

## ANALYZING THE IMPACT OF LEADERSHIP STYLES ON STUDENT ACHIEVEMENT IN ALABAMA'S RURAL HIGH SCHOOLS

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### Abstract

This study aimed to analyze leadership styles to discover which leadership style had the most significant positive and negative impact on student academic achievement in rural high schools in Alabama. This study attempted to reveal if a significant difference in student academic achievement existed based on the school leader's leadership style, years of leadership, and gender. The independent variables were leadership style, years of experience, and gender. The dependent variable was student academic achievement. The survey was distributed to 24 superintendents and 57 principals in rural high schools and rural school systems in Alabama. The survey consisted of Likert-style questions ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) regarding leadership style and three demographic questions. Employing a One-Way ANOVA and Two-Way ANOVA to analyze the research questions, the results revealed there was a significant difference in the means between student academic achievement and leadership style. Furthermore, results revealed no significant difference in student academic achievement when compared to leadership styles, years of experience, and gender. Transformational leadership had the highest potential for impacting student academic achievement and leaders should be professionally trained to utilize this style.

*Keywords:* leadership styles, achievement, rural schools, transformational leadership

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## Introduction

School leadership is crucial for a school's overall operation. Equally important is building a culture of academic success and rigor (Southern Cross University, 2019). Alabama must report academic progress annually in response to the Every Student Succeeds Act (ESSA). According to the 2018-2019 state report card data, as reported by the Alabama State Department of Education (ALSDE), the score for academic achievement for all Alabama high school students was 66.15%. A score of 53.02% was earned specifically by students categorized as rural, and a score of 79.28% by non-rural students (ALSDE, 2021). These scores indicate a discrepancy in the achievement of rural students versus their non-rural peers. If the goal is to increase rural students' academic achievement scores, the factors that impact achievement scores must be explored.

Much research exists about teachers' and educational program's impact upon achievement, but these are not the only factors that impact achievement. The people that lead schools and school systems are employed to act in their best interest. So, it becomes necessary to determine if a district and school leaders positively impact student academic achievement. If they do, training professionals can establish professional development opportunities to facilitate future leaders in impacting the rural schools they oversee.

### Background of the Study

Student academic achievement has always been at the forefront of public education. At its inception, public education in the United States began by teaching students to read the Bible, "bridge social gaps, and overcome poverty" (Chen, 2021). However, statistics do not measure these qualities, each aligned with academic achievement at the time. Academic achievement mirrors the pertinent qualities. In today's public education, the student's ability to perform at a high level in reading and mathematics determines student academic achievement scores. Although all content areas are important, reading and mathematics tend to be the focus on achievement.

The legislation established by the U.S. Department of Education's (2015) Every Student Succeeds Act (USDE-ESSA) dictates current trends. According to the USDE, ESSA emphasizes college and careers and state accountability. Specifically, it states that all students be taught the academic standards necessary to prepare them to succeed in life after their educational journey concludes. Additionally, it states that accountability must be expected to raise the outcomes of the lowest-performing schools.

Since 2015, states must publicly account for student academic achievement scores through a report card. Although the states have autonomy on the report card format, Alabama chose to use an A-F format that aligns with a student's report card to make it easier to understand. In an article about the report card, the Alabama State School Superintendent, Dr. Eric Mackey, informed the public the report cards are a tool to "jump-start conversations about what is working in public schools as well as identifying areas that may need support and additional resources" (Alabama News Network Staff, 2019).

Due to the report cards being in effect since 2015, school leaders have adapted to the new accountability measures. In high schools, the accountability score for student academic achievement is from the composite scores of the ACT Aspire and the Alabama Alternate Assessment. Each year, the ALSDE administers these tests to a new batch of students, and every

year a new score is given to the high school and the school system. The system's score reflects the student academic achievement scores at all districts, whereas the high school's score reflects the students they teach. If a school or system performs poorly on their accountability score, the ALSDE places them on monitoring and provides additional resources to improve their academic achievement score. If schools and school systems are held accountable for student academic achievement scores, it becomes necessary to identify factors that increase them.

Decades of research exist to understand factors that affect student achievement. Researchers can find correlational studies about poverty, motivation, school climate, teacher effectiveness, etc. However, the literature is scarce when researching studies involving the school leader's leadership style and its impact on student achievement. According to Jambo and Hongde (2019), school leaders face many challenges in determining their leadership style and increasing their students' academic achievement scores. Leadership styles are not clear-cut and are as vast as the factors influencing student achievement. Regardless of the spectrum of leadership, some leaders make all decisions, some collaborate with a team, and some give autonomy to subordinates to make decisions.

When developing this research study, the researcher considered many leadership styles. From the beginning, it was apparent that leadership styles are abundant and are classified based on different factors. However, although vast in number, they share similarities to Avolio and Bass's full-range leadership theory created in 1994. Their work has led to many studies researching leadership values, traits, and perceptions (Salter et al., 2014). Their theory identifies three leadership styles: transformational, transactional, and laissez-faire. This study utilized these three styles to determine relationships between leadership styles and student academic achievement. This study assumed that educational leadership impacted student academic achievement; specifically, the educational leader's leadership style had an effect that can be measured using quantitative research. This study also assumed that the leader's gender and years of leadership experience impacted student achievement.

### **Statement of the Problem/Purpose of the Study**

Research exists concerning teachers and resources' impact on achievement; however, little research pertains to the school leader's leadership style. A leader, the superintendent, oversees each school system, and a leader, the principal, oversees each school. Because leaders lead in various ways, leadership styles and their influence on academic achievement become an important equalizing factor. "Leadership style is a critical factor in organizational performance and effectiveness" (Machumu & Kaitila, 2014, p. 54).

Therefore, this study aimed to analyze leadership styles to discover which leadership style had the most significant positive and negative impact on student academic achievement in rural high schools in Alabama. This study examined three styles – transformational, transactional, and laissez-faire. Knowing that school leadership impacts student academic achievement is only a portion of the purpose. Which leadership style impacts student academic achievement? When researching leadership styles, the list can be comprehensive and defined based upon the investigator's preference. This study also aimed to analyze gender and the leader's experience to discover if they had an impact on student academic achievement.

