Race, Gender, and Socioeconomic Status Predicting Reading Achievement for Arkansas Delta Students in Grades 6-8

Cedric E. Hawkins

RACE, GENDER, AND SOCIOECONOMIC STATUS PREDICTING READING

ACHIEVEMENT FOR ARKANSAS DELTA STUDENTS IN GRADES 6-8

by

Cedric E. Hawkins

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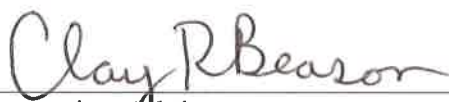in

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Dissertation

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ABSTRACT

by
Cedric E. Hawkins
Harding University
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Title: Race, Gender, and Socioeconomic Status Predicting Reading Achievement for Arkansas Delta Students in Grades 6-8 (Under the direction of Dr. Clay Beason)

The purpose of this dissertation was to determine the predictive effects of race, gender, and SES on reading achievement for sixth-, seventh-, and eighth-grade students in the Arkansas Delta. A quantitative, regression strategy was used to analyze the data. Predictor variables for each hypothesis were race, gender, and SES. The criterion variable was reading achievement for Grades 6, 7, and 8. The sample included 450 individual students from three participating schools located in the Arkansas Delta. The results were analyzed by examining the combination of predictor variables. Also, each predictor variable was examined individually to ascertain how much the predictor variable contributed to the overall prediction formula. The overall model significantly predicted for Grade 8 reading achievement and not for Grade 6 or Grade 7. Race and gender significantly contributed to the prediction model for Grade 8. SES was not significant for any of the hypotheses. Overall, the findings were inconclusive that race, gender, and SES predict reading achievement. Further research regarding the predictive effects of sociocultural factors on student achievement is necessary.

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CHAPTER I

INTRODUCTION

Many factors, including race, gender, and SES, have been investigated to determine how they impact reading achievement. Carnoy and Garcia (2017) opined that race could influence student achievement. Scullin (2020) concurred and offered that race was a contributor to student academic performance. However, Park and Bauer (2002) dissented and posited that parenting practices rather than race were a better predictor of student achievement. Lezotte and Snyder (2011) found that school culture rather than race was a stronger contributor to academic performance. Schemo (2006) asserted that students' economic environment, family life, and other background factors affected academic achievement. Schools have the daunting task of improving all students' achievement regardless of social challenges.

In 2019, results from census information revealed that the overall United States' poverty rate was 10.5%. In Arkansas in 2016, the poverty rate was 17%, making Arkansas' rate the nation's seventh highest (Semega, Fontenot, & Kollar, 2017). The Arkansas Delta percentage of poverty, at 36% of the population, is higher than the overall rate in Arkansas (Semega et al., 2017). Miranda (1991) indicated that economically disadvantaged children are more likely to suffer developmental delays, drop out, or give birth during the teen years than nonpoor children irrespective of race or ethnicity. Hodgkinson (1995) found a close correlation between poverty and low achievement.

Decades ago, in his groundbreaking study, Coleman (1966) argued that schools have little influence on a child's achievement, independent of a student's background and social framework. Thomson, De Bortoli, and Underwood (2017) suggested that home attributes, particularly books in the home, are among the most influential factors in student achievement. Of the many factors that may contribute to student achievement, poverty has the most significant influence.

Fully understanding adolescent achievement requires attention to student environments and teaching methods. Wormeli (2016) asserted that middle school students perform better academically through active learning rather than lecture or textbooks. Armstrong (2018) suggested that middle school educators ensure that learning environments are developmentally appropriate for teenage students. Wormeli (2016) also argued that different expertise is needed for teaching middle school students than is required to teach elementary and high school students. Setyawan (2019) offered that students taught through a blended teaching method performed significantly better than students who were instructed through the traditional teaching method. Ashdown and Bernard (2012) echoed that a social and emotional learning skills curriculum designed to teach positive attitudes and behaviors for learning and well-being is associated with improved reading achievement. Wang and Holcombe (2010) claimed that middle school students are successful when a highly functioning school culture is coupled with high student engagement and vision levels. How teachers instruct their classes and the environment in which the students learn to affect their performance outcomes. Thus, fully understanding adolescent achievement necessitates a careful evaluation of student environments and instructional approaches.

In addition to students' environments and varying teaching methods, other factors contribute to adolescent learning performance. Raebeck (1998) surmised that every student in a middle school should have an adult advisor as a contact person because of their unique needs. Unrau and Schlackman (2006) suggested that motivation was a more robust correlative to reading achievement than ethnicity, gender, and grade level for urban middle school students. Additionally, Hattie (2015) discovered that in over 800 studies on student achievement, student disposition had an effect size of 0.61, suggesting a positive correlation between student achievement and student disposition. Carnoy and Garcia (2017) asserted that students' inherent characteristics, such as race, gender, and SES, affect their school performance. Ferguson (2014) further suggested that the reading achievement difference between racial groups correlates to home literacy practices prevalent in higher SES homes more than lower SES homes. Thus, many factors, including mentoring, student motivation, student disposition, and students' inherent characteristics, contribute to student performance.

The learning environment is one of many variables affecting student academic performance. Jensen (2009) offered that when educators have high expectations for all students, and those expectations are paired with high support levels, student performance improves. Lezotte and Snyder (2011) found a direct link between positive school culture and higher student achievement. Lezotte suggested that a positive school culture includes teacher professionalism, academic press, and community engagement. Decades ago, Maccoby and Jacklin (1974) dismissed prevailing beliefs that females are better at rote learning and simple tasks and that males are better at higher-level cognitive processing. Instead, they noted that gender differences are evident in verbal ability, visual-spatial

ability, mathematical ability, and aggression. Hyde and Linn (1988) argued that gender differences in verbal ability indicated a slight female superiority in performance. Hyde (2005) added that males and females are more alike than different on most psychological variables, including academic skills such as reading and mathematics. Several factors could affect reading achievement, including home environment, parental income, student motivation, instructional strategies, school culture, expectations, teacher/student relationships, race, and gender. These factors, among other factors, have been investigated to discover how they influence student reading achievement.

Statement of the Problem

The purpose of this study was three-fold. First, the purpose of this study was to determine the predictive effects of race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for sixth grade students in three Arkansas Delta schools. The second purpose of the study was to determine the predictive effects of race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for seventh grade students in three Arkansas Delta schools. The third purpose of the study was to determine the predictive effects of race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for eighth grade students in three Arkansas Delta schools.

Background

Theoretical Framework: Sociocultural Theory of Development

Sociodemographic factors and social interactions have a substantial effect on a child's thinking and behavior. Cherry (2020) suggested that Lev Semyonovich Vygotsky, a Russian-born psychologist, worked with Alexander Luria and Alexei Leontiev to

develop the Vygotskian approach to psychology. Vygotsky is regarded as the father of sociocultural theory. Vygotsky argued that social interaction leads to continuous step-by-step changes in children's thoughts and behaviors that can vary significantly from culture to culture, depending on their interactions with people and the tools that the culture provides to help form their view of the world (Woolfolk, 1998). Tomasello, Kruger, and Ratner (1993) noted several ways for a cultural tool to be passed from one individual to another. Vygotsky, Hanfmann, Vakar, and Piaget (1962) offered that cultural tools mediate higher-order mental processes such as reasoning and problem solving and include books, media, computers, language, signs, writing, and symbols. Tomasello et al. (1993) found that a cultural tool could be passed first through imitative learning, where one person tries to imitate or copy another. The second way is by instructed learning, which involves remembering the teacher's instructions and then self-regulating. The final way adults pass on cultural tools to students is through collaborative learning, which consists of peers who strive to understand each other and work together to learn a specific skill. Haggbloom et al. (2002) suggested that although Vygotsky received minimal formal training in psychology, his approach has become a foundational work for cognitive science. His sociocultural theory emphasizes the influence of culture, social interaction, and language on people's development.

Language acquisition is critical in the overall development of a child. Vygotsky et al. (1962) asserted that language makes thought possible and is thus the basis of consciousness. Without language, his view was that human development could not exceed that of primitive sense and perception functions, characteristic of lower mammalian life forms. Vygotsky viewed language as the tool of culture that enables

social interaction, changes behavior and attitudes, and propagates and develops culture itself. The specific and early relationship between language and cognition can be identified through three critical stages in speech development: social, egocentric, and inner speech (Vygotsky et al., 1962). Language development separates human development from lower life forms and allows for higher social interaction and cultural development. How a child develops and learns is predicated on how the child acquires language.

Children acquire language through three critical stages. Social or external discourse dominates the first language development stage and is how young children (typically up to age 3) express emotions or simple thoughts. The speech is principally used to control others' behavior and convey early social influences such as parental behavior tolerance. Such effects inevitably lead to the restructuring of thoughts and cognition. Egocentric speech occurs between ages 3 to 7 and describes an intermediate language development stage between external speech and inner thoughts. Children will often talk to themselves to control their behaviors or justify actions or approaches to a task in this stage. With maturity, egocentric speech becomes inner speech (self-talk), which has also been referred to as the *stream of consciousness* by James (1890). Vygotsky et al. (1962) believed that inner speech enables individuals to direct and organize thoughts and is an essential proponent of higher mental functioning. Hence, the set of arbitrary and conventional symbols used to convey meaning are also culturally determined in form and interpretation and become a part of the individual's cognitive being.

Children learn by interacting with language and others. Vygotsky et al. (1962) also emphasized the importance of social interactions to the cognitive development of children. Vygotsky claimed that cognitive development stemmed from guided learning during social interactions within the *zone of proximal development* between children and more knowledgeable others as they co-construct knowledge. Vygotsky found that parents and teachers can foster learning in children by affording them opportunities within their zone of proximal development. Vygotsky also argued that children learn extensively through peer interactions. He suggested that children generally pay more attention to friends and classmates than adults in their lives. In addition, Vygotsky noted that children learn through observation and imitation of guided instruction within the zone of proximal development and are thus able to acquire new knowledge and skills. Finally, Vygotsky offered that although social interaction between children and others fostered gradual and continuous learning, this learning varied between different cultures.

Several factors influence childhood development, including social interactions guided by more knowledgeable others, including peers. When children interact with language and others, learning takes place. Vygotsky et al. (1962) placed great emphasis on the impact of culture on cognitive development. This position countered Piaget's (1952) view of universal stages and content of development. For Vygotsky et al. (1962), culture was viewed as the socially accepted actions, attitudes, and beliefs constructed through human social products such as institutions, symbol systems, and language. Vygotsky posited that culture influenced human mental functioning and behavior and formed an integrated association between personal development and the cultural

environment. He surmised that humans are contributors to cultural development as well as products of culture.

Educational institutions, particularly pre-kindergarten and K-12 entities, should focus on developing reading skills for all children. Vygotsky et al. (1962) offered that scaffolding provides a student the assistance of a more skilled person, and this assistance allows students to complete tasks they cannot do independently. Biggs and Moore (1993) suggested that the specific learning activities change as the student competence towards the ultimate task grows. The notion of the zone of proximal development also means that effective teaching should be within the individual's approximate potential but should perhaps be at the upper level of the zone of proximal development to maintain the student's interest in the activity. Vygotsky described the zone of proximal development as that which a student can accomplish with competent support. Teachers should understand where a child is on the learning continuum to provide needed supports to enable the student to continue academic development.

Reading Achievement Overview

Although public education is primarily left to the states' control, efforts have been made by the federal government to ensure educational equity for all students. In 1965, the federal government increased public education involvement with the Elementary and Secondary Education Act passage. In 2001, the Elementary and Secondary Education Act was reauthorized as a reform effort aimed at standards and principles that included accountability for student performance and teacher quality (United States Department of Education, 2004). In 2015, No Child Left Behind was reauthorized and identified as Every Student Succeeds Act (United States Department of Education, 2015). The Every

Student Succeeds Act included language to provide an equitable education for all students despite cultural factors. In addition, the United States Department of Education allowed for state flexibility in determining quality education for students. Thus, while public education is primarily the states' responsibility, the federal government has provided educational equality for all students.

Reading is fundamental to students' academic success and career opportunities. Governor Asa Hutchinson remarked, "Reading and literacy skills are vital for success in the classroom and life in general" (Governor's Office, News, & Media, 2018). Years earlier, Chall (1996) commented that higher reading and writing proficiency must meet the changing economic landscape. Parker, Hasbrouck, and Denton (2002) noted that the United States Congress authorized a National Reading Panel that examined scientific research on teaching students to read and ascertain the most effective reading pedagogy. To address literacy education challenges in Arkansas, legislators published the Reading Initiative for Student Excellence that focused on a new way of thinking about teaching to boost student achievement. As a result, legislators and educators have improved students' reading skills and better prepared students for the present career landscape. Reading is fundamental and foundational to students' academic success and career opportunities.

