respondents wrote (1) *The* [sic] *have had a difficult time doing their jobs due to COVID. They are pulled and putting out fires left and right that they don't have time during the day to do their jobs;* (2) *The COVID-19 pandemic has shown how little control principles* [sic] *have over their schools. Nearly everything is dictated by the division superintendent and the*

school board; and (3) *Our principal has had to take on roles outside of a principal's normal duties. These have made it difficult to perform every day duties of a principal and have forced leadership to make challenging decisions*. Other such responses centered around the actions of the school district that negatively influenced their perceptions of leadership as a whole (e.g., *The principal's leadership has been undermined in a many ways by directors and executive leadership's decision making and COVID "protocol." Principals were left scrambling and unable to be direct, open, and clear with information. Staff often felt they were not well informed, but principals felt that way too. Principals do not have enough autonomy to make decisions and implement processes/protocol for their community. Behind the numbers are real human beings. Directors do not know school communities well enough to have the power to decide most things. If the county is proud of their leadership training, then let their trained leaders lead.*)

Response to Question was Neutral or Unclear. While 30 responses (17.3% of the total) indicated that there was a connection between the COVID-19 pandemic and their perceptions of their principal's leadership, their responses were not clearly positive or negative. Thus, I coded them as neutral or unclear. Some of the neutral and unclear responses involved general statements about how COVID impacted schools without a clear positive or negative claim. For instance, three teachers shared neutral and unclear responses when they wrote that (1) *Has made me see her in a new light*; (2) *I have empathy for the stress she must have gone through*; and (3) *I think it has been greatly impacted because it has restructured how we teacher* [sic] *our students.* Other neutral and unclear responses simply stated that there is a relationship without any indication of whether it is positive or negative (e.g., *A lot!; Effected greatly; some*).

COVID-19 did not Influence Perceptions of Principal. Of the responses, 39 teachers did not perceive that the COVID-19 pandemic influenced their perceptions of their principal. It is

interesting that 22.5% of all responses rejected the premise that COVID-19 impacted how they perceived their leader. Most of the responses were short and simple (e.g., *Not at all; None; Has not; No influence*). However, there were a few responses that expanded on why the teacher did not think there was an impact. Their responses suggested that their perceptions of their principal are shaped by their leader's core and values, which were unchanged through the pandemic. For instance, one respondent wrote *Not really - I don't think the COVID-19 pandemic shifted or changed who my principal is*. Another respondent shared that *Not at all. My principal has always been thorough with her communication and clear on her expectations.* Finally, a third response stated that *The pandemic just emphasized the issues that were already there.*

Emergent Themes Across Responses. After my initial analysis regarding whether teachers perceived that COVID-19 impacted their principal's leadership positively or negatively (if at all), I looked for themes that emerged across responses. Upon doing so, two themes materialized: (1) The principal's humanity; and (2) The principal's control over their job.

The Humanity of the Principal. When considering how the COVID-19 pandemic impacted their perceptions of their principal's leadership, 29 teachers (16.8% of all responses) indicated that their opinions were swayed by their principal's ability or inability to show their humanity. Of the 26 responses, 18 indicated that COVID had a positive impact on their perceptions of their principal's leadership, seven indicated a negative impact, and one was unclear. Of the positive perceptions, teachers wrote that, (1) *I have seen a different side of leadership in general, and I think covid has made our leader a little more of* [a] *"person*;" (2) *I have seen another layer to my principal in the way he has cared for staff and put families (staff and students) first. He has advocated for our community to make sure families have what they need and for our staff so that we feel safe in the building*; and (3) *My principal has been open*

about the professional and personal challenges [they are] *going through this time which has led to a more open communication environment in the building*. In a similar vein, while the unclear comment (i.e., *This past 22 months was a first for us all. No manual for leading during a pandemic. However, some principals were able to admit that they didn't know while other* [sic] *move full steam ahead and lost teachers, students and families*) did not clearly establish whether their perceptions of their principal's leadership were positively or negatively impacted by COVID-19, it did make clear that effective principals showed their humanity by making themselves vulnerable, while others did not.

Meanwhile, the seven comments that indicated that the COVID-19 had a negative impact on their perceptions of leadership focused on how the principals failed to demonstrate empathy and authenticity. For instance, one teacher shared that *the hyper focused and narrow vision of my principal is stressing teachers out. We here* [sic] *the message of "together we can" or "we are in this together" but the reality is principals and central office are only looking at the data, not teachers and their needs*. Similarly, another teacher explained that *the admin just see low scores, not struggling from a global pandemic and shared trauma*. Focusing on the principal's lack of humanity, a third teacher wrote that *there was a lack of sensitivity and empathy during the pandemic, comments that were rude about teacher's work ethic and not wanting to come to work were made, further eroding her support amongst staff*. Finally, an exasperated teacher wrote that her principal *has totally washed his hands of us and does not care anymore. He needs to leave! …When we tell him we are tired, he laughs at us!* As previously discussed, some teachers perceived that the COVID-19 pandemic positively impacted their perceptions of their principal's leadership, while others indicated that the pandemic caused a negative impact to their perceptions. Yet, teachers who indicated that COVID-19 had both a positive and a negative

impact both made it clear that their principal's humanity (or lack thereof) influenced their perceptions.

The Principal's Control Over Their Job. Of the 173 responses to the second open-ended item, 28 responses (16.2%) specifically mentioned that the COVID-19 pandemic caused their principal to lose control over the nature of their job (e.g., *The COVID-19 pandemic has shown how little control principles* [sic] *have over their schools. Nearly everything is dictated by the division superintendent and the school board*; *I feel sorry for her that she is at the mercy of central office confusion and chaos… We are in CRISIS MODE*; and *I think I need to remind myself to step back and realize many decisions are coming from the board and not my principal*). Of the 28 responses that mentioned how principals lost control over the nature of their job, twelve of them indicated that COVID-19 had a positive influence on leadership, eight indicated that the pandemic had a negative influence on their perceptions of leadership, and eight fell under the "response to question was neutral or unclear" category. None of the 28 responses were also categorized as COVID-19 not having an impact on teachers' perceptions of their principal's leadership.

Teachers perceived that their principal lost the ability to make decisions for their school, and instead were "at the mercy" of central office, the school board and politicians. For instance, three teachers responded that: (1) …*their* [principals'] *hands are tied from on high*; (2) *The principal's leadership has been undermined in a* [sic] *many ways by directors and executive leadership's decision making and COVID "protocol."*; and (3) *…I can tell my principal has to make decisions that she is told to make, but not because she agrees with them or because she knows they are best for students. But because she is told. This causes friction with staff because the decisions are not easy for teachers… it's not the principal's fault*. Finally, a fourth teacher

wrote that, *principals do not have enough autonomy to make decisions and implement processes/protocol for their community… If the county is proud of their leadership training, then let their trained leaders lead*.

Additionally, teachers shared that external safety factors related to COVID-19 (e.g., developing and implementing safety protocols, fluid and changing COVID-19 prevention practices mandated by the State, engaging in contact tracing, managing COVID testing, and managing classroom coverage shortages, etc.) took principals away from being instructional leaders and present in classrooms. For instance, one teacher commented that *our principal has had to take on roles outside of a principal's normal duties. These have made it difficult to perform every day duties of a principal.* Another teacher complained that *I think the county has given principal's* [sic] *an unrealistic amount of tasks and standards to perform and meet… There are some guidelines and expectations that are ridiculous that can't be avoided – those might have changed some people's perception of his leadership, but not mine*.