## **Significance of the Study**

This study addressed the impact that leadership styles, the leader's gender, and the leader's years of experience had on student academic achievement in Alabama. This study is significant because, before 2021, very little research addresses these items in rural high schools. Consider the following: suppose the research indicates a significant difference between leadership styles and their effect on Alabama's rural high school student achievement. In that case, leadership development in the area with the highest positive impact could improve all Alabama rural school systems' achievement scores, eliminating funding and staffing inequality factors. According to Marzano and Walters (2005), school leadership positively impacted student achievement. Amin et al. (2018) stated that "research has consistently acknowledged and emphasized the critical role played by educational leaders in improving the rural high school educational system and the entire academic realm. Improving leadership development will influence the school system, the schools, the staff, and the students while paving the way for increased achievement outcomes.

## **Theoretical Foundation and Review of the Literature**

Social Cognitive Theory is grounded in the understanding that learners, or students, can be influenced by the individual, their environment, and their behavior. External factors play a pivotal role in a learner's cognitive development (WGU, 2020). The foundation for the Social Cognitive Theory was developed in the 1960s by Bandura, and he explained how people control their behavior to achieve long-term goals (LaMorte, 2019). Controlling one's behavior to achieve long-term goals was the basis for this study. If school leadership impacts student academic achievement, and if the goal is to increase academic success for the students in their school, then leaders should develop behaviors that provide every opportunity to achieve success. School leaders that adapt their leadership style to correlate to the area with the best chance for increased performance will have a higher statistical chance to impact student achievement scores positively.

Bass and Avolio's Full-Range Leadership Theory (see Figure 1 below) classifies three types of leadership (Romascanu et al., 2017). The three leadership classifications are transformational, transactional, and laissez-faire. Each leadership style has strengths and weaknesses and has been the topic of many research studies. Transformational leadership increases the capacities of those within the school, empowers others to perform above expectations, and creates a centralized vision to strive toward (Leithwood & Jantzi, 1999). Transactional leadership emphasizes a solid centralized authority, obedience, and leadership control (Du et al., 2020). Laissez-faire allows pure autonomy by giving little direction toward task completion to enable subordinates to utilize their strengths (Nasir et al., 2013).

## **Student Achievement**

Over many decades, academic achievement has been a research topic for researchers seeking to determine its correlation to different influences. Studies about student achievement have steadily increased as researchers determine the factors that can raise scores. Christensen (2010) attributes a new emphasis on academic scores to the No Child Left Behind educational reform. His

**Figure 1**

*Avolio and Bass Full-Range Leadership Model*



mixed-method study concluded that transformational and transactional leaders are likelier to change their leadership methods to enhance student achievement. Although laissez-faire leaders were in their position the longest, he stated they were more resistant to change, hindering progress.

Educational reform, especially in student academic achievement, requires changing old mindsets and philosophies to meet the needs of the current learner. Student academic achievement has been on the minds of researchers and education specialists since schools' inception. Many factors play a role in influencing how well a student performs academically, but at the core are socialization and the interactions between people. According to LaMorte (2019), Albert Bandura's Social Cognitive Theory states that learning occurs between people, environment interactions, and behaviors. His theory focuses on the ways social influence impacts people. Leaders within schools, and school systems have daily interactions with students and teachers, so, in theory, those social interactions would impact student achievement.

Moore (2019) conducted a literature review about the history of student academic achievement. This review pointed out that attitude, motivation, and self-control influence academic achievement in elementary schools. Although these factors influence achievement, any academic setback the student encounters would not specifically define an adverse outcome in academic achievement. A separate study about international graduate students concluded that language proficiency, academic preparation, and demographics impact academic scores (Ren and Hagedorn, 2012). Furthermore, intrinsic motivation and expectations significantly influence graduate students in college. Once students enter graduate programs, their desire to achieve personal goals guides their achievements beyond outside influence.

In a contrasting study, Bayat and Salehiniya (2019) found that personal demographics had little influence on academic achievement in college students; however, they confirmed that external and internal motivation played a pivotal role. The student's gender had no impact on academic achievement, nor did their educational status. The primary influence on academic achievement scores was the success they obtained in education. If college students have encountered success in the past, their academic achievement was higher than those who

experienced failures. Similarly, social-emotional and intrinsic motivational factors greatly influenced academic achievement in the literature about college students (Van der Zanden et al., 2018). The primary intrinsic motivation related to achievement was the student's study skills. Students who developed positive study skills were organized, persistent in their preparation, and scored higher in achievement scores.

Other notable elements in improving academic achievement, especially for rural schools, are ensuring the student's basic needs are met and the professional development of teachers. Chrisp (2019) stated that academic achievement increased when schools addressed equitable access to nutrition, educational resources, and social-emotional factors. Also, because students spend most of their educational experience within the classroom, teacher capacity had arguably the most influence on growing academic success. To adequately build teacher capacity is providing the professional development necessary to meet all students' needs. Professional development is key to ensure teachers utilize current practices because education is not a "one-size-fits-all" (p. 4).

Although much research exists to provide clues into factors that influence students' academic success, research about leadership styles is scarce, and rural leadership analysis is nearly non-existent. Niedermeyer (2003) pointed to this by explaining "little empirical data" (p. 7) that assesses a school leader's leadership style compared to student achievement. Preston and Barnes (2017) noted that although rural schools are prevalent throughout the country and a discrepancy between achievement between rural and urban students exists, there is an inadequate amount of research available about rural school leadership. Analyzing leadership styles is important because school leadership positively impacts student achievement (Marzano & Walters, 2005). This research study will fill the gap between student academic achievement and leadership styles within rural high schools in Alabama. Based on the ACT Aspire, and the Alabama Alternative Assessment (AAA) composite data, student academic achievement scores from the ALSDE 2018-2019 report card for each defined rural school district and the rural high schools within those districts were gathered and analyzed.