Race and Reading Achievement

Students' intrinsic characteristics contribute to their academic performance and continue to be of interest to many researchers. Carnoy and Garcia (2017) suggested that students' innate race, SES, or gender characteristics could affect their academic performance. However, Ferguson (2008) offered that Black students reported to school with fewer reading skills than other racial groups and that this gap persisted throughout

secondary school for Black students. Park and Bauer (2002) found authoritative parenting practices, not the parents' race, correlated with student achievement. Lezotte and Snyder (2011) suggested a direct link between positive school culture and better student performance for all students regardless of race. Ferguson (2008) noted that rather than race, disparities of schooling, socialization, and resources influenced skill-building and contributed to the current inequality. Ferguson further argued that racial disparities in past generations of institutions left parents and grandparents ill-prepared for their roles as teachers and caregivers. Scullin (2020) indicated that Black students lacked reading texts that accurately and authentically represented Black characters, which contributed to Black students' failure to attain reading gains. The National Center for Education Statistics (2020) scores showed a decline in Black, White, and Hispanic students' reading scores from 2019 compared to scores from 2017. However, Jensen (2009) suggested that when educators have high expectations for all students regardless of race, student performance improves while offering high student support levels. Many factors, including race, could contribute to student achievement. Many researchers are also interested in students' inherent characteristics and how those characteristics affect their academic success.

Gender and Reading Achievement

Many factors, including gender, may influence student achievement. Feingold (1988) concluded that differences in achievement dramatically changed between 1960 and 1983. Maccoby and Jacklin (1974) noted that males have higher scores than females at higher-level cognitive processes. However, Spencer, Steele, and Quinn (1999) discovered that negative expectations, rather than gender, influenced student

achievement. Similarly, Hyde (2005) argued that males and females are more similar than

dissimilar in academic skills such as reading and mathematics. Hyde noted that

differences found between male and female students were related to physical and

movement differences. Matthews, Poritz, and Morrison (2009) agreed that no significant

gender differences existed in educational achievement outcomes. Nowell and Hedges

(1998) found minimal differences in mean and variance scores between genders on

academic achievement. Machin and McNally (2005) investigated the role of social

factors' contributions to student achievement. They revealed that female students

performed better than male students from the onset of formal education through middle

school. Hartley and Sutton (2013) found similar evidence that negative stereotypes

related to gender influenced student performance. The reviewed literature suggested that

males and females are more alike than dissimilar in student performance and that when

differences are found, those may be attributed to expectations or stereotypes. Gender is

one of several factors that may impact student performance. The effect of gender on

student success is still a significant focus of research.

  The evidence for how gender influences student achievement seems to be

inconclusive. Hyde (2005) argued that differences existed due to gender tended to be

influenced by age, thus complicating the ability to ascertain the exact causes of

differences between males and females. Hyde examined the existing research supporting

gender differences in academic achievement and concluded that the results are unreliable.

Hyde further addressed gender differences through social and educational programs that

could be unproductive and detrimental to adolescents' self-esteem. Hyde argued that

males and females had similar cognitive abilities in student performance. Hyde further

added that the gender gap was not significant in many countries and indicated that gender differences in mathematics resulted from cultural and environmental factors. Identifying how gender may impact student achievement might prove difficult despite the subject research efforts.

Socioeconomic Status and Reading Achievement

The correlation between SES and student achievement continues to be a topic of interest for many researchers. Coleman (1966) argued that background and social framework influence a student's achievement and that schools have minimal effect on a child's achievement. Decades later, Honstra, Van der Veen, Peetsma, and Volman (2015) suggested that coming from a lower-SES condition and being a student of color could lower achievement results. Likewise, Harwell, Maeda, Boshop, and Xie (2017) found a modest relationship between SES and student achievement existed. Aikens and Barbarin (2008) asserted that family contributions such as home literacy environment, parental involvement in school, and parental role strain made the most considerable contribution to predicting initial kindergarten reading disparities. They further proposed that school and neighborhood conditions contributed more than family SES factors to reading achievement. Brady (2013) asserted that ethnicity and poverty exhibited a strong relationship with reading achievement. Albert et al. (2020) explored the relationship between SES and students' performance on achievement tests. According to Albert et al., children with low SES performed worse on achievement tests and earned lower grades than those with high SES. According to the National Center for Education Statistics (2020), students eligible for the National School Lunch Program had an average score 24 points lower than students who were not eligible nationally. Poverty, which is prevalent

across the United States and especially in the Arkansas Delta, according to census data, has affected student achievement. Many scholars continue to investigate the relationship between SES and student achievement.

Hypotheses

I generated the following hypotheses to address the problem in this study:

1. No significant predictive effects will exist between race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for sixth-grade students in three Arkansas Delta schools.

2. No significant predictive effects will exist between race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for seventh-grade students in three Arkansas Delta schools.

3. No significant predictive effects will exist between race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for eighth-grade students in three Arkansas Delta schools.

Description of Terms

Arkansas Delta Region. According to Gatewood and Whayne (1996), the Delta refers to the lower Mississippi River region consisting of 308 counties and parishes in Illinois, Kentucky, Missouri, Tennessee, Arkansas, Louisiana, and Mississippi. Although Arkansas is most easily divided into two distinct geographical regions, the northwestern uplands and the southeastern lowlands, six geographic subregions exist, three in each the uplands and the lowlands. The southeastern lowlands are the Gulf Coastal Plain, the Mississippi Alluvial Plain (the Delta), and Crowley's Ridge, all located in the eastern section of Arkansas along the western banks of the Mississippi River. The region extends

from Eudora in the south to Blytheville in the north and westward to Little Rock. The lower area borders the Arkansas River just outside Little Rock, down to Pine Bluff. This study will focus on three schools in the Arkansas Delta.

ACT Aspire Summative Assessment. The ACT Aspire Summative Assessment was adopted as Arkansas' assessment system in the 2015-2016 school year. All Arkansas students in Grades 3-10 are required to participate in the statewide educational assessments in English, reading, writing, mathematics, and science (Arkansas Department of Education, 2018).

Every Student Succeeds Act. According to the Arkansas Department of Education (2018), Every Student Succeeds Act, authorized in 2015, ensures all students' educational equity. Each student in Grades 3-10 is assessed in English, reading, writing, mathematics, and science with accessibility features for all students and accommodations available for qualifying students.

Gender. For this study, Newman (2018) defined gender as the concept used to refer to physiological traits that distinguish a species' males and females.

Race. According to Fasching-Varner, Mitchell, Martin, and Bennett-Haron (2014), race is generally used to describe humans based on skin color and perceived related phenotypes. For this study, race was categorized as White and non-White.

Socioeconomic Status (SES). SES refers to any measure that considers combinations of indicators, including education, income, and occupation. For this study, SES was defined by students' lunch eligibility status within the school system based on the standards set by the United States Department of Agriculture, Food, and Nutrition Services Child Nutrition Programs (2016).

Significance

Research Gaps

This study was used to investigate the predictive effects of race, gender, and SES on reading achievement for middle school students in three Arkansas Delta schools. A literature review revealed that reading performance levels varied across SES but did not specifically address the effect of SES and race on reading achievement. While addressing reading achievement overall, the literature did not extensively address middle school reading achievement (Raebeck, 1998). The study contributes to the research of sociocultural factors and their impact on reading achievement. More research is needed to focus on the predictive effects of race, gender, and SES on middle school students' reading scores in the Arkansas Delta.

Possible Implications for Practice

A fair and equitable education should result in all students learning at a high level**.** The need to increase student achievement for all students continues to challenge practitioners. Fram, Miller-Cribbs, and Van Horn (2007) stressed the SES gap in students' academic achievement. Fram et al. stated, "Education is viewed as a leveler of opportunity" (p. 309). Legislators, school leaders, and classroom teachers have emphasized closing achievement gaps and could benefit from this study's results. School leaders could find interest in this study as they continue to study achievement gaps and their causes. This study could help school leaders provide professional development opportunities to understand how race, gender, and SES combine to affect students' achievement.

School administrators seeking to support underprivileged students could continue exploring avenues to understand the challenges poverty presents for their students, such as access to resources and negative peer pressure. I sought to discover opportunities to leverage resources to support teaching and learning through this study. Also, policymakers could benefit from this study. Policymakers could use this study to ensure equal educational opportunities for all students by providing adequate funding for educational opportunities beyond the regular school day. With a substantial gap between White and non-White students in the scores on summative assessments across disciplines, this study could further evidence the importance of societal effects on student development. This study's results could clarify professional development opportunities to inform better classroom staff of effective instructional strategies and classroom management strategies that foster higher student engagement. School leadership could also develop professional development programs that help create a school culture where all students feel safe and supported.

Process to Accomplish

Design

A quantitative, nonexperimental multiple regression strategy was used to examine the three hypotheses. The independent or predictor variables for all three hypotheses were race (White or non-White), SES (free/reduced-price lunch eligibility or paid lunch), and gender (male or female). The dependent or criterion variable was reading achievement measured by the ACT Aspire Summative Assessment for all three hypotheses. Hypotheses 1-3 examined reading achievement scores from sixth-, seventh-, and eighth-grade students in three Arkansas Delta schools.

Sample

This study's sample was scores drawn from sixth-, seventh-, and eighth-grade students' ACT Aspire data from three schools located in the Arkansas Delta. These schools were chosen because of similar student demographics, student body populations regarding student enrollment, and SES percentages. Next, attempts were made to select representative numbers of scores from each level of the predictor variables regarding race, gender, and SES for sixth, seventh, and eighth-grade.

According to the Arkansas Activities Association (2018) classifications, School A had an enrollment of 1,553 students; School B had 2,971 students; School C had 2,472 students. School A's student population consisted of White (48%), Black (47%), Hispanic (4%), and Asian (1%). School B's student population consisted of White (70%), Black (24%), Hispanic-Latino (3%), and Asian (3%). School C's student population consisted of White (18%), Black (79%), Hispanic-Latino (2.4%), and Asian (0.1%). SES was determined by lunch status. SES was defined by students' lunch eligibility status within the school system based on the standards set by the United States Department of Agriculture, Food, and Nutrition Services Child Nutrition Programs (2016). The schools' free or reduced lunch percent were school A—64.0%, School B—60.0%, and School C—72.0%.

Instrumentation

The ACT Aspire is a vertically scaled battery of achievement tests designed to measure student growth in a longitudinal assessment system for Grades 3-10. ACT Aspire is designed to measure students' progress toward college and career readiness. Students are tested to determine readiness in reading, writing, English, mathematics, and

science. All public schools must administer the test annually (Arkansas Division of Elementary and Secondary Education, 2020). This statewide program involves testing of all students unless the student qualifies for an alternative assessment. Only reading scores for students in Grades 6, 7, and 8 were used for this study. Approximately 4.5 hours of total testing time are required for each grade, with 40 minutes allotted for English and 65 minutes for reading. Even though the ACT Aspire scoring falls into four levels (Exceeding, Ready, Close, or In Need of Support), raw or scaled scores were used for the analysis. The ranges of raw score internal consistency reliability for ACT Aspire for the online and paper test for grades 6, 7, and 8 for reading was between 0.80-0.87.

Data Analysis

A multiple regression analysis was conducted to determine the degree of predictive effect race, gender, and SES had on reading achievement for each hypothesis. The predictor variables were the same for all the hypotheses and included race, gender, and SES. The criterion variable was also the same for all three hypotheses, reading achievement measured by the ACT Aspire Summative Assessment. However, all three hypotheses examined a different grade level, including the sixth, seventh, and eighth grades. Each analysis involved the significance of the model as a whole with all the predictors. Then, each analysis determined how much each predictor variable was related to the overall formula. The hypotheses were tested using a two-tailed test with a .05 level of significance.

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Summary

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This study attempted to investigate sociocultural factors and their effects on students' reading achievement on the ACT Aspire Summative Assessment for middle

school students in three Arkansas Delta schools. Research varied widely on how individual social factors contributed to student achievement. Limited research exists that pertained to race, gender, and SES collectively on reading achievement. Investigation of the Arkansas Delta was found to be limited. Race, gender, and SES affect student reading achievement; however, the exact effect remains unclear. The definitive answer of the predictive effects race, gender, and SES has on reading achievement will possibly remain arguable. Many factors could impact reading achievement, including home environment, parental income, student motivation, instructional strategies, school culture, expectations, teacher/student relationships, race, and gender. Therefore, policymakers, school administrators, and practitioners should proceed with caution when considering policies and practices specifically designed to address sociocultural factors. Educational equity that allows all students to learn at the highest levels is a noble endeavor; however, efforts to raise student achievement should focus on educational reform. In this study I sought to continue investigating how sociocultural factors affect student reading achievement for middle school students in the Arkansas Delta.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

A myriad of factors contributes to adolescent reading achievement. A review of the literature suggested that race, gender, and SES could contribute to the reading performance of middle school students in the Arkansas Delta. Kirkland (2011) noted that Black males have historically lagged behind other ethnic groups in the United States and especially in the Arkansas Delta. Vygotsky et al. (1962) suggested that a child's thoughts and behaviors varied from culture to culture and depended on the interactions with people and tools provided by various cultures. The tools Vygotsky alluded to include, among other things, books, media, computers, social software, language, and symbols. The scholarship (Coleman, 1966; Ferguson, 2008; Kirkland, 2011) referred to the prevailing achievement gaps that pervade the country and, in particular, the Arkansas Delta. Although enormous amounts of data from ACT Aspire Summative Assessment data demonstrated a pervasive trend of achievement gaps between ethnic groups, genders, and SES on student achievement outcomes, the exact nature of the contribution remains an area of interest to researchers. Black student performance should be examined in light of the historical context of Black students. Dubois (1915) found that before officially sanctioned slavery was abolishied in 1863, Blacks were forbidden academic instruction according to the law. The deleterious effect resulting from approximately 250 years of

exclusion from academic instruction, although difficult to quantify, could be the subject of further research.