Furthermore, a few responses specifically called out how the COVID-19 pandemic caused principals to be unable to observe instruction, a core component of school leadership (Leithwood et al., 2020). For instance, one respondent lamented that, *My principal was unable to observe teachers during the pandemic. Her ability to get back into that habit has been slow to improve because of the contact tracing and COVID testing responsibilities that she has.* Another teacher shared that *administrators are required to take on much more than they usually would… I believe support would be better if administrators were not dealing with Covid-19 procedures and regulations throughout the day, everyday* [sic]. Finally, a third teacher indicated that, *I think the pandemic has refocused our leadership on health/procedures and has taken them out of academic related tasks.*

Thus, throughout their responses, teachers indicated their awareness that principals, due to no fault of their own, lost control over the nature and scope of their jobs. Undoubtably, this awareness (or lack of awareness) could impact how teachers perceived their principal's leadership in the context of the COVID-19 pandemic.

Summary.

Responses to the first open-ended question seemed to support the premise of my study, which is that teachers' perceptions of their principal's leadership impact their belief systems. Teachers who indicated that their principal demonstrates high levels of authentic leadership, tended to have positive responses to the first open-ended question. Similarly, teachers who provided low ratings for their principal's AL often gave negative responses about the principal. Additionally, many responses (see Tables 29 and 30) referenced or were easily sorted into AL's four components. Finally, when sorting data by theme, teachers voiced preferences that their principal be (1) trustworthy; (2) supportive; and (3) increase morale, traits consistent with authentic leaders (Avolio et al., 2009; Gardner et al., 2011; George, 2003).

My second open-ended question focused on how teachers felt that their perceptions of their principal's leadership are impacted by the ongoing COVID-19 pandemic. When excluding neutral/unclear responses from the analysis, 41.3% of teachers reported that COVID-19 had a positive influence on their perceptions of their principal's leadership. At the same time, 31.5% reported a negative influence and 27.3% reported that COVID-19 had no influence on their principal's leadership. Therefore, no strong conclusion (as to positive or negative) can be made regarding how COVID-19 impacted teachers' perceptions of their principal's leadership, other than that teachers' perceptions cannot be viewed as a monolith. Still, after analyzing responses according to themes, two patterns emerged: (1) relating to AL, teachers valued principals who

demonstrated their humanity; and (2) teachers recognized that principals lost the ability to control the nature of their job. Thus, teacher perceptions of their principal's leadership (as it related to the COVID-19 pandemic) were likely influenced by these two themes and should be considered when drawing conclusions from the data.

CHAPTER 6: DISCUSSION, IMPLICATIONS, AND CONCLUSIONS

I conclude with a discussion about my findings, the limitations of my study, and the implications of my work, both for practice and for future research. In Chapter 1, I introduced my study and framed my reasoning behind why increasing the authentic leadership (AL) of principals might increase the academic optimism (AO) of teachers. Furthermore, although my study does not include or involve student data, I explained how AO is tightly linked with student achievement. In Chapter 2, I provided the conceptual foundation and previous research basis for my study in the literature review. In my literature review, I delved into the foundational underpinnings of AL, AO, academic emphasis, collective efficacy and trust in students and parents. In Chapter 3, I explained my study's methodology, including how I protected my participants, the scales I used to create my survey, and the processes of data collection and analyses. Next, I presented my quantitative results and analysis in Chapter 4 and the qualitative findings in Chapter 5. This concluding chapter, Chapter 6, contains my discussion of the results, the limitations of my dissertation, and offers implications for theory and practice.

Discussion

For more than 60 years, the field of educational research has focused on enacting reforms and passing policies aimed at increasing student achievement (Coleman et al., 1966; Edmonds, 1979; Gamage et al., 2009; Grissom et al., 2021). In a similar vein, Leithwood et al., (2020) discuss how school principals, while playing a major role in the school improvement process and in creating a positive school climate, nevertheless rely on teachers to directly impact student achievement. Similarly, Hallinger and Heck (1996) and Wahlstrom and Louis (2008) found that the impact of principals on student achievement is secondary to the impact of teachers. Thus, it is important to identify variables that principals can influence, which in turn also influence students

(Mascall et al., 2008). Hoy et al., (2006) identified three variables of teachers that directly influence students: (1) academic emphasis, (2) collective efficacy, and (3) trust in students and parents, which directly relate to student achievement and are controlled for students' socioeconomic status. Previous research (e.g., Beard et al., 2010; Forsyth et al., 2011; Smith & Hoy, 2007; Wu et al., 2013) demonstrated that when academic emphasis, collective efficacy and trust in students and parents are combined, they mutually reinforce and form academic optimism (AO), a unified, general construct (Wu et al., 2013). AO, according to McGuigan and Hoy (2006), is the permeated belief that academic achievement is important, that teachers are able to effectively increase student achievement, and that students and parents are trusted partners in the learning process. AO has been tightly linked to student achievement in a number of studies (e.g., Beard et al., 2010; Smith & Hoy, 2007; Srivastava & Dhar, 2016).

If principals can increase the AO of their staff, increased student achievement would likely follow. Thus, as discussed by Leithwood et al., (2020), principals can indirectly impact student achievement in their schools. In my study, I viewed principals' leadership through the lens of authentic leadership (AL). Specifically, I investigated how teachers' perceptions of their principal's AL impacted their own AO. Next, I discuss my quantitative findings. Afterwards, I will discuss the qualitative findings of my study.

Quantitative Findings.

Across industries, authentic leadership has been found to positively impact employees in a variety of ways, such as job satisfaction (Azanza et al., 2015), work engagement (Giallonardo et al., 2010), commitment (Stander et al., 2015), optimism (Wang et al., 2014), trust (Wong & Cummings, 2009), creativity (Semedo et al., 2016) and hope (Rego et al., 2014). Additionally, a number of recent studies investigating the impact of AL on self-efficacy (Laschinger & Fida,

2014; Stander et al., 2015; Wang et al., 2014; Xu et al., 2017) used a construct called Psychological Capital (PsyCap), which measures hope, resiliency, self-efficacy, and optimism (Luthans & Youssef, 2004; Luthans et al., 2007). In studies across a variety of settings and contexts, Laschinger and Fida (2014), Stander et al., (2015), Wang et al., (2014), and Xu et al., (2017) all found that AL is positively correlated with employees' efficacy and increased their PsyCap. Consistent with this body of research, the results of my study (summarized below) demonstrate that teachers' perceptions of their principal's authentic leadership had a moderate, positive relationship with their academic optimism, collective efficacy, and trust in students and parents. As authentic leadership has been associated with many positive constructs based on what the employee believes (e.g., self-efficacy, optimism, commitment, etc.), it makes sense for AL to also be positively associated with academic optimism, which represent teachers' belief systems about their ability to successfully teach and for their students to successfully learn.

I found that after controlling for teachers' gender, race, and years of experience, AL was a significant predictor of AO (H1), as well as two of AO's three subindices: collective efficacy (H3) and trust in students and parents (H4). Specifically, I found that at a significance level of < 0.001 after accounting for the three control variables, AL predicted 5.8% of the variance in AO, 5.1% of the variance in collective efficacy, and 5.9% of the variance in trust in students and parents. Thus, according to my data, teachers' perceptions of their principal's leadership (i.e., AL) have at least a minor impact on their own belief systems (i.e., AO; collective efficacy; and trust in students and parents). At the same time, AL was not found to be a significant predictor of academic emphasis (H2). A summary of the results of my research question and its four hypotheses can be found in Table 27, in the Results and Analysis, Chapter 4.