## **Leadership Styles**

Lewin is widely known as the founder of social psychology (Carlin, 2019). Lewin's research to identify leadership styles has led to many studies that go well beyond the first three he identified in the 1930s: democratic, authoritarian, and laissez-faire. Research about each style's importance in an organization has also grown along with expanding the number of leadership styles. According to Avolio and Bass (1998), determining leadership styles and training professionals to use them effectively is essential because leadership goes beyond the relationship between leaders and subordinates. "Full-range leadership" (p. 394) includes transformational, transactional, and laissez-faire. Each style has positive and negative attributes; however, a leader reaching their full potential becomes a challenge without the appropriate training. Avolio and Bass's full-range leadership model is a continuum of leadership styles that transition from laissez-faire on one end to transformational on the other. It also reflects a leader's effectiveness through their activity or passivity (Vilhauer, 2018).

Leadership is a practice that influences and develops others for a purpose, and leadership styles improve people and programs within schools and school systems (Gyasi et al., 2016). This quantitative research study sought to examine the effect of leadership styles on academic performance in junior high schools in Ghana. A survey determined the headmaster's effectiveness

as the leader within those schools. The survey indicated that 45.6% of respondents strongly believe that the leader always helps people grow in their job, 53.2% strongly believe that the leader constantly challenges norms to achieve results, and 51.0% agreed they are satisfied with their headmaster's style of leadership. The study concluded that principals lacking knowledge and leadership skills do not know if they influence their schools. Also, the study revealed that leadership style affects academic performance. The effect could be positive or negative, but style influences the outcome.

Another study analyzed the relationships between transformational, transactional, and laissez-faire leadership styles and school culture from the viewpoint of the faculty (Martin, 2009). The School Culture Survey included a random sampling of 250 teachers from 50 elementary, middle, and high schools in five school districts in Georgia. The survey measured collaborative leadership, teacher collaboration, unity of purpose, professional development, collegial support, and learning partnership. The study revealed that a statistically significant relationship existed between the leadership styles of principals and school culture. For each factor measured, transformational leadership style had a positive relationship. Transactional leadership style had a positive relationship in contingent reward. Contrastingly, laissez-faire leadership style had a negative relationship in each factor measured. The study concluded that the principal's leadership style does influence the school's culture. A principal exhibiting a transformational leadership style is directly related to the school having a positive culture. A principal showing a laissez-faire leadership style is directly related to the school having an unfavorable culture.

Allen (2010) conducted a quantitative study to analyze Bass's full-range leadership model with each style's relationship with communication. Allen's research used a Likert-style survey and a regression analysis to determine relationships between transformational, transactional, and laissez-faire leadership styles and communication. The study concluded that each leadership style has its impact on communication. Transactional leadership style had a positive and significant influence, laissez-faire leadership style had a negative and significant effect, and transformational leadership style leads to the most active listeners.

As these studies indicate, a leader's leadership style directly influences those they oversee. However, how does one determine their leadership style, and why is it essential to understand one's style? Determining leadership style is necessary because when leaders know their style, they can build a climate that provides positive morale and higher expectations (Bulach et al., 2006). In their study, the researchers developed a survey instrument to identify 49 behaviors related to a principal's leadership style. They concluded that their tool is beneficial to help determine leadership traits to develop professional development plans. Determining leadership styles and utilizing tools to align a style to the person had been a daunting task.

In a confirming study, Smith et al. (2017) concluded that leaders who know their style and receive adequate training about other leadership style benefit by leading more efficiently and effectively. In turn, this knowledge serves to help those under their leadership. This study sought to determine if online college instructors utilized a particular leadership style to become more effective. They concluded that a single style would not fit all situations and leaders need to determine the style that works for them to help the students they oversee.

Leadership styles are vast and can be measured to determine their influence leading to various outcomes. The remainder of this literature review will focus on the literature associated

with the three leadership styles outlined by Avolio and Bass' full-range leadership model. This study focused on transformational, transactional, and laissez-faire leadership styles and their relationship to rural high school students' academic achievement.

### **Transformational Leadership Style**

Bass (1999) described transformational leadership as the leader's ability to guide followers from engaging in their self-interests toward achievement and the organization's success. Transformational leaders are not all the same, and different factors influence their leadership abilities. Bass indicated that female leaders tend to be more transformational in studies involving a leader's gender. Studies have shown that a "greater satisfaction" (p. 17) exists in those led by these female leaders. He also explains that previous studies are male-dominated, and more information is needed on gender to determine if these findings are consistent with the literature.

Leaders that utilize the transformational leadership style motivate those around them to perform at higher levels than their current state (Avolio & Bass, 1998). A successful transformational leader must align the followers' self-interests with the organization. Perhaps the most profound conclusion made by Avolio and Bass (1998) was that leadership training programs must focus on developing leadership styles and ways to utilize the styles to benefit others. Knowing the characteristics of a transformational leader is only a portion of the work; learning how to transform those in the organization is the other. Jiang and Lu (2020) conducted a literature review about transformational leadership style and empathy in making school decisions. They explain that this type of leadership is the most influential because of its ability to increase proficiency. Furthermore, they indicate that the most effective transformational leaders should adopt and utilize the best traits from other leadership styles to accomplish their goals. After researching the literature, they arrived at several conclusions. They concluded that role and mission shape the leader's emotional experiences, the leader's emotional abilities improve their communication and relationships with their subordinates, and the leader's supportive and collaborative behaviors positively affect the subordinate's emotions

Decades of research about the benefits of the transformational leadership style within organizations and schools exist; however, the results are mixed. Studies performed at the elementary school level are more abundant and have involved multiple data sets that compare this style to various outcomes. Luft (2012) researched the impact a transformational principal has on school climate and teacher efficacy. The study utilized a teacher perception survey about school climate and teacher empowerment. A pre-test and post-test of Bandura's Scale of Teacher Efficacy and Organizational Health Inventory-Elementary measured efficacy, and the Multifactor Leadership Questionnaire (MLQ) determined the principal's leadership style. Results indicated that transformational leadership had no impact on teacher efficacy; however, transformational leadership slightly affected a healthy school climate, decision-making, and job satisfaction. This study concluded that the data did not support the transformational leadership style's ability to improve a school's climate.