After the Civil War, the government made efforts to address educational inequities through the Freedmen's Bureau. Established in 1865, the Freedmen's Bureau strove to help poor Blacks and Whites in the south by providing food, creating healthcare programs and establishing schools. While the Freedmen's Bureau was attempting to address recently emancipated Blacks' opportunity to function in society, countermeasures were also employed by legislators and the judiciary to thwart educational equity, such as the election of 1877, enactment of slave codes, and the ruling in *Plessy v. Ferguson*. Much of the current research considers sociocultural factors and how these factors influence literacy achievement (Coleman, 1966; Ferguson, 2014; Hawes & Plourde, 2005). However, the ways in which these factors affect student achievement is challenging to quantify. The extant scholarship on the predictive effect of race, gender, and SES on reading achievement for middle school students in the Arkansas Delta noted that many other factors also contributed to adolescents' reading performance.

Although education is principally the state's responsibility, the federal government has increasingly become more involved in the educational process. The literature suggested that all students could benefit from the opportunity to have access to qualified teachers in a safe and supportive environment where professional educators work collaboratively to best prepare all students for college and careers. However, Coleman (1966) posited that students' backgrounds and social contexts contributed to students' achievement and that schools have minimal effect on students' academic performance. The literature revealed uneven results in initiatives and efforts to bring

about equity and close achievement gaps. In instances of educational success for all students, the research revealed that several factors showed statistically significant results, including a highly qualified teacher, a positive teacher/student relationship, home reading habits, teaching with students' zone of proximal development in mind, and students' social factors. However, the research failed to reveal how to address multiple contributing factors to student achievements, such as community crime and poverty, the prevalence of single-parent homes, and social media challenges. Primarily the responsibility of state government, education has increasingly become a focus at the state level and at the federal level to ensure all students' equity.

Researchers found that many strategies could have a positive effect on student achievement. For example, Brame (2016) argued that teachers who used interactive engagement strategies increased student understanding in males and females, reducing the gender performance gap. In addition, Brame's research revealed that active rather than passive learning, increased student performance for middle-level learners. In addition to teaching strategies having the potential to impact student achievement positively, Brame also found that family contributions, home literacy practices, parental involvement, and neighborhood conditions affect reading performance. Additionally, evidence (Armstrong, 2018; Bernard, 2017; Strobel, 2011) was found that student disposition, high educator expectations, and positive school culture all contributed to improved student performance. The efforts, methods, strategies, and initiatives that positively affected student achievement were reviewed in the research.

Theoretical Framework: Sociocultural Theory of Development

Social factors and a student's interaction with the social world may influence learning. Wilson and Lianrui (2007) mentioned that Lev Vygotsky, a Russian-born psychologist, was considered a pioneer in learning in social contexts. Wilson and Lianrui also suggested that sociocultural theory explained how learning could be fostered effectively through interactive pedagogical practices. Myles, Hooper, and Mitchell (1998) previously identified that learning occurs in a sociocultural environment, where learners are viewed as active constructors. Myles et al. argued that student learning and how students understand what is learned depends on the learner's social context, engagement, or interaction. Myles et al. posited that Vygotsky was the father of constructivism. Wilson (1992) suggested that learning occurs through dialogue. Vygotsky et al. (1962) argued that initial education occurred intermittently between teacher and student, between students, or between text and reader. Vygotsky further argued that the learner makes sense of what is said or written through internal or intramental dialogue. He also suggested that learning was interactive with the learner interacting with ideas and knowledge in a social setting and active participation with expertise in their minds. Lantolf (2000) further pointed out that learning depends on the students' purpose or motivation. Wilson and Lianrui (2007) opined that scaffolding was a fundamental concept of sociocultural theory. Earlier, Maybin, Mercer, and Stierer (1992) offered that scaffolding was the temporary but essential nature of the assistance that supported the learner to carry out tasks successfully. Vygotsky et al. (1962) had connected scaffolding with the idea that when support is provided by others, whether parents, peers or teachers, students perform better academically. Hammond and Gibbons (2005) interpreted

scaffolding as a high challenge and high support, which suggested that teachers set up challenging tasks beyond the student's current capacity. Hammonds and Gibbons alluded to teachers' need to avoid offering lessons to students that are not challenging enough, leaving students bored. Hammonds and Gibbons further suggested that teachers not present tasks that are too challenging because students would be frustrated and may give up. Many researchers (Myles et al.,1998; Wilson, 1992; Lantolf, 2000) suggested that facilitated learning environments that make available various learning purposes at levels related to the students' zone of proximal development with the necessary support, fostered student academic success. Social factors and a student's interaction with the social world may affect learning.

Vygotsky's sociocultural theory emphasizes cognitive, social, and contextual aspects of change. Panhwar, Ansari, and Ansari (2016) suggested that sociocultural theory activities may improve students' language skills and cognition. They argued that the sociocultural theory had the potential of forming new context-oriented language teaching and learning strategies. Panhwar et al. offered that sociocultural theory fostered the need for student-centered learning that established learner autonomy. Shabani (2016) provided that professional development is mainly identified in the literature as mentoring, observation/assessment, scaffolding, inquiry/action research, individually guided activities, study groups, and involvement, all grounded in Vygotsky's theoretical framework. Shabani suggested that Vygotsky's sociocultural theory encompasses three seminal ideas: mental functioning understood by an emphasis on developmental analysis, cognitive functioning had social origins, and focus on the mediated nature of human action. Teacher professional development rooted in student-centered instruction

emphasizing mental, social, and contextual change could improve students' language skills and understanding. Vygotsky's sociocultural theory stresses intellectual, social, and context-oriented parts of progress.

How a student interacts with culture, peers, and adults could impact their language development. Vygotsky et al. (1962) offered that symbolic and socioculturally constructed artifacts mediate human mental activity. They argued that a language is an essential tool in the mental life of the learner. Vygotsky et al. emphasized that learning is first social before becoming individualized due to linguistically mediated interaction between the learner and more knowledgeable others such as parents, teachers, and peers. Lantolf (2000) indicated that the source of knowledge construction should be sought in the social interaction co-constructed between more and less knowledgeable others. Lantolf further argued that knowledge construction is a socioculturally-mediated process affected by physical and psychological artifacts. Walqui (2006) assumed five ideas as core facets of Vygotsky's sociocultural theory: learning preceded development, the language was the tool of thought, mediation was fundamental to learning, social interaction was the core of learning and development where skills and knowledge are transformed from social into the mental plane, and the zone of proximal development is the primary area where learning took place. Shabani (2016) posited that behavior and consciousness are intertwined. He argued that the sociocultural theory was best defined as the unification of mind and social interaction. Lantolf (2000) offered that mediation was the result of indirect human relations with the world by physical and symbolic tools. Shabani (2016) suggested that learning is a socially mediated process influenced by different semiotic devices such as numbers, arithmetic systems, music, art, and especially

language. He further suggested that dialogic negotiation with social mediation triggered higher forms of a learner's mental functioning. Student social interaction with language, culture, and people impact how students develop and understand a language. How students interact with culture, peers, and adults could impact their language development and reading achievement.

How a student thinks about and comprehends experiences and exposures could contribute to academic performance. Shabani (2016) suggested that sociocultural theory assumed interrelationships among the various functions of the mind. He considered that individual processes of perception, memory, and thinking in childhood to adulthood were interrelated such as the relationship between memory and thinking that led to logical memory. Eun (2008) contended that social interactions should be framed within activities with a clear purpose with two or more people in a practical exercise. Vygotsky's sociocultural theory considers a multidimensional approach to learning. Vygotsky's sociocultural theory of learning implies social and cultural factors and their importance to academic performance, as well as emphasizes cognitive, social, and contextual aspects of change. Student learning involves recognition, recall, and relation to social interactions, not isolation, but from a multidimensional approach. How a student thinks about and comprehends experiences and exposures could contribute to academic performance.

Reading Achievement Overview

From the beginning of formal education in the United States, educating adolescent students has been debated and researched. Alexander (2003) argued for a program that specialized in the individual needs of the child. Alexander also argued for using organizational structures (scheduling, planning time, teams) to meet adolescent students'

needs. Armstrong (2018) suggested that middle school educators ensure that learning environments are developmentally appropriate for teenage students. Wormeli (2016) argued that different expertise is needed to teach middle school students than what is required to teach elementary and high school students. A myriad of approaches to meet the unique challenges of educating middle school students has been offered. How to educate adolescent students has been and continues to be the subject of much debate.

Policymakers have made many efforts to improve reading achievement for all children. Parker et al. (2002) noted that between 1997-2000, the United States Congress convened the National Reading Panel to examine all reputable scientific research on teaching children to read and determine the most effective reading method. Parker et al. further noted that the panel completed its 480-page report and concluded with offering Whole-Language proponents' strong rebuke and espoused phonics as the best method for teaching beginning readers. Parker et al. suggested that the whole-language approach to teaching and learning reflected a constructivist view. The No Child Left Behind Act of 2001 required that states test specified subjects and grades while establishing minimum performance standards for students, schools, and school districts, in addition to assisting while imposing sanctions on schools and districts not meeting performance goals. Goertz (2005) submitted that in response to variability by states, the federal government expanded its role by requiring states to test more, set more ambitious and uniform improvement goals, and outlined penalties for schools that failed to meet established goals. Hursh (2007) suggested that No Child Left Behind's enactment represents the federal government's most extensive education intervention in the United States' history. Efforts to improve student performance have included increased federal involvement and

an emphasis on teaching phonics but have seen a wide variation among states. Policymakers have made many efforts to improve reading achievement for all children.

Increased accountability, emphasizing both classroom and career success, has been emphasized as a strategy to improve student performance. Widespread support at the state and school district level for the basic premises of accountability and performance standards highlights subgroup performance and achievement gaps to affect student achievement positively (Cole, 2006). The Arkansas Division of Elementary and Secondary Education (2020) developed rules for new reading that included components that outlined the process to ensure educator proficiency in scientific reading instruction. To transform literacy education in the state of Arkansas, policymakers in 2018 published the Reading Initiative for Student Excellence that focused on a new way of thinking and a new focus on instruction while raising student achievement. In a press release, Governor Asa Hutchinson remarked, "reading and literacy skills are vital for success in the classroom and life in general." (Governor's Office, News, & Media, 2018). The Arkansas Division of Elementary and Secondary Education (2020) developed rules for reading legislation components. According to the Arkansas Division of Elementary and Secondary Education, at the beginning of the 2021-2022 school year, all core teachers, reading specialists, K-12 special education teachers, and K-6 English language learner teachers must demonstrate proficiency in the Reading Initiative for Student Excellence (Arkansas Department of Education, 2018). Efforts have been made locally and at the state level to increase student performance outcomes through teacher and district accountability measures. Increased responsibility, emphasizing classroom and career success, has been highlighted as a strategy to improve student performance.

Legislation aimed at teacher preparation, although beneficial, may not alone prove to be sufficient to raise student reading achievement. A 4-year longitudinal case study by Fletcher, Grimley, Greenwood, and Parkhill (2013) revealed that leadership, professional development, literacy expert, and assessment data improved students' reading achievement. Gruhn and Douglas (1971) emphasized the necessity of educators having specialized training. Districts should develop a collaborative leadership culture and ensure that professional development is individualized and school-wide to support reading. Successful teacher preparation equips teachers with the tools to overcome the challenges they face. Policy alone aimed at teacher preparation, although beneficial, may not prove to be sufficient to raise student reading achievement.