My findings, therefore, are similar and different to other researchers who investigated the impact of leadership on teachers' AO, as all of the researchers before me (e.g., Mascall et al., 2008; Rutledge, 2010; Srivastava & Dhar, 2016) who studied the impacts of leadership on teachers' AO, found that AL was a significant predictor of all facets of AO. Mascall et al., (2008) and Hasanvand et al., (2013) found that distributed leadership was a significant predictor of AO, Rutledge (2010) found that transformational leadership was a significant predictor of AO, and Kulophas (2018) and Srivastava and Dhar (2016) found similarly for the impact of AL on AO. Thus, my findings on H 1, H 3 and H 4 are consistent with prior research, while my findings on H 2 are inconsistent with previous studies about the impact of leadership on AO.

The Insignificance of Academic Emphasis. With the data I collected, there is no way to be certain why AL was not found to be a significant predictor of academic emphasis. While reflecting on why this could be, I wondered if the nature of academic emphasis could have played a role in this. Collective efficacy and trust in students and parents are both interpersonal constructs, which involve interactions between the teacher and students and the teacher and parents. Yet, academic emphasis is more related to a teacher's personal belief system of high expectations, making it a more intrapersonal construct. Perhaps, my data suggest that a teacher's perceptions of their principal's leadership had a significant impact on the interpersonal constructs and not on the intrapersonal construct. Nevertheless, it is impossible to know for sure without conducting further research into this topic. The "Implications for Future Research" subsection, found towards the end of Chapter 6, will, based on my findings, provide specific directions for further research.

Importantly, the academic emphasis subscale did not pass the assumptions of internal reliability and normality. Academic emphasis had poor internal reliability (a = 0.578).

Interestingly, this unacceptable level of reliability is quite different than Hoy et al., (1991) and Beard et al., (2010) who found that academic emphasis had internal reliability scores of 0.84 and 0.71, respectively. Additionally, as found on Table 15 in Chapter 4, academic emphasis failed the Shapiro-Wilk normality test and the Anderson-Darling normality test. These results are quite different from other studies which investigated academic emphasis (e.g., Alig-Mielcarek & Hoy, 2005; Goddard et al., 2000) and found the data to have normal distributions. Perhaps in a subsequent qualitative study, I could attempt to better understand to what extent (if at all) teachers believe that their principal's leadership impacts their academic emphasis.

Significant Control Variables. As shown in Table 33, I conducted hierarchical multiple regressions and found that some control variables were significant predictors of my study's dependent variables. The levels of reference for my control variables are as follows: Gender – "Female"; Race – "White or Caucasian"; and Years of Experience – "More Than 15 Years."

Table 33.

The Significance of Control Variables for Each Dependent Variable.

	Academic Optimism	Academic Emphasis	Collective Efficacy	Trust in Students and Parents
Gender				
Male	Not significant	Not significant	Significant *	Significant *
Race/Ethnicity				
Asian or Pacific Islander	Not significant	Not significant	Not significant	Not significant
Black or African American	Not significant	Not significant	Not significant	Not significant
Hispanic or Latino	Not significant	Not significant	Not significant	Not significant
Other	Not significant	Not significant	Not significant	Not significant
Multi-Racial	Not significant	Not significant	Not significant	Not significant
Years of Experience				
Less Than 5 Years	Significant **	Significant *	Significant *	Significant *
5 – 15 Years	Not significant	Not significant	Not significant	Not significant

Notes. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Male teachers had significantly lower levels of collective efficacy ($p < 0.05$) and trust in students and parents ($p < 0.05$) than female teachers. This result surprised me. My findings are similar to Arslan (2013), who found that female teachers have higher levels of self-efficacy than male teachers. At the same time, Odanga et al., (2015) and Klassen and Chiu (2010) found that male teachers have higher levels of self-efficacy than female teachers. Meanwhile, Alenezi (2019) found that gender was not a significant predictor of self-efficacy. I did not find prior research that specifically analyzed how the gender of the teacher may impact their trust in students and parents. However, given that collective efficacy and trust in students and parents are both components of academic optimism, it is worth mentioning that Thien et al., (2021) and Chang (2011) both found that male teachers had higher levels of AO than female teachers. My findings support the continued incorporation of gender as a possible predictor of AO.

Meanwhile, the race/ethnicity of the teacher was not found to be a significant predictor of the teacher's academic optimism, academic emphasis, collective efficacy or trust in students and parents. As previously mentioned, no prior studies have focused on how the race/ethnicity of the teacher may impact their AO or its components. While, Gershenson et al., (2018) and Carver-Thomas and Darling-Hammond (2017) explain that teachers' race and ethnicity can predict a variety of educational outcomes and factors, it was not a significant predictor in my study. A teacher's AO represents their core belief system about children and learning, (McGuigan & Hoy, 2006). Thus, my finding that a teacher's race/ethnicity does not impact their core belief system about children and learning makes sense to me. Future studies might want to explore how students' race/ethnicity may impact the teacher's core belief system. My study only occurred in Title I elementary schools in XCPS, where students tend to identify as Black and Latino. Thus, other studies might yield different results.

Finally, after conducting hierarchical multiple regressions, I found that teachers with less than five years of teaching experience had statistically significantly lower levels of academic optimism ($p < 0.01$), academic emphasis ($p < 0.05$), collective efficacy ($p < 0.05$), and trust in students and parents ($p < 0.05$) compared to teachers with more than 15 years of experience. Teachers with five to 15 years of experience did not have significantly different AO levels compared to teachers with more than 15 years. Furthermore, as shown in Table 34, a review of the standardized coefficients reveals that a teacher's experience (specifically, whether the teacher had less than five years of experience) was a strong negative predictor of the teacher's academic optimism, academic emphasis, collective efficacy and trust in students and parents. My data suggest that a teacher's level of experience was more impactful on my study's four dependent variables than was teachers' perceptions of their principal's authentic leadership. This is particularly noteworthy within the context of Title I schools, because they tend to have more inexperienced, new teachers (Carver-Thomas & Darling-Hammond, 2017). For a more robust discussion on how a teacher's level of experience impacted my data, please see the Implications for Future Research section later on in this chapter.

Table 34.

Teachers' Years of Experience Was a Stronger Predictor of the Dependent Variables than Authentic Leadership.

	Standardized Beta Coefficient of the Variable	
	< 5 Years of Experience	Authentic Leadership
Academic Optimism	-35.90	20.05
Academic Emphasis	-34.29	10.48
Collective Efficacy	-45.91	28.86
Trust in Students and Parents	-27.51	20.80

Notes. The reference level for teachers with less than five years of experience was teachers with more than fifteen years of experience.

My findings that a teacher's years of experience was a significant predictor of my study's dependent variables are consistent with that of Chang (2011), Huang and Yin (2018), and Thien et al., (2021), who all found that more experienced teachers reported higher perceptions of their own academic optimism than less experienced teachers. This finding makes sense to me and is consistent with the troubling turnover that has tended to occur among novice teachers at Title I schools (Simon & Johnson, 2015). Newer teachers tend to struggle and require more support than more experienced teachers (Carver-Thomas & Darling-Hammond, 2017). Without strong support and skillful leadership, newer teachers tend to turnover at alarming rates (Azanza et al., 2015), a trend exacerbated by the COVID-19 pandemic (Minihan et al., 2022; Zamarro et al., 2022). Thus, it makes sense that newer teachers would report lower levels of academic optimism than more experienced teachers, as was found in other studies as well (e.g., Huang & Yin, 2018; Thien et al., 2021).