In a study involving elementary schools, school climate, and student achievement, Allen et al. (2015) had a contradictory conclusion. They surveyed six principals in southeast Texas using the MLQ-5X to determine leadership style, the Self-Care Inventory-Revised to assess school climate, and the State of Texas Assessments of Academic Readiness (STAAR) to determine math achievement. Using the one-way ANOVA model with random effects, the data indicated a significant positive relationship between style and school climate. The data revealed

that no relationship existed between style and math achievement. They concluded that although a relationship exists between the transformational leadership style and school climate, which supports that a leader impacts climate, no relationship exists between this style and math achievement, which indicates that a leader has no impact on student achievement.

Sun et al. (2017) had a similar conclusion finding that transformational leadership positively affected student achievement. Their purpose was to analyze over two decades of studies to determine the antecedents to transformational leadership explicitly focusing on the educational realm. The examined studies utilized various methodologies to derive their conclusions while identifying three antecedents: "school leaders' internal qualities, organizational factors, and leaders' colleagues' characteristics" (p.8). The school leaders' internal qualities consisted of self-efficacy, values, emotional intelligence, traits, and cognitive capacities. After a review of the literature, they concluded that self-efficacy is the most impactful antecedent. Additionally, leadership training programs are vital to prepare leaders with the skills necessary to be effective and enhance their inner confidence and decision-making ability.

A study was performed to determine the relationship between transformational leadership and teacher motivation based on the teachers' demographic variables. The study (Serin & Akkaya, 2020) determined if teachers' perceptions of transformational leadership of their principal were significant to gender and working time. Four hundred eighteen teachers located in Turkey participated in the survey. Analysis of the data included the mean, frequency, independent groups t-test, MANOVA, and canonical correlation. The study indicated that female teachers have a high level of perception of their principals. Female teachers are more motivated, and perception changed when employment was for longer lengths. The longer a teacher was at a specific school, the higher their perception of the principal to provide vision and inspiration.

Kilicoglu (2018) explored the perception of teachers concerning democratic leadership and distributed leadership. Using stratified sampling and a correlational research design, 462 high school teachers participated. The Northouse Leadership Style Questionnaire measured leadership styles, while Hulpia Distributed Leadership Inventory measured functions and characteristics of the leadership team. The data analysis indicated a moderate perception of democratic leadership, and support and supervision led the team's functions. The study concluded that in schools where democratic leadership was present, collaboration, distribution of leadership, and teacher perception of the team dynamics had the most significant correlational relationships.

### **Transactional Leadership Style**

The essential theme of the transactional leadership style is that the leader makes others perform their duties by maintaining a "strict hierarchical structure" (Peker et al., 2018, p. 152). These leaders tend to operate with the mindset of reward versus corrective actions based on their performance levels (Avolio & Bass, 1998). Research studies on this leadership style have had mixed results; however, many conclude that this leadership style negatively affects people. Applying this to an educational context, one can hypothesize that when teachers are unhappy and unmotivated, the result can lead to academic decline, impacting student achievement.

Those serving under a transactional leader are affected at a higher psychological rate when they constantly attempt to please leadership (Hongyan et al., 2017). In this study involving sampling 391 manufacturing workers in China, a survey determined the relationship between transactional leadership and deviant workplace behaviors exhibited by employees. The survey was

analyzed using Cronbach's Alpha (0.90) and revealed that this leadership style positively correlated with employees' deviant workplace behaviors. Specifically, the study concluded that transactional leadership not only had a positive correlation, but this style also increased employees' negative behaviors.

Data also supports that this type of leadership leads to negative consequences from subordinates' performance because the ability to showcase their strengths was hindered (Wang et al., 2019). This study measured the extent to which transactional leadership affects the task performance of subordinates. They hypothesized that a negative relationship between transactional leadership and subordinates' task performance would exist. Data supported a significant negative relationship between transactional leadership and task performance ( $r = -0.22$ ). They concluded that transactional leadership had a negative relationship with the task performance of subordinates. When employees do not believe they have the autonomy to choose their direction to complete tasks, productivity suffers. Those wanting more freedom but working under a transactional leader will perform tasks to a lesser degree.

Peker et al. (2018) conducted a study that confirmed teachers' transactional leadership style's unfavorable effect. The study examined the relationship between leadership styles and the factors that affect teachers' experiences negatively. Factors analyzed were gender, seniority, and teacher happiness. The researchers provided a survey of 395 elementary school teachers in Turkey. A t-test determined if gender played a difference, and the results indicated that gender was significant in both males and females. A one-way ANOVA was used to determine if seniority made a difference. The result indicated that seniority was significant, especially in young teachers' commitment to the profession. A correlation analysis determined the relationship between leadership style and teacher happiness, and a positive correlation existed. This positive relationship indicated that more barriers existed for teachers working under a principal with the transactional leadership style. This study derived two significant conclusions. First, gender and the lack of seniority significantly influenced the factors that affect teachers. These influences are negative and hurt teachers' abilities to perform their duties. Second, the transactional leadership style diminished the happiness of teachers. Work output decreases when teachers are unhappy in their teaching position.

Although the previous studies indicate that transactional leadership has negative influences, many studies prove a positive correlation between this style and the correct context or setting. The transactional leadership style is the strongest when the leader gives clear directives to those they oversee. In a research study to analyze principals' leadership styles and their impact on low socioeconomic schools, Niedermeyer (2003) concluded that transactional leadership had the most significant influence on student achievement in elementary schools.