Researchers have varied opinions about the factors beyond race, gender, and SES that contribute to reading achievement. These include student motivation, home environment, and instructional practices. Hebbecker, Förster, and Souvignier (2019) explored the relationship between reading achievement and reading motivation. Their investigation revealed a positive relationship between reading achievement and motivation, both intrinsic and extrinsic. Wang and Guthrie (2004) had also suggested a positive relationship between reading achievement and motivation. Unrau and Schlackman (2006) concurred that motivation was a stronger correlation to reading achievement than ethnicity, gender, and grade level for urban middle school students. Strobel (2011) discovered three ideas about motivation and student achievement: students' motivation as a significant predictor of their achievement, caring environments that encourage effort and understanding that increase student motivation and produce higher student outcomes, and changes in classroom practices related to differences in

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students' motivation. Researchers have differing reactions about the factors beyond race, gender, and SES that contribute to reading achievement.

When students are highly engaged in their learning, they perform better. Steinberg, Dornbush, and Brown (1992) cautioned that school reform would not be successful until the engagement problem was remedied. Steinberg et al. further surmised that too many students are physically present but psychologically absent. Yair (2000) asserted that 85% of students passively listened to the teacher rather than actively engaged. Many schools across the country deal with the challenges of engaging all students in meaningful and challenging learning experiences that enrich the whole student's life. Rigorous and relevant learning experiences result in higher achievement for students. Vygotsky et al. (1962) suggested that the self-regulatory nature of inner speech and self-talk assisted students in guiding their speech and self-talk. Echoing Vygotsky's sociocultural theory of learning development, Bernard (2017) further asserted a link between students' attitudes and social and emotional learning skills, vital for student engagement and improving students' literacy skills. He also posited that social-emotional competence should be taught in addition to academic competence. Ashdown and Bernard (2012) noted that a social and emotional learning skills curriculum to teach positive attitudes and behaviors for learning and well-being was associated with improved reading achievement. Hattie (2015) identified in his meta-analysis of over 800 studies on student achievement, student disposition had an effect size of 0.61, suggesting a positive correlation between student achievement and student disposition. Motivation has been shown to have a significant association with student reading achievement. Highly engaged students perform better academically.

Attributes of the home beyond family income affect learning. Killian (2017) argued that home activity that includes but is not limited to books, parental involvement, and parents' education level, regardless of family SES, age, and gender, had significant positive effects on students' reading achievement. Hawes and Plourde (2005) differed as they argued no relationship between parental involvement and reading achievement for sixth-grade students. Home environment rather than parental involvement may be a more significant predictor of student success. Instructional practices may affect reading achievement. Li (2016) opined that formative assessment is positively associated with reading achievement for all students. Li further discovered that the relationship between formative assessment and reading achievement appeared stronger for Black students than White students. Li's findings indicated that formative assessment is strongly associated with students' reading performance in general and provided initial evidence of formative assessments' potential to address achievement gaps between Black and White students. Setyawan (2019) offered those students taught through a blended teaching method performed significantly better than students who were instructed through the traditional teaching method. Researchers have varied opinions about instructional practices and other factors that contribute to reading achievement.

A student's reading achievement can predict how well a student does overall in school and subsequently in life. Heckman (2000) asserted that factors such as children's knowledge and ability to think, learn, and communicate could affect the likelihood of their becoming productive adults and active citizens. Heckman further argued that mathematics and reading achievement test scores, which measure students' skills in these subjects, could be a good indicator of overall school achievement. Vygotsky's sociocultural theory aligns with Heckman emphasizing the importance of parents reading to their children and school systems promoting early interventions

for students with reading deficits. A student's reading achievement could predict academic and overall success.

Reading is fundamental and foundational to a student's academic success and career opportunities. From industry leaders to school administrators and teachers, the economy is changing from an industrial manufacturing base to a technological one requiring higher reading and writing proficiency (Chall, 1996). Twenty-five years ago, Chall (1996) further stated that today's work environment demands students read at a higher level. The demands are much more significant in the 21st century. Hanushek, Ruhose, and Woessmann (2018) suggested a strong correlation between a state's student achievement level and economic returns. Reading proficiency has been shown to correlate to financial viability. America has undergone shifts in its workforce skills from manual to manufacturing and now technological and digital. Reading is fundamental and foundational to a student's academic success and career opportunities.

School achievement is essential but not the only factor involved in having a successful school experience. Levin, Belfield, Muennig, and Rouse (2006) argued that school achievement is not the best predictor of later life health, wealth, and happiness. Levin et al. suggested that schooling is the most significant predictor of later life health, wealth, and happiness. Many social factors contribute to student academic achievement. Schemo (2006) asserted that poor neighborhoods, family life, and students' backgrounds affected their achievement. Additionally, Schemo suggested that communities, healthcare, and family contribute to student achievement. Although schools are often left to public criticism for dismal student achievement, other factors should be considered. These factors must be examined, not to distribute blame but to discover collaborative ways to elevate student achievement. The meaning of student success should be

investigated from a broader perspective than only student academic achievement. Living in a complex world demands that schools develop a citizenry equipped with the competencies to be civically active and critical thinkers. A well-rounded educational experience inclusive of social development and academic achievement is involved in a successful school experience.

Many factors contribute to students' achievement. Lee, Zuze, and Ross (2020) suggested that student achievement is strongly associated with students' social and academic background in 14 sub-Saharan African countries, even as school effects vary across countries. They argued that urban schools with more resources and higher-quality teachers performed better than rural schools with lower-quality teachers. Lee et al. further discovered that smaller schools outperformed larger schools. Silva, White, and Yoshida (2011) suggested that principals' one-on-one discussions with non-proficient students before state reading examinations demonstrated significant gains compared to students who had conversations after the state reading test. Cho, Toste, Lee, and Ju (2019) emphasized the relationship between motivation and reading. They found that early reading was a stronger predictor of later reading performance than motivation was of reading achievement. Bernard (2017) asserted that lower-performing students could benefit academically from teachers who participated in the Attitudes and Behaviors for Learning professional development program. Bernard argued that the Attitudes and Behaviors for Learning emphasized five teaching objectives: preparing students to begin literacy lessons with a positive mindset, sharing with students the goals of the literacy lesson, communicating behavior-specific feedback for learning, identifying, and discussing behaviors for learning, and discussing positive and negative self-talk. Many

researchers concluded that educators' professional development and professional practices could affect student achievement. Many factors contribute to students' achievement.

Middle School and Reading Achievement

How to define *middle school* and the *middle school student* has been the subject of much discussion. Cushman and Rogers (2008) surmised that students entered the middle ground when they reached the sixth, seventh, and eighth grades. They further asserted that middle school students could be defined as those who had traversed elementary school yet have not reached their high school years. They also argued that middle school and middle schoolers occupy an in-between space. Therefore, they constantly need a trusted advocate to guide them through the transition between childhood and young adulthood. Wormeli (2016) suggested that middle school students perform better academically through active learning rather than lecture or textbook. Thus, middle school and middle school students are unique and require trusted adults to guide and nurture them in school and life success. Clearly defining what constitutes a middle school continues to be of interest to researchers.

Middle school educators that are successful with their students have a clear mission. A mission statement allows an organization to facilitate strategic planning while setting priorities based on the organization's needs. Bottoms and Timberlake (2012) suggested that successful middle schools have a clear mission and strong stakeholder support. Wormeli (2016) argued that middle school educators must have a clear mission to provide students with knowledge and skills for high school success and beyond. Cross and Martinez (2016) argued that middle school students are successful when a highly

functioning school culture is vision- and mission-based, committed to all students'

achievement. Many researchers have found that middle school students must have a clear

mission with solid stakeholder support to attain the necessary knowledge and skills to

succeed. Therefore, a clear mission is essential for middle school educators to educate

middle school students successfully.

The factors that contribute to student achievement continue to be of interest to

researchers. Jensen (2009) offered that when educators have high expectations for all

students, and those expectations are coupled with increased support levels, student

performance improves. Higher-performing middle schools have high expectations for all

their students, according to Bottoms and Timberlake (2012). Park and Bauer (2002)

argued that employing authoritative parenting practices, more prevalent among European

American parents, positively relates to student achievement. Lam (2014) furthered this

idea as she claimed that low-income families lack stimulating cognitive resources due to

financial or physical challenges that result from low income. Lezotte and Snyder (2011)

also argued that a direct link between positive school culture and higher student

achievement existed. Lezotte and Snyder suggested that a positive school culture includes

teacher professionalism, academic press, and community engagement. They further

identified the academic press as the serious, orderly, and focused learning environment of

the school tone. Ferguson (2008) identified a strong correlation between parents'

education and student performance. Researchers have discovered several factors that

contribute to student achievement. Factors that contribute to student achievement

continue to be of interest among researchers.

Preadolescent and early adolescent young people need special attention to address their needs. Raebeck (1998) countered that although researchers increasingly saw fifth grade in school configurations, schools did not best serve fifth-grade students in the middle school concept because of their developmental needs. He argued that researchers sought to counteract junior high school. The middle school movement arose in the 1950s and came to fruition in the 1960s. He further suggested that although junior high was an attempt to address adolescents' needs, junior high was a miniature high school and was not configured by designers to meet the middle school students' developmental needs. Middle school students and middle school configurations should be given special attention to address the unique needs of the middle school student. Middle school students need special and particular attention from the structure and staff to meet their needs.

Highly effective educators see students as individuals and develop practices that address the individual needs of all students. Procedures should be implemented that ensure equity by setting short- and long-term goals tailored to the individual student. Arendale (2001) posited that highly effective teachers develop lessons that draw from real-life experiences. The middle school, housing Grades 6 to 8, was designed for educators to deal more effectively with the total person and address the complex and developmentally unique needs of middle school students (Glattorn & Spencer, 1986; Lipsitz, 2019). Each student is a unique individual and should be educated as such. Therefore, the need exists to better prepare teachers to employ individualized practices centered on the student while maintaining content integrity. Highly effective educators

see students as individuals and develop approaches that address the individual needs of all students.

Students often perform better academically when in supportive classroom environments. Dee (2015) showed statistically significant academic performance improvements for minority students in more supportive classroom settings. Raebeck (1998) surmised that every student in a middle school should have an adult advisor as a go-to person because of their unique needs. He extrapolated that educators should view teaching and learning as inseparably linked because of middle school students' individual needs. This link necessitates those educators examine a student's behavior in light of the teaching/learning environment, as Raebeck suggested. Many researchers suggest that as educators consider middle school education, they should consider developmentally appropriate configuration to address all students' needs as individuals while being continuously supported by an adult. Administrators and classroom teachers should collaboratively create a school culture that supports students as individuals by implementing professional growth opportunities to equip and enable professionals. Additionally, schools should develop wrap-around services to address students' needs through supportive classroom environments that accelerate learning to close the achievement gaps. Also, districts would do well to create a culture of high expectations for all students. When students are regarded as individuals and teachers are prepared and place high expectations on themselves and their students, students perform better. Students often perform better academically when in supportive classroom environments.

Preparing administrators and teachers to meet the needs of all students is essential to student academic success. According to Williams (2014), most middle and high school

teachers are non-English teachers, lacking the reading instruction preparation necessary to help struggling readers. If teachers and school leaders fail to prepare, the students could continue to struggle, negatively affecting society. Legislators, higher education, and school systems should develop a coherent preparation plan for K-12 institutions. Schools may need reading teachers, specialists, or interventionists to meet all students' needs, especially those Grade 6 and above. School systems should prioritize reading supports for all students throughout their K-12 schools.

Race and Reading Achievement

Reading is essential in all children's lives, and the development of reading skills in children should be intentional. Jensen (2009) asserted that reading is most important in the development of a child's brain. He further suggested that educators should teach reading explicitly and that students' reading is not hardwired into the human brain. Gardner (2011) found that while students can master reading and writing rules, students are failing to attain the capacity to read for understanding and the desire to read. Gardner postulated that students fail to master the ability to contextualize the necessary reading skills to make sense in their daily lives. He asserted that considering the success educators have attained in students' reading achievement through drill and skill, far too many students fail to understand why one should read. Like Vygotsky, Gardner embraced the idea that students should, as early as possible, become apprentices of competent, literate individuals where they are allowed to be immersed as learners in the world of the text. Gardner suggested that the ideal classroom setting is where students read not because they have to or are told to by adults but because they see adults enjoyably modeling and using reading in a real-life context. Some valuable methods to prepare

students with the all-important skill of reading are available. However, the reading skills of students continue to be a challenge for both educators and students.

Students' innate characteristics and how those factors contribute to their academic performance continue to interest many researchers. Carnoy and Garcia (2017) asserted that students' inherent characteristics, such as race, parents' economic status, or gender, affect their school performance. They further contended that although race was an essential contributor to achievement differences between social groups, SES differences were more significant in racial and gender differences in students' academic performance. Carnoy and Garcia suggested that Black and Hispanic students are more likely to have lower SES than White students. Harwell et al. (2017) discovered a minimal correlation between SES and educational achievement. Many researchers continue to disagree about the effect of SES as a predictor of student achievement. Students' intrinsic characteristics and how those built-in factors contribute to their academic performance interest many researchers.