Additionally, the COVID-19 pandemic likely heightened the difficulties experienced by many newer teachers (Minihan et al., 2022; Zamarro et al., 2022). Significant portions of XCPS's 2019-2020 school year and 2020-2021 school year were conducted virtually. Thus, for all second- and third-year teachers in my study, the 2021-2022 school year during which my study was conducted, was the first complete school year where teachers taught full classes in-person. Due to the nature of virtual learning, second- and third-year teachers did not need behavior management skills the same way that teachers need behavior management skills in-person (e.g., in virtual learning, students engaging in disruptive behaviors can be muted or have their video turned off). Thus, for all intents and purposes, second- and third-year teachers were first-year teachers with regards to behavior management. Given that teacher stress and burnout levels have been escalated during the COVID-19 pandemic (Minihan et al., 2022; Pressley,

2021; Steiner & Woo, 2021), it makes sense that newer teachers would be highly impacted by this, as newer teachers tend to experience more stress than more experienced teachers (Carver-Thomas & Darling-Hammond, 2017). Increased levels of stress could cause teachers to have lower expectations for students, lower levels of self-efficacy, and reduced trust in students and parents (Klassen & Chiu, 2010; Minihan et al., 2022; Steiner & Woo, 2021). Therefore, the increased levels of stress, could have caused teachers with less than five years of teaching experience to have lower levels of academic optimism than the higher levels of academic optimism contained by more experienced teachers. For further discussion on how years of experience may have interacted with my model, please see the Implications for Future Research section later on in Chapter 6.

Qualitative Findings.

The data from my two open-ended questions support the theoretical framework (as described in Chapter 1) of my study and strengthen it. Asking and analyzing data from the two open-ended questions informed and deepened contextual understanding behind the quantitative findings. The previously discussed quantitative findings demonstrate that teachers' perceptions of their principal's authentic leadership do have an influence on their own academic optimism. Yet, the quantitative data are not able to explain why this is the case. Thus, the qualitative data I captured supports the quantitative analysis by providing additional information about the potential "why" behind the numbers. The themes and patterns that emerged from my qualitative data help me better understand why my independent variable had a statistically significant relationship with three out of my four dependent variables.

In this section, I will begin by discussing the findings from the first open-ended question, which asked teachers to respond to the question: *How (if at all) do you think your principal's*

leadership impacts your ability to successfully teach and for your students to successfully learn? Afterwards, I discuss my findings from the second open-ended question, which asked teachers: *How (if at all) do you think that your perceptions of your principal's leadership have been influenced by the COVID-19 pandemic?*

First Open-Ended Question. I analyzed data from the first open-ended question three ways. First, I looked for patterns and potential associations between teachers' responses to the open-ended question and their perceptions of their principal's authentic leadership, as measured by the Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008). The responses to the first open-ended question seemed to support the premise of my study, which is that teachers' perceptions of their principal's leadership impact their belief systems. Teachers who indicated that their principal demonstrates high levels of authentic leadership, tended to have positive responses to the first open-ended question. Similarly, teachers who provided low ratings for their principal's AL often gave negative responses about the principal. The qualitative responses supported the validity of the quantitative AL construct because teachers who gave positive, qualitative reviews of their principal's leadership overwhelmingly gave high scores on the ALQ. Similarly, as shown in Table 28 within Chapter 5, low scores on the ALQ were strongly associated with negative responses on the first open-ended question about the principal's leadership.

For my second coding and analysis procedure, I sorted the data by the four components of authentic leadership (Avolio et al., 2007). Given that the survey questions did not explain, identify or discuss the four components of authentic leadership, I was surprised that roughly half of the responses to the first open-ended question mentioned or alluded to at least one of AL's

four components. The results from this analysis further strengthened the validity of the authentic leadership construct.

Finally, I sorted data from the first open-ended question by leadership theme. Based on the responses, teachers preferred that their principal be (1) trustworthy; (2) supportive; and (3) increase morale, traits consistent with authentic leaders (Avolio et al., 2009; Gardner et al., 2011; George, 2003). Furthermore, each of academic optimism's three components (i.e., collective efficacy, academic emphasis, trust in students and parents) can be matched to one of the leadership traits that were referenced in the responses. I purposefully phrased the open-ended question in a way that did not identify, reference, or lead teachers into discussing academic optimism or any of its three components. Therefore, I am pleased to report that a portion of teachers' responses to this question referenced AO's three components!

The first component of academic optimism, collective efficacy is a natural match for self-efficacy, a leadership trait that was referenced by about 11% of the participants who responded to the prompt. Teachers who mentioned self-efficacy shared that they felt empowered by principals who made them believe in themselves more and whose leadership supported their instructional practice. Of the responses, 13% of teachers indicated that perceptions of the principal's high expectations (or lack thereof) highly impacted them. The theme of high expectations is a natural match for the academic emphasis component of AO. Finally, 18% of responses mentioned the importance and value of trust. In their responses, teachers indicated that trust between the principal and the teachers strongly influenced their belief systems. The trust leadership trait can be paired with the third component of academic optimism: trust in student and parents. However, this pairing must be made with a caveat. Within the teacher responses, the leadership trait of trust primarily centered on the relationship between the principal and teachers.

However, the trust in students and parents is specifically about the relationship between the teachers and students and parents. Nevertheless, the fact that each component of AO could be logically paired with one of the themes from the data of the first open-ended question strengthens the validity of the academic optimism construct and begins to develop a profile for leadership consideration at Title I schools.

Finally, analyzing the data to the first open-ended question helped me better understand the themes that emerged. Looking at each response in three different ways truly caused me to feel more confident about the conclusions that I drew. Analyzing each response according to its positive or negative assessment of leadership, according to the four components of AL, and then finally, according to the leadership characteristics that were referenced, supported my big-picture understanding. Furthermore, incorporating three different processes into the data analysis process helped maximize the rich conclusions and understandings that would otherwise have been missed.

Second Open-Ended Question. My second open-ended question focused on how teachers felt that their perceptions of their principal's leadership are impacted by the ongoing COVID-19 pandemic. As presented in Table 32 in Chapter 5, teachers were quite divided about how their perceptions were influenced by COVID-19. A significant number of teachers perceived that COVID-19 had both positive and negative influences. Furthermore, more than one-fourth of teachers indicated that COVID-19 had no influence at all on their perceptions of their principal's leadership. Therefore, no strong conclusions can be made regarding how COVID-19 impacted teachers' perceptions of their principal's leadership, other than that teachers' perceptions cannot be viewed as a monolith. Despite the mix of opinions regarding how COVID-19 impacted teacher perceptions of their principal's leadership, two themes did

emerge upon further reflection across responses. First, regardless of whether responses were positive, negative, or neutral, some teachers referenced the humanity of the principal. Specifically, in their responses, they shared that the COVID-19 pandemic caused them to have heightened awareness of their principal's empathy (or lack thereof), feelings, and interactions with others. Additionally, teachers shared that external safety factors related to COVID-19 (e.g., developing and implementing safety protocols, fluid and changing COVID-19 prevention practices mandated by the State, engaging in contact tracing, managing COVID testing, and managing classroom coverage shortages, etc.) took principals away from being instructional leaders and present in classrooms. Thus, due to no fault of their own, principals were unable to support the instructional program at school in the same way that they could have prior to the COVID-19 pandemic.

Limitations

In this limitations section, I review and identify potential weaknesses or problems in my research. I first present my quantitative limitations followed by discussion of the qualitative limitations of my study. These limitations inform the suggestions I then offer in my Implications section.

Quantitative Limitations

My study had quantitative limitations regarding its internal, construct and external validity. The exploratory, cross-sectional research design I used is better suited to describe trends found between the variables, rather than providing a rigorous cause-and-effect explanation of the impact of authentic leadership on academic optimism, academic emphasis, collective efficacy and trust in students and parents (Creswell & Guetterman, 2019). This is due in large part to the

fact that alternative explanations for the results cannot be dismissed (Maruyama & Ryan, 2014). Thus, causation cannot be claimed (Creswell & Guetterman, 2019).