School leaders that utilize the transactional leadership style are more task-oriented and directly affect followers' behaviors (Smith, 2011). This study aimed to determine how often school leaders utilize this leadership style using a qualitative methodology. After transcribing interviews, the study concluded that all participants utilized the transactional leadership style. The participants' responses indicated they used transactional leadership because "they felt compelled to address managerial tasks" (p. 187). The conclusion supported the study's purpose because they found that transactional leaders are more task-oriented.

Nazim and Mahmood (2016) expanded on this finding in their research. They concluded that transactional leadership correlated with college teachers' job satisfaction when the leader

clearly defined their roles. Their study sought to examine the relationship between principals' leadership styles and the job satisfaction of college teachers. They conducted survey research using a random sampling of 43 colleges with five teachers representing each college. They measured the frequency of leadership styles and analyzed their job satisfaction using Pearson's  $r$  and a t-test. The results revealed a significant positive relationship between the transactional leadership style and job satisfaction ( $r = 0.259$ ). College teachers were more satisfied with their role if their supervisors defined job responsibilities and expectations.

### **Laissez-faire Leadership Style**

Nasir et al. (2013) described this leadership style as a "hands-off" (p. 5) approach because the leader provides minimal direction and oversight. Furthermore, Carlin (2019) describes this leadership style as allowing the group to have the freedom to complete a task using their completion methods. The laissez-faire leadership style has positive attributes and has a place in leadership. In a study by Beggs (2008) to examine the frequency of laissez-faire leadership in outdoor college programs, he concluded this leadership style was the most used. In this quantitative study, the researcher surveyed a purposeful sampling of 113 outdoor collegiate program leaders using the MLQ-5X to determine leadership styles. A repeated-measures ANOVA computed the interactions between leadership styles among the participants. The results of this study indicated that while the laissez-faire leadership style was used the most by these professionals, no reference to the effectiveness of using this leadership style was present.

In a study conducted on high school agricultural leaders, the laissez-faire leadership style was the least used because it was not preferred (Jones & Rudd, 2008). Their study determined the frequency of leadership styles and if gender or ethnicity contributed. Of the 56 respondents, the mean score of those using the laissez-faire leadership style was 0.88. In contrast, those using the transformational leadership style had a mean score of 3.28, and those using the transactional leadership style had a mean score of 2.24. They found that the scores were indicative of the overall respondents, with gender and ethnicity playing no role in the outcome of the scores. The study indicated that the laissez-faire leadership style was the least used, and the researchers comment that any other leadership style should be considered over this style when leading schools.

Although laissez-faire leadership is present in some leaders, most research conducted in schools and organizations concludes it is inefficient, leads to lower performance, and increases organizational conflict. These leaders operate through absence or avoidance and tend to be ineffective because they seem apathetic and fail to empower others (Avolio & Bass, 1998). Furthermore, leaders who utilize this leadership style avoid difficult decisions and conversations, resulting in poor performance and motivation (VonBergen, 2012).

In a study to determine which leadership style increased employee motivation, Chaundry and Javed (2012) explained that the laissez-faire leadership style has no association with motivation based upon experience, gender, or marital status. They measured the experience, motivation, gender, and marital status of 278 participants. The Pearson correlation determined the relationship between leadership style and motivation. They concluded that the laissez-faire leadership style had a significant relationship with motivation, albeit negatively. Employees are more motivated when given direction and rewarded for completed work and are less motivated when the leader is passive or avoidant.

So, where does laissez-faire leadership fit into schools? The literature is scarce; however, one study determined its impact on high school student's academic performance (Oyugi & Gogo, 2018). This study employed a descriptive research design and a correlational design of 35 principals, 340 teachers, and 1,400 students. After surveying all participants, Pearson's correlation measured the strength and direction of relationships between democratic, autocratic, and laissez-faire leadership styles to high school student academic performance. Democratic and autocratic styles positively influenced student achievement; however, the laissez-faire leadership style had a moderate-negative influence ( $r = -0.435$ ). This score indicates that this style strongly and negatively impacts academic achievement. The researchers conclude their study by stating that when the school leader is naturally laissez-faire by nature, students' "academic performance decreases" (p. 27). As one can infer from the research studies described above, the laissez-faire leadership style can lead to more negative outcomes for those serving under this type of leader if the leader is ineffective at motivating others to operate in this type of format.

## **Methods**

This study analyzed multiple factors that involve Alabama's rural high school students. First, the study determined rurality as the basis of the quantitative research. Rural was defined, which allowed a precise and consistent dataset involving rural school systems and high schools. Second, studies about student academic achievement suggested that the leader's gender and years of experience affected scores. Third, research obtained about transformational, transactional, and laissez-faire leadership styles suggested that each impacts student academic achievement scores in rural high schools. Research studies have mixed conclusions about how leadership styles affect student achievement scores but have made many correlations related to other school factors (i.e., climate, motivation, job performance, etc.). It is important to note that although previous studies have researched leadership styles and academic achievement, leadership styles and their relationship to rural high schools are scarce at best. This study hypothesized that leadership styles, the leader's gender, and the leader's years of leadership experience impacted rural high school student achievement.

This quantitative study analyzed the results of three questions:

- RQ1. What difference, if any, exists in student achievement scores in Alabama's rural high schools based on the school leader's leadership style?
- RQ2. What interaction occurs between leadership styles and years of leadership experience affecting student academic achievement scores in Alabama's rural high schools?
- RQ3. What interaction occurs between leadership styles and the leader's gender affecting student academic achievement scores in Alabama's rural high schools?

## **Research Design**

This quantitative study utilized a causal-comparative research design to examine the relationships among the dependent and independent variables. Quantitative research investigates variables by gathering data and performing statistical analysis (Question Pro, 2021). A causal-comparative research design determines relationships between independent and dependent variables and if the "independent variable affected the outcome" (Salkind, p. 124). This research

study combined quantitative and causal-comparative research designs to employ a survey instrument to gather the statistical data needed. Northouse's Leadership Style Questionnaire determined the respondent's leadership style. The LSQ is a free survey instrument offered by SAGE Publications.