The current achievement levels of Black students have continued to lag behind other racial groups. Hussar et al. (2020) reported scores from the National Center for Education Statistics showing that Black, White, and Hispanic students' reading scores decreased nationally from 2019 compared to 2017. The reading scores of Black students declined nationally from an average score of 241 in 2017 to 237 in 2019. Further, the 2019 national reading scores of Black students also trailed White students by 29 points and Hispanic students by 19 points. In contrast, Ferguson (2008) opined nationally that Black and Hispanic scores rose from the early 1970s through the 1980s. Ferguson pointed out that African American students arrive at kindergarten with fewer reading skills than

other racial groups despite their parents having equal schooling. Ferguson suggested that this initial gap persists from primary through secondary schools. He also identified that Blacks' and Whites' scoring gap narrowed more than 60% between 1971 and 1988 nationally. However, beginning 1998 through 2015, the National Assessment of Educational Performance scores showed that the gap between Black and White student scores remained relatively stagnant with a 30-point difference in scores. Since 2015, the national reading scores between Black and White students have remained mostly unchanged, according to the National Assessment of Educational Performance data. Black students continue to lag behind other racial groups. In Arkansas, only 30% of all students scored at or above the proficiency level, three points lower than the national average (National Center for Education Statistics, 2020). Although educators have made some progress in closing the achievement gap between Black students and other racial groups, gaps continue to exist.

Black students have and continue to perform at lower rates than other students and continue to be researched. During the first half of the 20th century, Woodson (1998) suggested that researchers examine policymakers' efforts to understand Black students' achievement since reconstruction. Woodson posited that Blacks' education after the Civil War was principally the function of philanthropic agencies whose objective was to teach the newly freed men simple life duties. He further suggested that when Blacks learned to perform the tasks that parallel other peoples, they would be duly qualified to function as citizens. Wilson (1992) offered that students of color and others participating in early intervention programs performed better on cognitive development measures. Wilson also noted that students attending early intervention programs had higher reading achievement

scores and more positive attitudes toward school achievement than students who did not participate in such programs. Wilson commented that although education aims to prepare a student for a job, move up in social status, and be a means to a better life, the essential purpose of education is to survive. Wilson lamented that Blacks are in a precarious position of danger that causes researchers to question whether Black people will survive the next century. Since reconstruction, efforts have been made to address the need to educate and understand the achievement levels of Black students. Although Black students continue to perform at lower rates than other students, researchers continue investigating the root causes.

Various factors are to be considered when examining the achievement levels of Black students. Gardner (2011) argued that many ways to acquire and represent knowledge are available, which educators should consider when thinking about pedagogy and assessments. Wilson (1992) further posited that maximizing students' ability to improve reading and writing scores is essential but enhancing students' intelligence to survive physically is more important. Ferguson (2008) suggested that schooling disparities, socialization, and resources that influence skill-building contribute to current and racial inequalities. Ferguson further indicated that these disparities did not prepare parents and grandparents for their roles as teachers and caregivers. Ferguson also asserted that SES predicts the racial difference in achievement between racial groups. Ferguson stated that the greater the disparity in SES, the more significant the gap in student achievement. Sirin (2005) countered that SES had an extensive association with student achievement at the school level but not at the individual level. Ferguson (2008) suggested that the reading achievement difference between racial groups correlates to home literacy

practices prevalent in higher SES homes than lower SES homes. Scullin (2020) offered that Black male students have not attained reading gains because of the absence of texts that accurately and authentically represented African American characters. Many researchers suggested that to understand Black students' present achievement, educators should trace the beginning of formal educational efforts undertaken and the original purposes of education for Black students, considering teaching and assessment strategies. Educators should take a historical look from emancipation to the present to understand Blacks' current state of achievement. Researchers could consider several contributors when examining the achievement levels of Black students.

Gender and Reading Achievement

Researchers have widely studied gender differences and their effect on student achievement. Maccoby (1974) found that girls exceeded boys in most verbal performance facets. Females say their first words sooner, are more articulate earlier, use longer sentences, and are more fluent through preschool and early school years. He further posited that boys have typically caught up with girls by age 10, and from then on, no consistent differences in vocabulary were evident. As early as the 1970s, Maccoby and Jacklin (1974) dismissed prevailing beliefs that girls are better at rote learning and simple tasks and that boys are better at higher-level cognitive processing. They offered that gender differences are evident in verbal ability, visual-spatial ability, mathematical ability, and aggression, concluding that gender differences emerge by age 11. Feingold (1988) suggested that girls scored higher than boys on grammar, spelling, and perceptual speed scales, and boys had higher scores of spatial visualizations, high school mathematics, and mechanical aptitude. She further argued that gender differences

decreased dramatically over the years surveyed (1960-1983) and that differences in high school grades have also diminished. Hyde and Linn (1988) suggested that gender differences in verbal ability indicated a slight female performance superiority. Evidence for differences between gender performance seems to be inconclusive. Researchers have widely studied gender differences and their effect on student achievement

Gender differences continue to be explored yet seem to be varied among researchers. Stanley (1985) argued that by age 13, a significant gender difference existed in mathematical reasoning ability and that such differences among students are especially pronounced among the higher achievers. Halpern et al. (2007) countered that boys and girls are more alike than different on most psychological variables, including academic skills such as reading and mathematics. Hyde (2005) further suggested that exaggerated claims of gender differences carry substantial costs educationally, in the workplace, and in relationships. Matthews et al. (2009) deviated from Carvalho (2016) and suggested that although girls outperformed boys in self-regulation assessments, no significant gender differences were found by researchers on academic achievement outcomes. Carvalho indicated that females are more adaptive to school and have better impulse control, contributing to better academic achievement. Reynolds, Scheiber, Hajovsky, Schwartz, and Kaufman (2015) exclaimed that girls outperformed boys on writing tasks from ages 7-19. The evidence from exploring gender variations in student achievement continues to be without consensus among researchers. Gender differences continue to be explored yet seem to be varied among researchers.

Gender achievement differences continue to be studied widely. Nowell and Hedges (1998) opined that gender differences in mean and variance seem to be minor.

However, they discovered that the differences in extreme scores seem to be substantial. They further asserted that differences in gender performance have remained relatively unchanged since 1960. Voyer and Voyer (2014) concurred that although differences existed in grades between genders, achievement test performance was relatively the same. Burts et al. (2017) discovered that females had higher overall and subject area averages than males. McCoy and Reynolds (1999) contended that boys are more likely than girls to be retained. Halpern and Wright (1996) offered that although many researchers conclude that females demonstrate superior performance on verbal tasks and males perform better on visual-spatial and quantitative tasks, a more practical examination would be to understand the differences in the cognitive processes between-sex differences. Many researchers have offered their evidence about the effect that gender has on student achievement. Vygotsky's idea of scaffolding is pertinent to this research, particularly the need to understand and better approach students and how gender contributes to their academic perspective. Gender achievement differences continue to be studied widely.

Socioeconomic Status and Reading Achievement

Poverty is prevalent across the United States. Silva (2020) reported children living in households with incomes at or below 150% of the federal poverty level are eligible for free school meals. They further reported that children living in families with incomes between 130 and 185% of the national poverty level are eligible for reduced-price meals. The Office of the Assistant Secretary for Planning and Evaluation, an arm of the United States Department of Health and Human Services, established the 2020 federal poverty guidelines for a family of five at $30,680. The National Center for Education Statistics

(2020) reported that 52% of United States children were eligible for free and reduced-price lunch. They noted that since 2000, the percentage of children receiving free and reduced-price lunches has risen from 38% in 2000 to 52% in 2016. The National Center for Education Statistics revealed that the percentage of public school students in high-poverty schools was higher than that of low-poverty schools (25% versus 21%). High-poverty schools are where more than 75% of students are eligible for free or reduced-price lunch, and low-poverty schools are those where 25% or less of the students are eligible for free or reduced-price lunch. Educators should be aware of poverty's effects on student learning because of poverty's prevalence and continued growth across the country. Most of the students in the United States are eligible for free and reduced-price lunch.

The Arkansas Delta is a vast, economically distressed area that continues to lose population and an economic base. According to Colby and Ortman (2015), the Arkansas Delta covers a vast geographic area (27,945 square miles), which is more than half (54%) of Arkansas's total land area and entails the entirety of the eastern half of Arkansas. Also, more than half of all Arkansans call the Delta home. Pender and Reeder (2011) communicated that Arkansas has the third most counties (46) among the Delta Regional Authority states outside Louisiana and Mississippi. Pender and Reeder reported that every county, except for Arkansas County and Desha County, in the Arkansas Delta, was classified as distressed. A county or parish is deemed distressed by economists if the county meets an unemployment rate of 1% higher (5.2 %) than the national average (4.2%) for the most recent 24-month period and have a per capita income that was 80% or less of the national per capita income. Based on data from 2014, annual unemployment

rates in the Arkansas Delta (7.9 %) exceeded the United States rate (6.2%) and the

overall Arkansas percentage (6.1%). The per capita personal income for the Arkansas

Delta ($36,488) was below the Arkansas average ($37,782) and substantially lower than

the national average ($46,049). Poverty rates in the Arkansas Delta (18.5%) were also

higher than the Arkansas rate (17.6%) and the national percentage (13%). Colby and

Ortman (2015) reported that 25 of the 42 Delta counties lost population. Colby and

Ortman also reported that 39% of the Arkansas Delta adults had inadequate literacy

skills. Elliot (2005) reported that as many agricultural jobs vanished, so did the economic

base resulting in double-digit unemployment percentages and more than half of Arkansas

Delta residents living below the federal poverty line. He further discovered that the

Arkansas Delta had the highest dropout rate and the least number of college graduates in

Arkansas. The Delta is an impoverished area suffering from continued population loss

that negatively affects local tax bases, labor force quantity, school enrollment, and

budgets. The Arkansas Delta is a vast, economically distressed area that struggles to

maintain a population and economic base.

A family's household income can be a predictor of student academic

achievement. Albert et al. (2020) explored the relationship between poverty and students'

performance on achievement tests. According to Albert et al., children with low-income

backgrounds performed worse on achievement tests and earned lower grades than those

with higher household incomes. Carnoy and Garcia (2017) further asserted that SES

relates to academic performance in United States schools. Carnoy and Garcia argued that

although achievement gaps between Black and White students have declined over time,

the gaps between student groups, based on income, have increased. Because poverty is

prevalent across much of Arkansas's Delta region, according to data from Areas (2020), school districts with higher concentrations of students from low-income homes could have lower achievement results than those with lower poverty levels. Socioeconomic factors, unlike other factors, could contribute to student achievement. A student's SES can be a predictor of student academic achievement.

Segregated schools seem to be correlated with lower student achievement levels for schools with predominantly minority students. Carnoy and Garcia (2017) explained the damaging effects of highly segregated schools on students' educational performance. Reardon (2016) argued that a strong association existed between racial segregation and academic achievement gaps. *Brown v. Board of Education* (1954) found that separate educational facilities are inherently unequal and inflicted psychological injury on Black children. Educational inequality persists in the southern United States, according to Fram et al. (2007). Renchler (1993) argued that educational imbalances could manifest from a lack of stable family structure, exposure to violence, or prevalence of crime or peer groups. Schools alone will not be able to solve many of the problems that manifest in achievement outcomes. Schools must form partnerships with civic, business, and other community entities to provide the necessary support for student success and address potential negative contributors to academic achievement. Minority segregated schools appear to relate to lower performance levels for students.

Teachers have the daunting assignment of raising the achievement levels of all students. School systems should do everything possible to better train teachers to prepare students to read and read to learn. Cole (2006) explored the unique preparation program for Teach for America corps members and found that teacher preparation positively

affected student achievement. Teach for America corps members undergo a rigorous program that includes pedagogical training and cultural training. Teach for America corps members are immersed in poverty's effect on achievement outcomes, along with strategies to develop relationships with students. In 1991, Teach for America corps members partnered with Delta communities to ensure all children had access to rich and rigorous educational opportunities. Sweeney (2015) reported that in the 2015-2016 school year 110 corps members worked in the east and southeast regions of Arkansas. Teacher preparation in Arkansas is critical to the success of teaching and learning. To ensure teachers are prepared, the Arkansas Division of Elementary and Secondary Education (2020) set rules for ensuring that teachers can demonstrate proficiency or awareness in scientific reading instruction applicable to their position. For teachers to raise student achievement, high expectations should be coupled with guidance to facilitate student success. Raising the achievement levels of all students is a daunting task for educators.