The exploratory nature of my study was in of itself, a limitation, as my study did not offer a standardized, conclusive analysis. Additionally, the correlational, survey design provided insight into a snapshot in time. Grissom et al., (2021) explained how longitudinal studies are more effective at identifying the principals' characteristics, skills and behaviors that lead to increased student achievement. As the AL construct is developmental in nature, leaders' AL can grow over time (George, 2003; Walumbwa et al., 2008). Thus, a more robust design would have been longitudinal in order to better measure how AL impacts teachers' AO and its three components over a series of years. Future research should investigate how perceptions of principals' AL may impact teachers' AO over time. This type of a study could also inform the extent to which the COVID-19 context, during which I administered my study, impacted any of my findings. Additionally, a study designed in this way would allow the researcher to better understand how teachers' experiences may play a role in the findings.

Despite the Authentic Leadership Questionnaire (ALQ) and the Teacher Academic Optimism Scale – Elementary (TAOS-E) both having strong reliability and validity through multiple operational definitions and from comparisons with similar measurements (Walumbwa et al., 2008; Hoy et al., 2006; Beard et al., 2010), by their design, they measure individuals' beliefs and perceptions. As Maruyama and Ryan (2014) explained, although the variables measure the constructs of interest, they may also measure other indiscernible factors of teachers, such as biases, inaccuracies, and subjective perceptions. Further qualitative studies on the relationship between AL and AO (and its components) would provide the study with higher levels of internal

validity, as any insights gleaned would help to better understand the relationship and interaction between teachers' perceptions of AL and their AO.

Moreover, although researchers such as Hoy et al., (2006), Beard et al., (2010) and Srivastava and Dhar (2016) found that the TAOS-E had a reliability greater than 0.7, my study did not consistently have strong reliability. As shown previously in Table 20, the academic emphasis and collective efficacy constructs had reliabilities that were less than 0.7. Still, Taber (2018) argued that constructs with a Cronbach's Alpha score of less than 0.7 can still merit investigation, particularly within exploratory studies. Furthermore, my AO construct as a whole, did have a reliability of 0.764, greater than all of the individual components. Nevertheless, as two of the three components of AO had reliabilities of less than 0.7, the quantitative conclusions of this study should be interpreted with caution.

With regard to external validity, it is critical to note that my data were gathered from a subset of elementary, Title I teachers within XCPS. Although the survey was sent to every full-time teacher in Title I elementary schools in XCPS, the voluntary and self-selective nature of the study means that it is a convenience sample, which presents a threat to its external validity (Creswell & Guetterman, 2019). It is possible that there was an unidentified factor in common between the teachers who chose to complete the survey and those who did not, which could skew my results. Additionally, given that the survey window was open for multiple weeks, it is possible that right before a respondent took the survey, there was an event or something that occurred at a school that may have skewed teachers' perceptions. For instance, if a teacher took the survey within the hour of having a notably positive or negative interaction with their principal, that might influence their responses in a way that would not have occurred had that particular interaction not have happened.

Finally, my sample did not represent all teachers in Title I schools across the country, much less all elementary school teachers nationwide. My study should be replicated numerous times to obtain higher levels of external validity. As the research results cannot be generalized to the populations and settings of interest, the present study has relatively low levels of external validity (Creswell & Guetterman, 2019; Maruyama & Ryan, 2014). As Title I elementary schools are unique and not representative of all elementary schools, the findings of my study should not be generalized to other populations, without replication across a variety of educational contexts.

Qualitative Limitations

My study also contains qualitative limitations. All of my data were collected via the two open-ended responses at the end of the survey. Given the anonymous nature of my survey instrument, I was not able to follow-up with teachers in order to conduct follow-up interviews or focus groups in order to learn more about or clarify their responses. The format of an interview or a focus group would have allowed me to collect richer data that may have led to further insights about the relationship between teachers' perceptions of their principal's authentic leadership and their own academic optimism, academic emphasis, collective efficacy and trust in students and parents. However, this was not the intention of my study's purpose, and so although it would be beneficial to have additional qualitative data, that would be better ascertained through a follow up study.

Additionally, after I defended my dissertation proposal in September 2021, I received terrific feedback about how to improve the wording of my open-ended questions. Specifically, it was suggested that my first open-ended question prompt for authentic leadership in the question. Thus, instead of the question reading, *"How (if at all) do you perceive that your principal's*

leadership impacts your ability to successfully teach and for your students to successfully learn?" it would have been *"How (if at all) do you perceive that your principal's authentic leadership impacts your ability to successfully teach and for your students to successfully learn?"* Additionally, with my committee, we discussed included an addition open-ended question that would have asked teachers to list three to five leadership traits and qualities that their principals exhibit when they demonstrate authentic leadership.

After I successfully defended my proposal, I made the suggested edits in the Google Form that I had intended to send out to teachers. About a week after I defended, my committee shared that I should transfer my survey instrument from the Google Form into a more secure data collection site. I decided to transfer my survey from the Google Form into a Survey Monkey. Due to limitations associated with the Google Form, I was not able to copy and paste from the Google Form to the Survey Monkey. Thus, I recreated the survey within the Survey Monkey. Unfortunately, when I recreated the survey, I included the old set of open-ended questions, mentioned throughout this study, rather than the improved three items that had been discussed during the proposal defense and revision process. More unfortunately, I only realized this a week after I had sent the Survey Monkey out to all 2,124 Title I elementary school teachers in XCPS. Therefore, my study included the two open-ended questions that were not improved after my proposal defense.

My qualitative data are not as pinpointed and rich as they might have been, had I included the updated and improved open-ended questions. On the first open-ended question, I received 178 responses, 88 of which referenced a component of authentic leadership. Undoubtably, if my item had specifically called out "authentic leadership," rather than just "leadership," my data would have been more focused and would have revealed richer data

regarding how teachers perceived their principal's authentic leadership. Additionally, my analysis of the leadership traits that teachers included in their responses would have been stronger had I included the third open-ended question (i.e., asked teachers to list three to five leadership traits and qualities that their principals exhibit when they demonstrate authentic leadership). Furthermore, I could have used a website like mentimeter.com to create an interesting and revealing word cloud containing all of the leadership traits and qualities mentioned by teachers in their responses.

Implications

The findings and discussion of the quantitative and qualitative data, although with some limitations, holds much possibility for future practice and research. In this section, I describe the implications of my research. First, I present implications for practice and recommendations for practicing principals, both of which can be applied within schools. Then, I discuss implications for future research.

Implications for Practice

Regarding schools' efforts to increase student achievement, Mascall et al., (2008) wrote, "The challenge is to identify the indirect path through which leadership influences students; this is a challenge to identify variables that leaders influence and which also influence students" (Mascall et al., 2008, p. 214). Given that academic optimism has been found to be tightly linked with levels of student achievement (Beard et al., 2010; Hoy et al., 2006; Srivastava & Stelson, 2020), school leaders should pursue strategies and processes that are found to increase teachers' academic optimism. Previously, authentic leadership has been found to be associated with increased job satisfaction (Azanza et al., 2015), higher levels of work engagement (Giallonardo et al., 2010), stronger commitment (Stander et al., 2015), and more employee optimism (Wang et

al., 2014), trust (Wong & Cummings, 2009), creativity (Semedo et al., 2016) and hope (Rego et al., 2014). Adding to the positive associations of authentic leadership, the results of my study indicate that teachers' perceptions of their principal's authentic leadership also had a moderate, positive impact on their own academic optimism. Essentially, when teachers perceived that their principals demonstrated authentic leadership, their belief systems about their ability to successfully teach and for their students to successfully learn improved. Thus, the results of my study have implications for practice within public elementary schools. With the caveat that my data reflect Title I elementary schools within one school system, there are important implications for school principals and school district leaders.