## **Setting**

The sample of superintendents and principals was delimited to rural school systems and their high schools throughout Alabama. The justification for selecting the participants for this study was based upon specific definitions outlined below and was based upon the researcher being located in Alabama. Defining rural and using only the participants that met the definitions was important because this study was specifically designed to measure the rural leader's impact on student academic achievement. Rural schools and school systems receive the least funding from local, state, and federal funds due to their limited size, so fewer dollars are allocated to increasing student academic achievement than their non-rural counterparts. Determining the impact of leadership on student achievement can help bridge this gap because little to no funding is required to develop leadership styles to meet the academic needs of the students.

## **Participants**

The identified rural superintendents and rural high school leaders in Alabama who met the definition of rural received the survey. Rural areas have fewer than 50,000 residents, have fewer than 35 residents per square mile, and have high schools with fewer than 600 students in attendance in high schools containing grades 9-12. After applying the definitions for rural, the participant pool consisted of 24 Alabama counties and 57 high schools within those counties. The survey was a single-blind study to avoid bias. A single-blind study is used so the respondent will be unaware of the originator of the survey (Gell, 2020). The survey was distributed to the superintendents and principals through the Director of the School Superintendents of Alabama (SSA) to ensure confidentiality. The Director oversees public school superintendents and has contact information for the identified schools and school systems.

## **Instrumentation**

This study used the Leadership Style Questionnaire by Northouse (2020). This instrument consisted of 18 items that examined leadership styles by measuring communication, leadership, adaptability, relationships, task management, production, development of others, and personal development. The LSQ was scored on a scale of 1 to 5, from strongly disagree to agree (see Appendix B) strongly. In addition to determining leadership style, the instrument also determined the dominance each leadership style has for each respondent. Dominance ranges from very high range to very low range. The LSQ measured three leadership styles: democratic, authoritarian, and laissez-faire. Although the survey measured democratic and authoritarian leadership styles, the correlation between transformational and transactional leadership styles is explained below.

The transformational leadership style and the democratic leadership style share similar attributes. Both are rooted in collaborative leadership by involving subordinates in decision-making (Duggan, 2019). Both also share a vision with subordinates to ensure that everyone works as a cohesive unit to reach the organization's goals. The transactional leadership style and the authoritarian leadership style also share similar attributes. Both have an authoritative leader who ultimately makes all decisions, and both believe that workers reach their full potential when a chain

of command and expectations are in place (Maryville University, 2021). Also, both leadership styles allow the leader to make quick decisions, allowing the organization to move forward rapidly.

Information related to reliability and validity for Northouse's LSQ was not readily available. An attempt was made to SAGE Publications to gather the information. They responded that the survey is intended for self-reflection and a validity score is not available (SAGE Publications, personal communication, July 12, 2021). Although the publication company did not have the available information, research has employed the LSQ as the lead survey instrument to determine leadership styles. Hina and Zafar (2018) used Northouse's LSQ in their research study to determine leadership styles while analyzing their relationship to job satisfaction. Seeger's (2020) research revealed the LSQ had a Cronbach's alpha ranging from .92 to .95, which is interpreted as being in the highest range for internal consistency.

Additionally, Sherard's (2015) research using the LSQ revealed a reliability coefficient of 0.887 and the Kaiser-Meyer-Olkin's (KMO) coefficient of 0.896. The KMO score indicates the sampling is adequate. Cronbach's alpha measures the consistency of a set of items as a group and reliability (UCLA, 2021). According to Statistics Solutions (2021), a Cronbach's alpha score of .90 and above is best when estimating the reliability of a score. The lack of a validity score from the developer was a recognized limitation of this study. However, the study's intent was not to determine the leader's leadership style; it was to determine the perceived leadership style's impact on academic achievement.

## **Ethical Procedures**

There was no foreseeable harm to participants. To protect the researcher's identity in this single-blind study, the Director of School Superintendents of Alabama distributed emails to the superintendents and principals that met the definitions of rural. All participants were over the age of 18 and were voluntary participants. The participants remained anonymous, and the survey results were kept confidential. The survey was created and maintained by the researcher using a password-protected computer. Permission to participate was obtained before surveys were distributed. Concerns about the survey or the study were sent to the Director and then anonymously to the researcher.

## **Results**

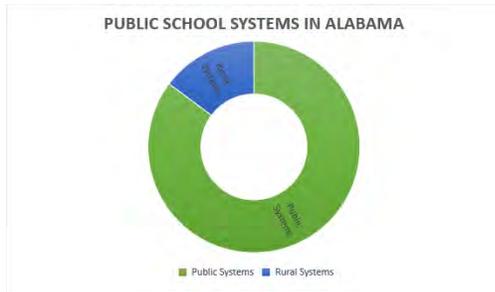
### **Demographic Characteristics**

The identified rural superintendents and rural high school principals in Alabama meeting the definition of rural received the survey. In review, rural areas have fewer than 50,000 residents, have fewer than 35 residents per square mile, and have high schools with fewer than 600 students in attendance in high schools containing grades 9-12. To protect the researcher's identity for this single-blind study, the Director of the School Superintendents of Alabama distributed the survey to 24 superintendents and 57 principals. Figure 2 displays the ratio of participants to the overall population of principals in Alabama's public high schools. Figure 3 displays the ratio of participants to the overall population of superintendents in Alabama's public schools. The Alabama State Department of Education (2021) reports 565 public high schools and 138 school systems in public education. Before answering questions related to leadership styles on the survey, the participants indicated their position (superintendent or principal), their years of

experience (novice or veteran), their gender (male or female), and their student academic achievement score.