Successful school systems ensure that teacher practices implemented are research-based and raise student achievement. Richman, Demers, and Poznyak (2019) discovered an association between teachers who foster student engagement, have students participate in classroom discussions, have classrooms with fewer classroom disruptions, and have classroom settings conducive to instruction, with higher student achievement levels. Also, Dee (2015) asserted that minority students in more supportive classroom environments performed better than those in less supportive classroom environments. Additionally, Brady (2013) suggested that improved student achievement occurs when the best teachers are assigned to the most struggling students and cultivate supportive

relationships with those students. Minority students who are highly engaged in supportive classroom environments where their voices are valued and encouraged tend to perform better (Dee, 2015). Also, when schools ensure that administrators schedule the best teachers with the students who struggle the most, they could be more apt to attain higher achievement levels. Teacher education programs should ensure that teachers are prepared for the educational challenges they face. Well-prepared teachers can implement professional practices that foster high levels of student engagement, encourage respectful dialogue and discussion, and provide supportive classroom environments conducive to learning for all students regardless of social considerations.

Not only teachers but also students' peers can have a tremendous effect on student achievement. When teachers are actively engaged in the learning and ensure that students work collaboratively with their peers, student learning is significantly improved (Richman et al., 2019). Vygotsky et al. (1962) suggested that the child's meaningful education occurs through social interaction with the skillful tutor. According to Vygotsky, social interaction involving cooperative or collaborative dialogue promotes cognitive development. *More knowledgeable other* is a term Vygotsky used to refer to someone who has a better understanding or higher ability than the learner. Honstra et al. (2015) suggested that, in general, a lower socioeconomic condition and being a student of color yielded lower achievement results. Considering this research, school systems might pay particular attention to scheduling. This scheduling pertains to student assignments to teachers and how administrators schedule students with their peers. Based on Vygotsky's work, various classroom settings could prove beneficial for schools with a large concentration of poverty. Districts may benefit from ensuring that teachers are prepared

for the challenges presented by school settings with a high poverty concentration through professional growth opportunities to create classroom environments that are both cooperative and collaborative. According to Vygotsky et al. (1962), children should be in learning environments with competent teachers and peers of varying abilities regardless of their social contributors. Some researchers suggested several practices to improve student achievement, including collaboration, peer tutoring, scheduling, and targeted professional development. Teachers and peers can significantly affect student learning when more knowledgeable others know more about learning than the learner.

Social characteristics can affect children's reading achievement. These social characteristics can have implications for the individual student and the overall student population. Aikens and Barbarin (2008) asserted that family contributions, home literacy environment, parental involvement in school, and parental role strain, made the most considerable contribution to predicting initial kindergarten reading disparities. They further suggested that school and neighborhood conditions contributed more than family socioeconomic factors to learning rates in reading. Aikens and Barbarin argued that school characteristics and reading outcomes suggested that the makeup of the student population, indexed by poverty concentration and the number of children with reading deficits in the school, is related to reading achievement. Vygotsky et al. (1962) asserted that sociocultural theory interprets social interaction as the catalyst for human development. Sociocultural theory suggests that human development depends on interaction with people and the culture's tools to help form their worldview. A low household income may not be a predictor of reading achievement for the individual student in isolation. However, large concentrations of poverty have been shown to

correlate with student achievement. Social characteristics can affect children's reading achievement.

If students are to attain high academic achievement and life success, children must start learning early. Heckman (2000) argued that when parents begin reading early on to their children, they assist them in reading success throughout school. Vygotsky et al. (1962) posited three ways to pass a cultural tool from one individual to another: imitative, instructed, and collaborative learning. Tomasello et al. (1993) offered that cultural tools are passed through imitative learning. One person imitates another by instructed learning, which involves remembering the teacher's instructions, and collaborative learning, consisting of peers or a more knowledgeable other. Schools could consider creating collaborative school cultures rich with dialogue and discussion between teachers, students, and their peers. These efforts should be a part of the students' beginning phase of their school career and throughout.

The sociocultural development of children plays a role in later school development and throughout life. Social and emotional skills affect performance in school and the workplace (Heckman, 2000). Lally and Doyle (2012) asserted that educators should broaden the definition of school readiness to include social and emotional competencies necessary for good citizenship. Policymakers should examine school readiness from an economic or developmental perspective and a social-emotional development perspective. Also, educators may find interest in how social and emotional skills affect academic performance. Perhaps policymakers and school administrators could examine social-emotional learning and its potential effect on student achievement. Vygotsky's sociocultural theory suggests that humans are products of the culture that

includes social interactions and how they affect children emotionally. The social-emotional development of children plays a role in later school development and throughout life.

Achievement gaps between racial, socioeconomic groups, and gender could exist. According to the National Center for Education Statistics (2020), the average reading score of eighth-grade students in Arkansas was 259. The eighth grade reading average score is three points lower than the national average of 262. Black students had an average score that was 29 points lower than that of White students nationally. Also, Black students had an average score that was nationally 19 points lower than that for Hispanic students. On the National Center for Education Statistics (2020), students eligible nationally for the National School Lunch Program had an average score of 24 points lower than students who were not eligible. This performance gap was not significantly different from the gap that existed in 1998 (21 points). Considerable differences in scores of students' demographic groups across the country and Arkansas exist. Achievement gaps between racial, socioeconomic groups, and gender exist.

The reason for achievement gaps has been researched, debated, and discussed by many over the years. According to Ferguson (2014), few differences exist between groups at the age of 1, and more group differences appear by two years old. Brady (2013), countered that ethnicity and poverty exhibited a strong relationship with reading achievement. Ferguson further contended that no credible evidence existed concerning genetic differences because of racial achievement gaps or that people generate life skills through their life experiences. Researchers suggested that all students are born without discernible differences in their ability to achieve. Ferguson's study posited that

differences are a result of the life experiences and exposures that individuals have. These experiences contribute to their skill level, which achievement tests can measure. The origin of achievement gaps will continue to be discussed, debated, and researched in the future.

Many factors contribute to student achievement. One of those factors is SES. However, the degree to which SES affects student achievement remains unclear. Some believe that there are methods by which the effects of poverty can be overcome. Richman et al. (2019) claimed that teacher instructional practices significantly affect student achievement. In contrast, Heckman (2000) investigated the role of family engagement, specifically family reading and student achievement. Williams (2014) explored teacher preparation's role in reading achievement for middle and high school students. A myriad of components seems to have a role in contributing to student achievement. Although SES appears to play a role in student achievement, several other contributors seem essential.

Schools have the daunting task of improving all students' achievement regardless of social challenges. Hodgkinson (1995) found a close correlation between low SES and low achievement. In 2019, results from census information revealed that the United States' poverty rate was 10.5%. Poverty was considered $25,926 for a family of four (Colby & Ortman, 2015). The percentage of poverty in Arkansas in 2016, according to Colby and Ortman (2015), was 27%. The Arkansas Delta had a higher rate of 36% during the same period. Miranda (1991) indicated, irrespective of race or ethnicity, that poor children are more likely to suffer developmental delays, drop out, and give birth during the teen years than non-poor children. Payne (2013) contended that schools operate from

middle-class norms and use the middle class's hidden rules to the economically deprived child's detriment. Feuerstein, Klein, and Tannenbaum (1991) suggested that mediation or intervention should link the environmental stimulus and the student's response. This mediation of an adult aligns with sociocultural theory in emphasizing the importance of the more knowledgeable other. Payne (2013) submitted that educators could influence students' lives through efforts devoid of cost by role models. To successfully overcome the sizable challenges students face in poverty, schools should implement strategic supports to bridge the gaps resulting from poverty. Schools have the daunting task of improving all students' achievement regardless of social challenges.

The link between student achievement and SES continues to be of interest to many researchers. During the 1960s, Coleman (1966) found that schools have little influence on a child's achievement, independent of a student's background and social framework. He further suggested that although schools added little to affect outcomes, a positive relationship existed between the students' peer group, social environment, and student achievement. Borman and Dowling (2010) stated that schools' socioeconomic and racial composition is strongly related to student achievement. Harwell et al. (2017) suggested a modest relationship existed between SES and achievement. Reardon (2016) posited that the single most powerful correlate of achievement gaps was the disparity of average school poverty rates. Sirin (2005) somewhat dissented by calling into question the way that SES is defined. He claimed that researchers generally represent SES to measure parental income, parental education, parental occupation, and home resources. Sirin further theorized that data that reports students' lunch status is more readily available than parents' employment and income as the rationale. He also suggested that

researchers should examine SES from an aggregate rather than an individual perspective. Thomson et al. (2017) found that home environments, particularly books in the home, are among the most influential factors in student achievement. They suggested that children from economically disadvantaged households are disadvantaged because they often lack an academic home environment, aligning with Vygotsky's sociocultural theory suggesting that cognitive development and culture are inseparable. Researchers vary widely on the effect that SES has on student achievement. The relationship between SES and student outcomes will continue to be of interest.

The harmful effects of poverty on student well-being, including achievement, continue to be a widely researched topic. Claro, Paunesku, and Dweck (2016) found that children from lower-income families were less likely to have a growth mindset. Jensen (2009) claimed that students raised in poverty are at a greater risk of stressors that undermine school behavior and performance. Berliner (2005) argued that impoverished people experience severe medical problems at greater rates than those not disadvantaged. Berliner further posited that poverty restricts the inborn talent at the lower end of the socioeconomic scale. Renchler (1993) focused on the significantly greater educational and developmental disadvantages of children in poverty. Renchler further argued that children in poverty were at greater risk of dropping out, thus drastically reducing their earning capacity. Brooks-Gunn and Duncan (1997) claimed that children who experience poverty during their preschool and early school years have lower school completion rates. Poverty negatively affects students in a myriad of ways. Students in poverty complete school at far lower rates, experience more severe medical problems, and are often

developmentally disadvantaged. The widely researched effects of poverty on student outcomes continue to generate much interest.

Summary

While researching the predictive effect of race, gender, and SES on reading achievement for middle school students in the Arkansas Delta, researchers noted that many factors contributed to the reading performance of adolescents. Much of the current research does consider sociocultural factors and how these factors affect literacy achievement. Vygotsky et al. (1962) posited that a child's cultural interactions and tools shaped a child's thoughts and behaviors. Coleman (1966) suggested that students' background and social context were contributors to a students' achievement and that schools have minimal effect on a students' academic performance. However, how these factors contribute to student achievement is challenging to quantify.

The extant scholarship on the predictive effect of race, gender, and SES on reading achievement for middle school students in the Arkansas Delta noted that many other factors also contributed to adolescents' reading performance. One of those factors seems to be a student's socioeconomic status. Poverty is pervasive in the United States, especially in the Arkansas Delta, with more than 52% of students qualifying for free and reduced lunch. Data from The National Center for Education Statistics (2020) reported that more students live in high-poverty schools, with more than 75% of students eligible for free and reduced lunch. Albert et al. (2020) explored the relationship between a student's socioeconomic status and educational achievement and found that SES adversely affected a student's performance. Carnoy and Garcia (2017) came to a similar conclusion and offered that socioeconomic status affected student performance, but the

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gap widened between high and low socioeconomic status groups. With the continuing loss of population and economic base in the Arkansas Delta, the subsequent number of students living in poverty will continue to exist and perhaps increase.

Although education is principally the state's responsibility, the federal government has become increasingly more involved in ensuring all students' educational equity. The opportunity for all students to have access to qualified teachers in a safe and supportive environment where professional educators work collaboratively to best prepare all students for college and careers should be all schools' aim. However, the literature revealed uneven initiatives and efforts to bring about equity and close achievement gaps. In instances of educational success for all students, the research revealed that several factors showed statistically significant results: having a highly qualified teacher; having a positive teacher/student relationship, having home reading habits, teaching being within a students' zone of proximal development, and a students' social factors. However, the research failed to reveal how to address many contributing factors to student achievements, such as community crime and poverty, the prevalence of single-parent homes, and social media challenges. Primarily the responsibility of state government, education has increasingly become a focus at the state level and at the federal level to ensure equity for all students.

The factors, efforts, methods, strategies, and initiatives that positively affect student achievement were reviewed in the research. For example, Brame (2016) argued that teachers who used interactive engagement strategies increased student understanding in males and females while reducing the gender performance gap. The research revealed that active learning rather than passive learning increased academic performance for

middle-level learners. In addition to teaching strategies having the potential to positively

affect student achievement, family contributions, home literacy practices, parental

involvement, and neighborhood conditions were all found to affect reading performance.

Additionally, evidence was found that student disposition, high educator expectations,

and positive school culture improved performance. The efforts, methods, strategies, and

initiatives that positively affect student achievement were reviewed in the research.

Chapter III includes a discussion of the methodology used in this study, including a

description of the research design, instrumentation, data collection, sample, data analysis,

and limitations.

CHAPTER III

METHODOLOGY

The United States Department of Education (2015) reauthorized and identified No Child Left Behind as Every Student Succeeds Act. The Every Student Succeeds Act included language to provide an equitable education for all students despite cultural factors. The literature review indicated several factors could affect reading achievement. Carnoy and Garcia (2017) found that students' innate characteristics such as race, gender, and SES could affect academic achievement. Further, Park and Bauer (2002) suggested that authoritative parenting practices rather than innate characteristics influenced student achievement. Ferguson (2008) countered that disparities of schooling and resources had a more substantial influence on student achievement than race.