Within the context of Title I elementary schools in XCPS, my study provides insight into the relationship between authentic leadership and academic optimism, collective efficacy and trust in students and parents. The quantitative and qualitative analysis showed that teachers are positively impacted when they perceive that their principal demonstrates authentic leadership. Academic interventions, strategies and processes that are successful in Title I schools tend to generalize well to other schools. Thus, comparable results could occur in schools across the nation.

Recommendations for Practicing Principals. I recommend principals strive to demonstrate authentic leadership. Specifically, principals should familiarize themselves with the four components of authentic leadership (i.e., self-awareness, balanced processing, internalized moral perspective, and relational transparency) in order to show authentic leadership. For self-awareness, for instance, I recommend that principals engage in thoughtful, mindful reflections so that they have a better handle on their own strengths and weaknesses. Principals can take the principal's version of the Authentic Leadership Questionnaire (Walumbwa et al., 2008), different

from the teacher's version used in this study. By taking this self-reflective survey, principals can better understand their own strengths and weaknesses. Importantly, I do not recommend that principals focus their work on improving their weaknesses. Rather, I strongly recommend that teachers lead from their strengths, as described by Rath (2007), and hire other leaders whose strengths overlap with their own weaknesses.

Regarding principal practices at the school level, Celebi et al., (2020) describe how teacher perceptions of their principal's leadership can influence, reinforce and cause change to the principal's practices. Thus, if principals are mindful of how their authentic leadership is being perceived, they will be more likely to demonstrate higher levels of authentic leadership. To achieve this, principals should seek out teacher voice (and student voice) regarding how their leadership is being received. While principals generally know the intentions of their leadership, they may not always know how their leadership impacts others. Through anonymous surveys, voluntary focus groups and formal and informal conversations, principals can seek feedback on their leadership. If done in a trusting, genuine, and non-threatening manner, principals can better hone their leadership, causing teachers to better perceive them as authentic.

With regard to balanced processing, although there are times when principals need to make definitive decisions, they should make sure that most often, decisions are made collaboratively. This is especially important when related to the school improvement process. Principals should authentically and genuinely seek feedback from a diverse set of views, and not just from folks who tend to agree with them. When this occurs (i.e., many different ideas are solicited), the cream (i.e., stronger ideas) rises to the top, allowing schools to make better decisions.

In terms of internalized moral perspective, principals should ensure that their actions are consistent with their belief systems about students and learning. Furthermore, in the event that a principal does not have a strong opinion about a certain topic, they should solicit feedback from other leaders in the building in order to ensure that the actions taken by the school are consistent with its mission and core values.

Finally, with regard to relational transparency, principals should ensure that they are genuine and real in their interactions with teachers at all times. Principals need to know that they are always "on," and that their behaviors and interactions impact their teachers at all times. For instance, if a principal is feeling upset and stressed about something and passes a teacher in the hall without acknowledging them, the teacher might interpret the principal's facial expression and lack of a greeting as if the principal is upset with them.

If principals and school district leaders demonstrate increased authentic leadership, they can improve the academic optimism of teachers, creating an opportunity to indirectly increase student achievement. Therefore, I recommend that principals demonstrate increased levels of authentic leadership, engage in professional development and reflection focused on growing their authentic leadership capacity, and to seek genuine feedback from teachers about how their leadership is being received. Given that authentic leadership can be developed in leaders (George, 2003), it is critically important that principals and school district leaders engage in professional development focused on increasing principals' awareness of and capacity to demonstrate AL. Schools and school systems should pursue systemwide leadership development that introduces, explains and clarifies how principals can demonstrate authentic leadership. Principals should be given opportunities to reflect on their own leadership, with an understanding of how leading authentically can better support the staff and students within their schools.

Implications for Future Research

My study contributes to the ever-growing authentic leadership literature base, suggesting the many positive impacts that the construct has been found to have on employees across industries. Future research should apply AL across industries and across settings in order to better understand how and why AL results in positive outcomes. Certainly, more study is necessary to gain insight into the relationship between authentic leadership and academic optimism (and its three components). For instance, follow-up research should incorporate a more thorough examination of the three dimensions of AO, with an exploratory factor analysis or principal component analysis and pursue a multivariate multiple regression.

Researchers have studied the effects of different types of leadership on AO (Hasanvand et al., 2013; Hong, 2017; Mascall et al., 2008; Rutledge, 2010) and how AL impacts AO in other countries (Kulophas et al., 2018; Srivastava & Dhar, 2016). However, the relationship between AL and AO needs further study, especially in schools in the United States. Although my study adds to the knowledge base of how AL may impact AO, there remains a gap for future research (Srivastava & Stelson, 2020). More study and investigation are necessary into the high-quality research practices and methods that provide clear, systematic direction for leadership policy and practice (Grissom et al., 2021).

Although I found that AL had a moderate, positive impact on academic optimism, collective efficacy and trust in students and parents, my study should be replicated in different educational contexts and settings in order to better understand the interactions between the variables. Further research should consider conducting interviews and focus groups to better understand how AL may impact AO. The ability to ask follow-up questions could provide rich data that could better explain the relationship between AL and AO. Additionally, I recommend that future research conduct a longitudinal study, over a series of years, to study how teachers'

perceptions of their principal's authentic leadership may impact their own academic optimism over time. As my study provides a snapshot in time, a longitudinal study has great potential to reveal the long-term impacts of AL on AO (and its three components).

The results of my study also have implications for future research as it relates to the relationship between newer teachers (i.e., teachers with less than five years of experience) and academic optimism. As less experienced teachers tend to require more support and have higher levels of turnover (Azanza et al., 2015; Carver-Thomas & Darling-Hammond, 2017), and as newer teachers likely experienced heightened difficulties during the COVID-19 pandemic (Minihan et al., 2022; Zamarro et al., 2022), more research is necessary to identify leadership strategies and processes that will cause higher levels of teacher retention. Specifically, similar to the findings of Chang (2011), Huang and Yin (2018), and Thien et al., (2021), my results indicate that more experienced teachers had higher levels of academic optimism than teachers with less than five years of experience. Moreover, as previously shown in Table 34, the data from my study showed that a teacher's years of experience had a greater impact on their AO, academic emphasis, collective efficacy and trust in students and parents, than did the teacher's perceptions of their principal's authentic leadership. Therefore, given that one of my control variables was a stronger predictor of the dependent variables than was my independent variable, more research is warranted into the interactions between years of teaching experience and academic optimism (and its three components). This is especially important within the context of Title I schools, my study's population, as Title I schools tend to have more inexperienced teachers than non-Title I schools. If years of experience is a strong predictor of teachers' AO, the importance of teacher retention at Title I schools would take on an even higher level of urgency. A future study which investigates how authentic leadership moderates the relationship between

years of teaching experience and academic optimism would add value to our understanding about this particular demographic.

Finally, it is important to note that the explanatory power of my full model still only predicts around 11% to 12% of the total variance, indicating there are several additional predictors or relationships that need to be explored, relative to AO. One such construct is Psychological Capital (PsyCap), developed by Luthans & Youssef (2004) and refined by Luthans et al., (2007), which measures hope, resiliency, self-efficacy, and optimism. Although PsyCap has not been studied extensively within schools, it has been studied in the context of self-efficacy and authentic leadership (e.g., Laschinger & Fida, 2014; Stander et al., 2015; Xu et al., 2017). Compared to AO, PsyCap lacks a thorough, established research base linking it to increased student achievement. Nevertheless, studying PsyCap in the context of AL and AO could yield interesting results.