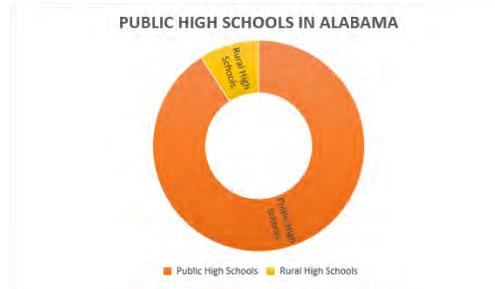
**Figure 2**

*Public high schools vs. rural public high schools*



**Figure 3**

*Public school systems vs. rural school systems*



**Table 1**

*Number of Leaders Indicating their Leadership Style*

Position	Total s	Transformational	Transactional	Laissez-Faire
Principal	26	18	5	3
Superintendent	12	9	2	1
	38	27 (71%)	7 (18%)	4 (11%)

**Research Question 1**

What difference, if any, exists in student achievement scores in Alabama's rural high schools based on the school leader's leadership style?

Research question one focused on analyzing the student academic achievement scores and determining each leadership style's impact. In review, 27 respondents were transformational, seven were transactional, and four were laissez-faire. Table 2 displays the descriptive statistics for the mean (M) student academic achievement score for each indicated leadership style and their standard deviation (SD). Student academic achievement scores are reported in the A-F format, while their mean (M) scores are numerical. Results indicated that the mean score for the transformational leadership style of school leaders had an overall score of B (M = 81.778; SD = 8.025). Using the transactional leadership style, school leaders had an overall score of C (M = 73.143; SD = 8.707). School leaders using the laissez-faire leadership style had an overall score of D (M = 68.25; SD = 6.551). Table 3 displays the results of the One-Way ANOVA. F-score and a P-value determined if the results were statistically significant. The F-score calculates the variances of the groups to determine statistical significance. The P-value threshold of  $p \leq 0.05$  is considered statistically significant, meaning that the data deviates from a normal distribution which rejects the null hypothesis. For this research question, the computed value of  $F_{(2, 35)}$  was

7.041, and the computed significance level (p) was 0.003. Both values rejected the null hypothesis because the F-score was greater than the F-critical score ( $7.041 > 3.27$ ), and the calculated P-value was less than the threshold ( $0.003 < 0.05$ ). The effect size was measured using eta squared ( $\eta^2 = 0.287$ ), indicating that the type of leadership style accounts for twenty-nine percent of the variability in student academic achievement scores.

**Table 2**

*Descriptive Statistics for Leadership Styles*

Style	M	SD
Transformational	81.778	8.025
Transactional	73.143	8.707
Laissez-faire	68.25	6.551

**Table 3**

*Results of the one-way ANOVA (Analysis of Variance) and Scheffe's post-hoc test*

	Variance (F)	Significance Level (p)	Effect Size ( $\eta^2$ )
One-Way ANOVA	7.041	0.003	0.287
Transformational vs. Transactional		0.052	
Transactional vs. Laissez-faire		0.628	
Laissez-faire vs. Transformational		0.013	

*Note.*  $F > 3.27$ ;  $p \leq 0.05$

Due to the rejection of the null hypothesis, it was necessary to conduct a post-hoc test. In review, a rejected null hypothesis requires a post-hoc test. According to Scheffe's post-hoc test, the transformational and transactional leadership styles were significantly similar and had a significance (p) of 0.052. There was no significant difference between transformational and transactional leadership styles ( $0.052 > 0.05$ ). The transactional and laissez-faire leadership styles were also significantly similar and had a significance (p) of 0.628. There was no significant difference between transactional and laissez-faire leadership styles ( $0.628 > 0.05$ ). However, the transformational and laissez-faire leadership styles differed significantly and had a significance (p) of 0.013. There was a significant difference between transformational and laissez-faire leadership styles ( $0.013 < 0.05$ ).

### **Research Question 2**

What interaction occurs between leadership styles and years of leadership experience affecting student academic achievement scores in Alabama's rural high schools?

Research question two focused on analyzing the interaction between leadership styles and the leader's years of experience with student academic achievement scores.

In review, novice (years 0-2) or veteran (years 3+) describe years of leadership experience. Of the 38 surveys analyzed, 11 respondents were novices, and 27 were veterans.

Furthermore, five novice and 22 veteran leaders exhibited the transformational leadership style, four novice and three veteran leaders exhibited the transactional leadership style, and two novice and two veteran leaders exhibited the laissez-faire leadership style. The results from the survey indicated that 71% of respondents were veteran leaders with three or more years of leadership experience, while 29% of respondents were novice leaders with less than three years of experience. Again, the results indicated that most respondents exhibited the transformational leadership style, while the least exhibited the laissez-faire style. Table 5 displays the descriptive statistics for the mean (M) student academic achievement score and standard deviation (SD) based on leadership style and years of leadership experience. Student academic achievement scores are reported in the A-F format, while their mean (M) scores were numerical. Results indicated that the mean score for novice school leaders using the transformational leadership style was C (M = 79.40; SD = 10.02), while the veteran transformational school leaders had an overall score of B (M = 82.32; SD = 7.68). Results indicated the mean score for both novice (M = 73.50; SD = 11.85) and veteran (M = 72.67; SD = 4.04) school leaders using the transactional leadership style had an overall score of C. Results indicated the mean score for both the novice (M = 69.50; SD = 4.95) and veteran (M = 67.00; SD = 9.90) school leaders using the laissez-faire leadership style had an overall score of D.

**Table 4**

*Descriptive statistics for mean scores based on leadership styles and years of experience*

Experience/Style	M	SD
Novice/Transformational	79.40	10.02
Veteran/Transformational	82.32	7.68
Novice/Transactional	73.50	11.85
Veteran/Transactional	72.67	4.04
Novice/Laissez-faire	69.50	4.95
Veteran/Laissez-faire	67.00	9.90

A Two-Way ANOVA was used to analyze research question two. F-score and a P-value determined if the results were statistically significant. The F-value calculates the variances of the groups to determine statistical significance. The P-value threshold of  $p \leq 0.05$  is considered statistically significant, meaning that the data deviates from a normal distribution which rejects the null hypothesis. For this research question, the computed value of  $F_{(2, 35)}$  was 0.237, and the computed significance level ( $p$ ) was 0.791. Because the F-score was lower than the F-critical score ( $0.237 < 3.27$ ), and the calculated P-value was greater than the threshold ( $0.791 > 0.05$ ), the null hypothesis was accepted by both. The effect size was measured using eta squared ( $\eta^2 = 0.015$ ), which indicated that less than two percent of the variability in student academic achievement scores is accounted for by the leadership style and years of leadership experience. The null hypothesis was accepted, so no post-hoc test was performed.