Smaller classroom settings, single-gender schools, and incorporating more kinesthetic learning are some of the initiatives that specialize in meeting students' individual needs that have focused on educating the middle school student. Gruhn and Douglas (1971) emphasized the need for specialized educator training to raise students' reading achievement. These studies placed considerable emphasis on the importance of adolescent children having specialized trained educators to meet the needs of the middle school student. Although training and development are undoubtedly beneficial, perhaps teacher preparation alone might not be sufficient to raise student achievement.

Several factors, including race, gender, and SES, have been examined to determine their influence on students' reading achievement. Vygotsky et al. (1962) explained that childrens' thoughts and behaviors varied between cultures and depended mainly on how children interacted with, among other things, the people, symbols, arts, and language of the respective culture. Coleman (1966) concurred that a students' background and social framework influenced a child's development more than the school alone. Hebbecker et al. (2019) found a positive relationship between student motivation and reading achievement. Unrau and Schlackman (2006) further offered that motivation was a stronger predictor of reading achievement than race or gender. The purpose of this study was to ascertain the predictive effects of race, gender, and SES on reading achievement in three Arkansas Delta schools. As a result, I generated the following hypotheses.

1. No significant predictive effects will exist between race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for sixth-grade students in three Arkansas Delta schools.

2. No significant predictive effects will exist between race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for seventh-grade students in three Arkansas Delta schools.

3. No significant predictive effects will exist between race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for eighth-grade students in three Arkansas Delta schools.

This chapter described the research design for the study, the population of the sample, and the instrumentation used to collect and organize the data. In addition, the

data collection procedures were detailed, the analytical methods were outlined, and the study's limitations were discussed. A summary was also provided at the end of the chapter.

Research Design

A quantitative, multiple regression was used for this study. Mills and Gay (2019) stated, "Quantitative research is the collection and analysis of numerical data to describe, explain, predict, or control phenomena of interest" (p. 6). The predictor variables for the hypotheses were race, gender, and SES. The dependent or criterion variable for the hypotheses was reading achievement measured by the ACT Aspire Summative Assessment for students in Grades 6-8 at three schools in the Arkansas Delta.

Sample

The sample of this study comprised of ACT Aspire scores taken from 2018-2019 students in Grades 6-8 from three schools located in the Arkansas Delta. Consideration was given to the selected school districts' location, student count, and other demographical characteristics. The level of SES was determined by student eligibility for free or reduced-cost lunch. The classification protocol used by the Arkansas Activities Association (2018) classified School 1 as a 4A school and had a student enrollment of 1,553 and consisting of White (48%), Black (47%), Hispanic (4%), and Asian (1%). School 1 had 64% of its students qualify for free or reduced-cost lunch. Arkansas Activities Association classified School 2 as a 5A school and had a student enrollment of White (70%), Black (24%), Hispanic-Latino (3%), and Asian (0.1%). School 2 had 60% of its students qualify for free or reduced-cost lunch. Arkansas Activities Association classified School 3 as a 5A school and had a student enrollment of White (18%), Black

(79%), Hispanic-Latino (2.4%), and Asian (0.1%). School 3 had 72% of its students qualify for free or reduced-cost lunch.

Instrumentation

The instrument for this study was the ACT Aspire Summative Assessment. In Arkansas, all public schools must administer the ACT Aspire Summative Assessment annually (Arkansas Division of Elementary and Secondary Education, 2020). The ACT Summative Assessment is a longitudinal system of assessments that measure college and career readiness. Annually given, the ACT Summative Assessment determines students' ability to solve problems, understand implied meanings, draw inferences, and make judgments in areas critical to success in college. The ACT Aspire measures students' college and career readiness using a vertically scaled battery of achievement tests. All students must participate in annual testing to ascertain readiness in reading, writing, English, mathematics, and science unless the students are eligible for alternative assessment.

For this study, only reading scores from sixth through eighth-grade students were used. Three to five days were allotted for administering the test in its entirety, with a testing time between 4 to 5 hours. Approximately 65 minutes were allocated for the students to complete the reading portion of the assessment. The Reading Test measures a student's ability to read closely, reason logically using text evidence and integrate multiple sources. The evaluation for the sixth- and seventh-grade students included multiple-choice questions, technology-enhanced items, and a constructed response item for a total of between 29-31 items. Students in the eighth-grade had the same type of assessment with a total of between 30-32 items. Raw scores were collected instead of

using the four levels (Exceeding, Ready, Close, & In Need of Support) that ACT Aspire

used to categorize student performance. Scale score ranges were between 403-436 for

sixth-grade students, 402-436 for seventh-grade students, and 401-440 for eighth-grade

students. The reading scores internal consistency reliability for the ACT Aspire ranged

from 0.80 to 0.87 for the Grades 6-8 assessments (ACT, 2019).

Data Collection Procedures

In the spring of 2021, I sought and gained the approval of the Institutional Review

Board. The ACT Aspire was given by school personnel within all public-school districts

in Arkansas in 2019. Each student took and submitted the assessment electronically and

was assigned a scale score for the reading assessment. Scoring was conducted by

educational professionals trained in performance scoring (ACT, 2019). Student

assessment scores were reported to the Arkansas Department of Education; they released

the scores to the individual schools through the ACT Aspire Data Portal. School

superintendents or their designees gave me permission to use school data for the three

Arkansas Delta schools. A data file of sixth through eighth-grade reading scores was

attained from district authorized personnel from the ACT Aspire portal. Data included

students' race, SES, gender, grade, and reading scores. All information that could

disclose student identification was removed and replaced with research-specified

numbers. All three schools were combined into a single spreadsheet and exported to

SPSS for analysis, with students missing values excluded from the sample.

Analytical Methods

To determine any predictive effects among the variables, *SPSS Version 27* was

used for data analyses. The predictor variables for this study were race, gender, and SES.

The criterion variable for the hypotheses was reading achievement as measured by the ACT Aspire Summative Assessment for students in Grades 6-8 at three schools in the Arkansas Delta. A multiple regression analysis was used to analyze the predictor variables on the criterion variable. Each predictor variable was analyzed individually to determine how the individual variable contributed to the overall prediction model.

Before conducting a regression analysis, the data were examined to ascertain whether the assumptions were met. A scatter plot was generated to determine if a linear relationship existed between the variables. Residual plots were generated to determine linearity, normality, and homoscedasticity. Outliers were also identified and deleted. The assumption of multi-collinearity was conducted to determine if variables met the requirements; collinearity statistics revealed tolerance >.1 and VIF <10 (Mertler & Vannatta, 2017). For each hypothesis, the combination of predictor variables was analyzed first. Then, each predictor variable was examined individually for contribution to the prediction model. A two-tailed test was used with a .05 level of significance. I used a two-tailed test with a .05 level of significance to test the three null hypotheses.

Limitations

Several limitations were noted in this study. The identification of these limitations affords the readers opportunity to decide how to interpret the results. The following limitations were present in this study. First, the study only used student data from three school districts from the Arkansas Delta. Additional data from other school districts and a broader range of ages would allow for a broader range of generalizations. Furthermore, the instructional practices varied between these three school districts and across the

individual grade levels within the respective districts, impacting student reading achievement.

Second, the sixth-grade (middle) participants of two school districts attended a different building than seventh- and eighth-grade participants (junior high). Cushman and Rogers (2008) offered that middle school consisted of Grade 6-8. This evidence presents an issue regarding instructional time and instructional practices. Students in the seventh grade received less instructional time in reading than students in sixth grade. Eighth-grade students did not have a designated time allotted to teach or emphasize reading, affecting the reading achievement results. On the other hand, the additional time could improve student achievement for some students. Also, the elementary buildings' procedures for RTI and enrichment were more focused and emphasized than those at the middle school.

Third, the SES percentages at the three districts varied significantly from 51% to more than 80%, which could constitute a limitation resulting from higher concentrations of poverty and student performance. Further, schools with more than 75% socioeconomically disadvantaged students are considered high-poverty schools, contributing to reading deficits that could impact reading achievement. Additionally, high concentrations of poverty in schools could contribute to a greater risk of developmental and educational disadvantages. A lower percentage of socioeconomically disadvantaged students could have higher reading scores.

Fourth, the research design for this study was nonexperimental using regression analysis, which constitutes a limitation. In this study, I was unable to manipulate the variables or randomly assign participants. This design alone is a limitation that produces

less conclusive results. However, these limitations did not seem to exceed the typical

circumstances encountered by researchers when schools are used for research studies.

Finally, I was formerly an administrator for one of the school districts and is

presently an administrator in one of the school districts in which the study was

conducted. Procedures were put into place to avoid bias. Student and teacher

identification numbers were used to keep the participants from being recognizable. In

addition, I did not work directly with students in daily classroom activities and did not

administer the ACT Aspire tests to participating students.

Summary

The existing research on the predictive effects of race, gender, and SES on

reading achievement has been inconclusive. Additional factors such as location and grade

level could present further insight to understand the inconsistencies better. In addition,

school leaders, legislators, and practitioners could gain helpful information from

examining the overall model of race, gender, and SES. Therefore, each predictor variable

was examined individually to discover how much each contributed to the overall model.

Chapter IV includes an overview of the analytical methods and analyzed the results from

Hypotheses 1-3.

CHAPTER IV

RESULTS

The purpose of this study was three-fold. First, the purpose was to determine the predictive effects of race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for sixth-grade students in three Arkansas Delta schools. Second, the purpose was to determine the predictive effects of race, gender, and SES on reading achievement measured by the ACT Summative Assessment for seventh-grade students in three Arkansas Delta schools. Third, the purpose was to determine the predictive effects of race, gender, and SES on reading achievement measured by the ACT Summative Assessment for eighth-grade students in three Arkansas Delta schools. The results of these analyses are presented in this chapter.

Hypothesis 1

Hypothesis 1 stated that no significant predictive effect would exist between race, gender, and SES on reading achievement as measured by the ACT Aspire Summative Assessment for sixth-grade students in three Arkansas Delta schools. Before conducting a regression analysis, the data were examined to determine if assumptions for multiple regression were met. An inspection of the residual plot revealed that the assumptions of linear relationship, normality, and homoscedasticity were met. An examination of the intercorrelation table (see Table 1) suggested that the potential for multicollinearity among predictor variables, race, gender, and SES was low. Additionally, R^2 was

examined, resulting in tolerances higher than $1 - R^2$ (Leech, Barrett, & Morgan, 2015).

Therefore, multicollinearity was not considered problematic for the model. Table 1

illustrates the means, standard deviations, and intercorrelations for actual reading scores

and predictor variables.

Table 1

Means, Standard Deviations, and Intercorrelations for Reading Scale Scores

Variable	*M*	*SD*	1	2	3
ReSclScore	419.99	6.56	-.060	.043	-.105
Pred Var					
1. Race	0.55	0.49	----	.018*	.003**
2. Gender	0.59	0.50	.018*	----	.248
3. SES	0.47	0.50	.003**	.248	----

Note. ReSclScore = reading scale score; Pred Var = Predictor Variable; SES = socioeconomic status. $N = 150$.
*$p < .05$. **$p < .01$. ***$p < .001$.

To examine the fit of the regression model comprising race, gender, and SES for

predicting reading achievement at the sixth-grade level, casewise diagnostics and tests for

influential cases (examining Cook's distances) were conducted. One outlier was

identified; however, the outlier did not exert a significant influence on the model and was

therefore retained in the data. After testing all the relevant assumptions and model fit

diagnostics, a standard multiple regression analysis was conducted to determine the

degree to which race, gender, and SES predicted reading achievement of the sixth-grade

students at Arkansas Delta schools. A summary of this analysis is displayed in Table 2.

Table 2

Simultaneous Multiple Regression Analysis for Predicting ACT Reading Scores

Model	SS	df	MS	F	p
Regression	93.22	3	31.07	0.72	.543
Residual	6325.78	146	43.33		
Total	6418.99	149			

Regression results indicated that the overall model did not significantly predict reading achievement, $R^2 = .015$, $R^2_{adj} = -.006$, $F(3, 146) = 0.72$, $p = .543$. These results suggested the model was no better at predicting reading achievement than the grand mean. Hence, the null hypothesis could not be rejected. The model accounted for 0.60% of the variance in reading achievement. A summary of the unstandardized and standardized regression coefficients for this model is presented in Table 3.

Table 3

Unstandardized and Standardized Coefficients for Predicting ACT Reading Scores

Model	B	SE	B	t	p	Collinearity Statistics	
1(Constant)	420.55	1.07		394.99	< .001	Tolerance	VIF
Race	-0.63	1.13	-0.05	-0.55	.579	.917	1.091
Gender	0.61	1.11	0.05	0.55	.587	.961	1.040
SES	-1.21	1.11	-0.09	-1.09	.278	.941	1.062

Note. SES = socioeconomic status.