Conclusion

Academic optimism is positively correlated for student achievement and is comprised of three constructs: academic emphasis, collective efficacy, and trust in students and parents. As effective principals' leadership is vital towards developing and maintaining effective schools and improving student achievement, the development of AO in teachers must be analyzed within the context of leadership. If school principals were to increase the AO of their staff, student achievement would likely increase. As displayed in Figure 1, located in Chapter 1, my study focused on this relationship through the lens of authentic leadership, specifically, the interactions between perceptions of principals' leadership behaviors (i.e., AL) and teachers' own belief systems, measured through AO.

Using cross-sectional survey data analyzed with hierarchical multiple regression, this study analyzed 245 responses to my Survey Monkey and found that after accounting for the control variables, AL was a statistically significant predictor of AO, collective efficacy, and trust in students and parents, two of AO's three components. Given that AO predicts student achievement, it is notable that principals' AL is positively, moderately correlated with teachers' AO, as AL could thereby also indirectly result in increased student achievement. Additionally, the qualitative data from my study also suggests that teachers who perceive that their principal demonstrates authentic leadership had higher beliefs in their own ability to successfully teach and for their students to successfully learn. These findings reinforce my study's conceptual framework, found in Figure 1 in Chapter 1 of my dissertation. Specifically, my qualitative findings suggest that teachers' perceptions of their principal's leadership influence their own belief systems. Thus, schools and school systems should focus their leadership development programs and processes around developing authentic leaders. As academic interventions, strategies and processes that are successful in Title I schools tend to generalize well to other schools, comparable results could occur in schools across the nation.

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APPENDIX A – INFORMED CONSENT FORM

Authentic Leadership and Academic Optimism

1. INTRODUCTION

You are invited to be a participant in a research study about the potential relationship between teachers' perceptions of their principal's authentic leadership and their own academic optimism. You were selected as a possible participant because you are a teacher at a Title I elementary school in the public school system selected for this study. We ask that you read this document and ask any questions you may have before agreeing to be in the study. We require that participants in this study be at least 18 years old. The study is being conducted by Noah Drill, a Doctoral candidate at Hood College in Frederick, Maryland.

2. BACKGROUND AND PURPOSE OF THE STUDY

The purpose of this study is to explore how teachers' perceptions of their principal's leadership impacts their own belief systems. The research question of this study is, "Within Title I elementary schools, how do teachers' perceptions of their principals' authentic leadership impact their academic optimism, academic emphasis, collective efficacy and trust in students and parents?" Academic optimism (AO) is a construct that has been found to be tightly correlated with increased student achievement. When teachers have high levels of AO, students tend to have higher levels of student achievement. My study aims to investigate whether there is a relationship between teachers' perceptions of their principal's leadership (through a construct called 'Authentic leadership') and the teachers' own AO. The findings of this study can inform principals and school leaders within Title I elementary schools about how to be more effective leaders.

3. DURATION

Completing my study should take you approximately 10-15 minutes. Thank you so much for participating!

4. PROCEDURES

If you agree to be in this study, you will answer 39 multiple choice questions, two open-ended questions, and five questions that address demographic information. Not all questions need to be answered. As participation in the study increases, so too does the strength of my study's findings.

5. RISKS/BENEFITS

There are no risks or discomforts anticipated. There are no direct benefits of participation for you.

6. CONFIDENTIALITY

Your response will be anonymous, as my Survey Monkey does not capture any personally-identifying information.

7. VOLUNTARY NATURE OF THE STUDY

Your participation in this study is completely voluntary. Your decision whether or not to participate will not affect your current or future relations with Hood College or any of its representatives. If you decide to participate in this study, you are free to withdraw from the study at any time by exiting the survey. Individual participant responses will not be included in the study results.

8. CONTACTS AND QUESTIONS

The researcher conducting this study is Noah Drill. If you have questions or comments prior, during, or after participating in the study, you may contact him at (973) 477 – 3024 or at Noah_N_Drill@mcpsmd.org. The faculty sponsor of this study is Dr. Jennifer Cuddapah, an associate professor at Hood College. She can be contacted at Cuddapah@hood.edu.

If you have questions or concerns regarding this study and would like to speak with someone other than the researcher(s), you may contact Dr. Jolene Sanders, Institutional Review Board Chair, Hood College, 401 Rosemont Ave., Frederick, MD 21701, sandersj@hood.edu.

9. STATEMENT OF CONSENT

The procedures of this study have been explained to me and my questions have been addressed. The information that I provide is confidential and will be used for research purposes only. I am at least eighteen years old. I understand that my participation is voluntary and that I may withdraw anytime without penalty. If I have any concerns about my experience in this study (e.g., that I was treated unfairly or felt unnecessarily threatened), I may contact the Chair of the Institutional Review Board or the Chair of the sponsoring department of this research regarding my concerns. I agree to participate in the study.

O I agree and give my consent to participate in the study.

O I do not give my consent to participate in the study.

APPENDIX B – AUTHENTIC LEADERSHIP QUESTIONNAIRE (ALQ)

Noah Drill

Authentic Leadership Questionnaire (ALQ Version 1.0 **Rater**)

Bruce J. Avolio, Ph.D.

Name: _____ Date: _____

Organization ID #: _____ Person ID #: _____

Instructions: The following survey items refer to your leader's style, as you perceive it. **Judge how frequently each statement fits his or her leadership style using the following scale:**

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

My Leader:

1.	says exactly what he or she means	0 1 2 3 4
2.	admits mistakes when they are made	0 1 2 3 4
3.	encourages everyone to speak their mind	0 1 2 3 4
4.	tells you the hard truth	0 1 2 3 4
5.	displays emotions exactly in line with feelings	0 1 2 3 4
6.	demonstrates beliefs that are consistent with actions	0 1 2 3 4
7.	makes decisions based on his or her core values	0 1 2 3 4
8.	asks you to take positions that support your core values	0 1 2 3 4
9.	makes difficult decisions based on high standards of ethical conduct	0 1 2 3 4
10.	solicits views that challenge his or her deeply held positions	0 1 2 3 4
11.	analyzes relevant data before coming to a decision	0 1 2 3 4
12.	listens carefully to different points of view before coming to conclusions	0 1 2 3 4
13.	seeks feedback to improve interactions with others	0 1 2 3 4
14.	accurately describes how others view his or her capabilities	0 1 2 3 4
15.	knows when it is time to reevaluate his or her position on important issues	0 1 2 3 4
16.	shows he or she understands how specific actions impact others	0 1 2 3 4

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APPENDIX C – FORM ESS (ENABLING SCHOOL STRUCTURE)

Form ESS

Directions: The following statements are descriptions of the way your school is structured. Please indicate the extent to which each statement characterizes behavior in your school from **never** to **always**.	**Never**	**Once in a while**	**Sometimes**	**Fairly Often**	**Always**
1. Administrative rules in this school enable authentic communication between teachers and administrators.	1	2	3	4	5
2. In this school red tape is problem.	1	2	3	4	5
3. The administrative hierarchy of this school enables teachers to do their job.	1	2	3	4	5
4. The administrative hierarchy obstructs student achievement.	1	2	3	4	5
5. Administrative rules help rather than hinder.	1	2	3	4	5
6. The administrative hierarchy of this school facilitates the mission of this school.	1	2	3	4	5
7. Administrative rules in this school are used to punish teachers.	1	2	3	4	5
8. The administrative hierarchy of this school obstructs innovation.	1	2	3	4	5
9. Administrative rules in this school are substitutes for professional judgment.	1	2	3	4	5
10. Administrative rules in this school are guides to solutions rather than rigid procedures.	1	2	3	4	5
11. In this school the authority of the principal is used to undermine teachers.	1	2	3	4	5
12. The administrators in this school use their authority to enable teachers to do their job.	1	2	3	4	5