### **Research Question 3**

What interaction occurs between leadership styles and the leader's gender affecting student academic achievement scores in Alabama's rural high schools?

Research question three focused on analyzing the interaction between leadership styles and the leader’s gender to student academic achievement scores. In review, gender was either male or female. Of the 38 surveys analyzed, 22 respondents were male, and 16 were female. Specifically, 17 male and ten female school leaders exhibited the transformational leadership style, four male and three female school leaders exhibited the transactional leadership style, and one male and three female school leaders exhibited the laissez-faire leadership style. The results from the survey indicated that 58% of respondents were male, while 42% were female. Consistent with findings throughout this study, the transformational leadership style was the most utilized, while laissez-faire was the least utilized by school leaders. Table 6 displays the descriptive statistics for the mean (M) student academic achievement score and standard deviation (SD) based on each school leader's leadership style and gender. Student academic achievement scores are reported in the A-F format, while their mean (M) scores were numerical. Results indicated the mean score for both male (M = 81.35; SD = 9.29) and female (M = 82.50; SD = 5.64) school leaders using the transformational leadership style had an overall score of B. Results indicated the mean score for both transactional male (M = 74.50; SD = 11.39) and female (M = 71.33; SD 4.93) school leaders had an overall score of C. Results indicated the mean score for male school leaders exhibiting the laissez-faire leadership style had an overall score of C (M = 73.00; SD = 0), while female laissez-faire school leaders had an overall score of D (M = 66.67; SD = 7.02).

**Table 5**

*Descriptive statistics for mean scores based on leadership styles and gender*

Gender/Style	M	SD
Male/Transformational	81.35	9.29
Female/Transformational	82.50	5.64
Male/Transactional	74.50	11.39
Female/Transactional	71.33	4.93
Male/Laissez-faire	73.00	0
Female/Laissez-faire	66.67	7.02

A Two-Way ANOVA was used to analyze research question three. F-score and a P-value determined if the results were statistically significant. The F-value calculates the variances of the groups to determine statistical significance. The P-value threshold of  $p \leq 0.05$  is considered statistically significant, meaning that the data deviates from a normal distribution which rejects the null hypothesis. For this research question, the computed value of  $F_{(2, 35)}$  was 0.396, and the computed significance level (p) was 0.676. Because the F-score was lower than the F- critical score ( $0.396 < 3.27$ ), and the calculated P-value was greater than the threshold ( $0.676 > 0.05$ ), the null hypothesis was accepted by both. The effect size was measured using eta squared ( $\eta^2 = 0.024$ ), which indicated that less than three percent of the variability in student academic achievement scores was accounted for by the type of leadership style and the leader's gender. The null hypothesis was accepted, so no post- hoc test was performed.

## Discussion

The results of this study implied that a school leader’s leadership style impacted student achievement in Alabama’s rural high schools. This study sought to accept or reject the null

hypothesis of three research questions by determining if leadership style, leadership experience, and gender impacted student achievement. The mean scores for student academic achievement were higher for transformational leaders than for transactional and laissez-faire leaders. Implications can be made that rural high school students and rural school systems led by transformational leaders score higher in academic achievement. The researcher recommends that leadership development programs train future leaders in transformational leadership as results prove it has the most positive and significant impact on academic achievement scores.

The mean scores for leadership styles and years of leadership experience were negligible and had no significant impact on rural high school students and rural school systems. Also, the mean scores for leadership styles and gender were negligible and had no significant impact on rural high school students and rural school systems. No implications could be made for the leader's years of experience and gender and their impact on student academic achievement scores.

### **Recommendations and Future Research Directions**

Previous studies conducted on leadership styles and rural high school student academic achievement are nearly nonexistent. This research fills this void; however, more research is recommended for future studies. This study showed a significant difference between the leadership styles and student academic achievement scores. It would be valuable to apply this research to a nationwide survey. Does the difference apply to rural high schools nationwide, or is it unique to Alabama? Also, more research is recommended for non-rural high schools. Does the difference only apply to rural academic achievement scores, or is it consistent in the non-rural settings?

This study also compared the leadership styles and the leader's years of experience to rural high school student academic achievement in Alabama. Although the study did not show a significant difference in the leader's style and experience in impacting student academic achievement, the topic should be further explored. Adding a qualitative research question to the study could have offered insight into the leader's decision-making process to determine if experience level has an impact. Finally, this study compared the leadership styles and the leader's gender to rural high school student academic achievement in Alabama. This study did not show a significant difference in the leader's style and gender toward impacting student academic achievement. Gender and leadership style impact is a nonissue because there was no gender influence shown.

### **Conclusion**

This study aimed to analyze leadership styles to discover which style had the most significant positive and negative impact on student academic achievement in rural high schools in Alabama. It was understood from the beginning that the school leader impacts students; however, how much impact? By focusing on three leadership styles that represent Avolio and Bass's Full-range Leadership Model (Salter et al., 2014), it became apparent that there was a significant difference in the style's influence on student academic achievement. As previously described, the transformational leadership style positively impacts student achievement. It should be used as a focal point in leadership development programs. Ingrained in the transformational style is the concept that the whole is greater than the individual parts.

For this to work effectively, the leader must be at the forefront of transforming and adapting to best meet the organization's needs. If the educator's goal is to reach and empower students, the leader's leadership style must be in alignment. The leader must be flexible, understand the school's needs, and determine the leadership style that best serves the school. Are they indeed a leader without knowing their style and willingness to change to meet the school's needs?

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