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APPENDIX D - TEACHER ACADEMIC OPTIMISM SCALE ELEMENTARY (TAOS-E)

TAOS-E

Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.	Nothing		Very Little		Some Influence		Quite a bit		A Great Deal
1. How much can you do to get students to believe they can do well in school work?	1	2	3	4	5	6	7	8	9
2. To what extent can you craft good questions for your students?	1	2	3	4	5	6	7	8	9
3. How much can you do to get children to follow classroom rules?	1	2	3	4	5	6	7	8	9

Directions: Please indicate the extent to which you agree with each of the statements below from Strongly Disagree (1) to Strongly Agree (5).	Never	Rarely	Sometimes	Often	Always
4. I trust the parents of my students.	1	2	3	4	5
5. I can count on parent support.	1	2	3	4	5
6. I trust my students.	1	2	3	4	5
7. I have confidence in my students.	1	2	3	4	5
8. I ask students to explain how they get their answers.	1	2	3	4	5
9. I don't accept shoddy work from my students.	1	2	3	4	5
10. I give my students challenging work.	1	2	3	4	5
11. I press my students to achieve academically.	1	2	3	4	5

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APPENDIX E – OPEN-ENDED QUESTIONS AT THE END OF THE SURVEY

Your responses to these open-ended questions can help me gain insight into the relationship between principals' leadership and teachers' belief systems, as well as into the broader context during which this study is occurring.

How (if at all) do you think your principal's leadership impacts your ability to successfully teach and for your students to successfully learn?

How (if at all) do you think that your perceptions of your principal's leadership have been influenced by the COVID-19 pandemic?

APPENDIX F – DEMOGRAPHICS ITEMS

Authentic Leadership and Academic Optimism

Demographics

All done after this!

* Please indicate your gender identity. 0

- ◯ Male
- ◯ Female
- ◯ Transgender
- ◯ None of These

* What is your race/ethnicity? Please check all boxes that apply. 0

- ☐ Asian or Pacific Islander
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Middle Eastern or North African
- ☐ Native American or Alaskan Native
- ☐ White or Caucasian

* Are you currently teaching at a Title I school? 0

- ◯ Yes
- ◯ No
- ◯ I don't know

* In total, how many full years of teaching have you completed? 0

0 60

* How many full years of teaching have you completed with your current principal? 0

0 60

APPENDIX G – HOOD COLLEGE INSTITUTIONAL REVIEW BOARD APPROVAL

Oct. 29, 2021

Noah N. Drill
401 Rosemont Ave.
Frederick, MD 21701

Dear Noah N. Drill,

The Hood College Institutional Review Board reviewed your research proposal for the study entitled, *The Relationship Between Teachers' Perceptions of Their Principal's Authentic Leadership and Their Own Academic Optimism in Title I Elementary Schools* (proposal #2122-12). The committee decided that your proposal is exempt and does not require further review. However, if there should be substantial changes to your data collection methodology, the proposal would have to be reviewed by the IRB as a new proposal.

The IRB did note a few details; a formal response is not necessary.

Consent form:

1) We see that you will begin with a consent page; just confirming that a check box to denote consent is provided. Suggested language "By checking the box below you give your consent to be in the study. You can print out a copy of this consent for your records."
2) We will assume all participants are over 18, so you may remove "We require that participants in this study be at least 18 years old" and may replace with "We require that participants in this study have at least one year under their current principal to participate."
3) Risks/Benefits (#5). Could describe indirect benefits or potential benefits in consent. Mention that there is no compensation. Might add that "participate in the study helps to advance…"

4) Questionnaire: Anticipate that you will remove Name, Organization ID and Personal ID on Authentic Leadership Questionnaire

All individuals engaged in human subjects research are responsible for compliance with all applicable Hood Research Policies:
https://www.hood.edu/sites/default/files/Hood%20IRB%20Policy%20revised%20September%202013.pdf.

The Lead Researcher of the study is ultimately responsible for assuring all study team members review and adhere to applicable policies for the conduct of human sciences research.

The Hood College IRB approval expiration (of exempt status) date is Oct. 29, 2022. As a courtesy, approximately 30-60 days prior to expiration of this approval, it is your responsibility to apply for continuing review and receive continuing approval of exemption for the duration of the study as applicable. Lapses in approval should be avoided to protect the safety and welfare of enrolled participants.

No substantive changes are to be made to the approved (exempt) protocol or the approved consent forms without the prior review and approval of the Hood IRB. All substantive changes (e.g. change in procedure, number of subjects, personnel, study locations, study instruments, etc.) must be prospectively reviewed and approved (or reviewed again as exempt) by the IRB before they are implemented.

All research must comply with the *Hood College Promise of Fall Plan* regarding COVID-19 precautions.

Appears to be a well-designed study. Good luck!

Sincerely,

Jolene M. Sanders

Jolene M. Sanders, Ph.D.
Chair, Hood College Institutional Review Board

Hood College • 401 Rosemont Avenue • Frederick, MD 21701-8575 • www.hood.edu • Tel. 301-663-3131

APPENDIX H – XCPS INSTITUTIONAL REVIEW BOARD APPROVAL

Office of Shared Accountability
[redacted]

December 14, 2021

MEMORANDUM

To: Mr[redacted] Chief of Staff

From: Dr[redacted], Director, Office of Shared Accountability

Subject: Approval of Request to Conduct Research

In compliance with Regulation AFA-RA, *Research and Other Data Collection Activities in* [redacted], this request to conduct research has been reviewed and approved by the Office of Shared Accountability (OSA). The request is recommended for approval by the Chief of Staff. Mr. Noah Drill, staff development teacher, [redacted] Elementary School, requests permission to conduct a dissertation research study titled *How Teachers' Perceptions of Their Principal's Authentic Leadership Impact Their Own Academic Optimism in Title I Elementary Schools.* The purpose of this study is to investigate how principals' leadership is related to teachers' expectation for students' academic achievement.

Participant Recruitment and Participation

All teachers from 31 elementary Title 1 schools listed in the table below will receive an invitation email that describes the purpose of the study and includes a link to access the requested survey.

[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
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[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	[redacted] Elementary School
[redacted] Elementary School	

Included in the survey link is an informed consent form that specifies the study purpose, data collection activities, and protocol to maintain confidentiality of collected information. In addition, teachers will have the opportunity to watch a short, prerecorded video made by the researcher to further understand the purpose and procedure of the study. Approximately 100 teachers will be included in the study. Participation is voluntary.

Data Collection Activities

Data collection activities will occur between January and March 2022. Participants will be asked to complete an online survey regarding their perception of their principal's leadership and their academic optimism for students. The survey will take about 20 minutes to complete. Any information participants provide will be kept confidential.

The Hood College Institutional Review Board (IRB) has approved the research study as exempt from IRB oversight. All data will be reported in summary format. The names of participants, schools, and the school district will not be used in the summary of results. The study is supported by Dr. [redacted], area associate superintendent, Office of Teaching, Learning, and Schools.

There can be no changes to the scope and objectives of the study. The approved study and associated data collection activities must be consistent with what is included in this memo. Any proposed changes in data collection activities must be communicated to OSA for review and approval. If you have questions regarding this request, please contact Dr. [redacted], coordinator of applied research unit, Office of Shared Accountability, a[redacted] or via e-mail a[redacted]

KLA:hw

Copy to:
Principals of invited schools
Directors, Office of Teaching, Learning, and Schools
Area Associate Superintendents, Office of Teaching, Learning, and Schools
Mr. Drill
[redacted]

Approved: Jimmy Ramos
[redacted] Chief of Staff