An examination of the standardized coefficients revealed that none of the variables significantly contributed to the model predicting reading scores for the sixth-grade students in the Arkansas Delta schools. The results from the coefficient table revealed the equation for predicting the percentage of reading scores for three Arkansas Delta schools as follows: ACT reading achievement scores (predicted) = 420.55 - 0.63(race) + 0.61(gender) - 1.21(SES).

Hypothesis 2

Hypothesis 2 stated that no significant predictive effect would exist between race, gender, and SES on reading achievement as measured by the ACT Aspire Summative Assessment for seventh-grade students in three Arkansas Delta schools. Before conducting a regression analysis, the data were examined to determine if assumptions for multiple regression were met. An examination of the residual plots between the predictor variables and the outcome variable showed an acceptable degree of linear relationship, normality, and homoscedasticity. An examination of the intercorrelation and coefficient tables (see Tables 4 and 6, respectively) indicated that two of the variables in the model (race and SES) had a comparatively higher degree of correlation ($r = .34$) and tolerance levels greater than $1–R^2$ (Leech et al., 2015). Although a potential for multicollinearity existed in the model, a more general approach to interpreting multicollinearity suggested by Leech et al. (2015) was considered for the model (Tolerance > .1; VIF < 10). Furthermore, to examine the fit of the regression model for predicting reading achievement scores, casewise diagnostics and Cook's Distance test for influential cases were conducted. The test revealed no influential outliers. Table 4 summarizes the means,

standard deviations, and intercorrelations for reading scores and the predictor variables in

the model.

Table 4

Means, Standard Deviations, and Intercorrelations for ACT Reading Scores

Variable	*M*	*SD*	1	2	3
ReSclScore	421.17	7.47	-.044***	.035*	.065
Pred Var					
1. Race	0.47	0.50	----	.120	.000***
2. Gender	0.53	0.50	.120	----	.194
3. SES	0.40	0.49	.000***	.194	----

Note. ReSclScore = reading scale score; Pred Var = Predictor Variable; SES = socioeconomic status. *N* = 150.
*p < .05. **p < .01. ***p < .001.

After testing all the relevant assumptions and model fit diagnostics, a standard

multiple regression analysis was then conducted to determine the degree to which race,

gender, and SES predicted reading achievement for three Arkansas Delta schools. These

results are displayed in Table 5.

Table 5

Simultaneous Multiple Regression Analysis for Predicting ACT Reading Scores

Model	SS	df	MS	F	p
Regression	95.99	3	32.00	0.57	.636
Residual	8211.51	146	56.24		
Total	8307.49	149			

Regression results indicated that the overall model does not significantly predict reading achievement, $R^2 = .012$, $R^2_{adj} = -.009$, $F(3, 146) = 0.57$, $p = .636$. These results indicated that this model was not a better predictor of reading achievement scores when compared to the grand mean. Hence, the null hypothesis could not be rejected. The model accounted for approximately 0.90% of the variance in reading achievement scores for three schools in the Arkansas Delta. A summary of the unstandardized and standardized regression coefficients for this model is presented in Table 6 and indicated that none of the predictor variables contributed significantly to the model.

Table 6

Unstandardized and Standardized Coefficients for Predicting ACT Reading Scores

Model	B	SE	β	t	p	Collinearity Statistics	
1(Constant)	420.77	1.10		381.88	.000	Tolerance	VIF
Race	-1.22	1.32	-0.08	-0.92	.358	.867	1.153
Gender	0.74	1.24	0.05	0.59	.554	.978	1.022
SES	1.47	1.34	0.10	1.10	.275	.871	1.148

Note: SES = socioeconomic status.

None of the predictor variables contributed significantly to the model predicting reading achievement for students in three Arkansas Delta schools. The results from the coefficient table revealed the equation for predicting reading achievement for seventh-grade students from three Arkansas Delta schools as follows: ACT reading scores (predicted) = 420.77 - 1.22(race) + 0.74(gender) + 1.47(SES).

Hypothesis 3

Hypothesis 3 stated that no significant predictive effect will exist between race, gender, and SES on reading achievement as measured by the ACT Aspire Summative Assessment for eighth-grade students in three Arkansas Delta schools. Before conducting a regression analysis, the data were examined to determine if assumptions for multiple regression were met. An inspection of the residual plot revealed that the assumptions of linear relationship, normality, and homoscedasticity were met. An examination of the intercorrelation table (see Table 7) suggested that the potential for multicollinearity among predictor variables, race, gender, and SES was low. Additionally, R^2 was examined, resulting in tolerances higher than $1 - R^2$ (Leech et al., 2015). Therefore, multicollinearity was not considered problematic for the model. Table 7 illustrates the means, standard deviations, and intercorrelations for actual reading scores and predictor variables.

Table 7

Means, Standard Deviations, and Intercorrelations for ACT Reading Scores

Variable	*M*	*SD*	1	2	3
ReSclScore	421.90	7.61	-.302***	.250***	.020
Pred Var					
1. Race	0.55	0.50	----	-.133	.324***
2. Gender	0.49	0.50		----	.040
3. SES	0.45	0.50			----

Note. ReSclScore = reading scale score; Pred Var = Predictor Variable; SES = socioeconomic status. *N* = 148.
*$p < .05$. **$p < .01$. ***$p < .001$.

Additionally, to examine the fit of the regression model for predicting reading achievement, casewise diagnostics, and tests for influential cases (examining Cook's distances) were conducted. After testing all the relevant assumptions and model fit diagnostics, a standard multiple regression analysis was then conducted to determine the degree to which race, gender, and SES, predicted reading achievement for three Arkansas Delta schools. These results are displayed in Table 8.

Table 8

Simultaneous Multiple Regression Analysis for Predicting ACT Reading Scores

Model	*SS*	*df*	*MS*	*F*	*p*
Regression	1255.70	3	418.57	8.31	< .001
Residual	7249.78	144	50.35		
Total	8505.48	147			

Regression results indicated that the overall model significantly predicts reading achievement, $R^2 = .148$, $R^2_{adj} = .130$, $F(3, 144) = 8.31$, $p < .001$. These results indicated that this model was a better predictor of reading achievement when compared to the grand mean. Hence, the null hypothesis was rejected. The model also accounted for approximately 13.00% of the variance in reading achievement. A summary of the unstandardized and standardized regression coefficients for this model is presented in Table 9 and indicated that race and gender contributed significantly to the model.

Table 9

Unstandardized and Standardized Coefficients for Predicting ACT Reading Scores

Model	B	SE	β	t	p	Collinearity Statistics	
1(Constant)	422.25	1.13		373.54	$< .001$	Tolerance	VIF
Race	-4.76	1.26	-0.31	-3.79	$< .001$	.874	1.145
Gender	3.10	1.18	0.20	2.62	.010	.975	1.026
SES	1.72	1.24	0.11	1.38	.170	.888	1.126

Gender (β = 0.20) contributed slightly to the overall model, and race made a more significant contribution (β = -0.31) to students' reading achievement scores in three Arkansas Delta schools. The results from the coefficient table revealed the equation for predicting actual student reading scores as follows: ACT reading scores (predicted) = 422.25 - 4.76(race) + 3.10(gender) + 1.72(SES).

Summary

The purpose of this study was to determine the predictive effect of race, gender, and SES on reading achievement scores for sixth-, seventh-, and eighth-grade students in three Arkansas Delta schools. The multiple regression analyses indicated that race, gender, and SES did not significantly affect ACT reading achievement for the sixth- and seventh grades at three Arkansas Delta schools. However, Hypothesis 3 indicated that the model explained reading scores better than the grand mean. Additionally, Hypothesis 3 indicated that race had a significant effect on eighth-grade students' reading achievement scores. The summary of the results is displayed in Table 10.

Table 10

Summary of p Values for the Model with Race, Gender, and SES

Variables by H_o	6th	7th	8th
Model	.543	.636	< .001
Race	.579	.358	<.001
Gender	.587	.554	.010
SES	.278	.275	.170

Note. SES = socioeconomic status.

Additionally, race for eighth-grade students significantly affected reading achievement more compared to predictors: gender and SES. Chapter V includes a discussion of the findings and implications for each hypothesis and recommendations for practice and further research.

CHAPTER V

DISCUSSION

This study included race, gender, and SES as predictors of reading achievement scores through a multiple regression analysis of Vygotsky's sociocultural theory of development for students in Grades 6, 7, and 8. The study used students' scores from three Arkansas Delta schools. Findings and implications of the results are presented in this chapter. Chapter V also includes recommendations for policy and practice and future research considerations to understand to what degree a connection exists between reading achievement and sociocultural factors.

Findings and Implications

This study used a quantitative, multiple regression analysis to determine the predictive effects of the predictor variables race, gender, and SES on reading achievement. School district enrollment, poverty percentage, demographic data, and reading scale scores were collected for three Arkansas Delta schools. For the three hypotheses, the significance of the overall model was analyzed. In addition, each predictor variable's contribution to the model was analyzed.

Hypothesis 1

Hypothesis 1 stated that no significant predictive effects will exist between race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for sixth-grade students in three Arkansas Delta schools. The null hypothesis

for this model was not rejected. The model accounted for a very small percentage of the variance in reading achievement. The unstandardized and standardized regression coefficients indicated that no individual variable significantly contributed to the model predicting reading scores for sixth-grade students in three Arkansas Delta schools.

Hypothesis 2

Hypothesis 2 stated that no significant predictive effects will exist between race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for seventh-grade students in three Arkansas Delta schools. The null hypothesis for this model was not rejected. The model accounted for a very small percentage of the variance in reading achievement scores for three schools in the Arkansas Delta. The unstandardized and standardized regression coefficients indicated that no individual variable contributed significantly to the model.

Hypothesis 3

Hypothesis 3 stated no significant predictive effects will exist between race, gender, and SES on reading achievement measured by the ACT Aspire Summative Assessment for eighth-grade students in three Arkansas Delta schools. The null hypothesis for this model was rejected. The model accounted for approximately 13% of the variance in reading achievement for eighth-grade students. The unstandardized and standardized regression coefficients indicated that race and gender contributed significantly to the model.

Race

Based upon the results of the hypotheses, the contribution of race on reading achievement was inconclusive. The evidence from this study failed to overwhelmingly

indicate that children's educational performance could be attributed to students' race. Reading is not hardwired into the brain of a child and should therefore be taught explicitly (Jensen, 2009). Gardner (2011) asserted that although students can master reading and writing rules, they fail to attain the capacity to read for understanding and leisure. This finding is especially true for students who are identified as Black as they continue to have lower performance scores on standardized tests. Although all students' reading scores decreased nationally in 2019 compared to 2017, Black students' reading scores declined from a scale score of 241 in 2017 to a scale score of 237 in 2019 (National Center for Education Statistics, 2020). Carnoy and Garcia (2017) suggested that although race was a predictor of student academic achievement, they argued that SES was more significant in predicting students' academic achievement. However, the present study did not align with those findings of Carnoy and Garcia. Lezotte and Snyder (2011) argued that a stronger link existed between higher student academic achievement and school culture than race and student achievement. In the present study, race was only important in the model for predicting reading achievement at the Grade 8 level. Many different factors appeared to significantly affect reading achievement other than a student's race, such as school culture, books in the home, student motivation, and parents' education. Although a significant achievement gap exists, race achievement disparities could be attributed to factors other than race. Wilson (1992) suggested that early intervention programs correlated to better performance for all students, especially students of color. Sirin (2005) posited a more significant association between student achievement and SES rather than race and student achievement. The absence of representative texts also seemed to factor in the lack of reading achievement gains for

Black male students. Many researchers (Coleman, 1966; Dubois, 1915, Ferguson, 2008; Woodson, 1998) suggested that to understand how race has influenced the present state of the disparities between races, researchers should consider the historical progression of formal education efforts for the various races.

Ferguson (2008) argued that initial efforts of policymakers to legislate formal education often left parents and grandparents ill-equipped as teachers and caregivers. Colby and Ortman (2015) added that more than 39% of parents in the Arkansas Delta had inadequate literacy skills. Vygotsky et al. (1962) suggested that childrens' thoughts and behaviors varied between cultures and were correlated highly with how children interacted with the people, symbols, arts, and language of the respective culture. Thus, the social framework and student background influenced childrens' intellectual development more than the school environment. Ferguson (2008) further contended that home literacy practices that are highly correlated to student achievement were often lacking in the homes of lower SES students, which is highly correlated with Black students. According to Colby and Ortman (2015), more than 50% of students in the United States were eligible for free and reduced-price lunches. According to the Arkansas Activities Association (2018), more than 50% of the students for this study were classified as Black. Additionally, the higher the percentage of students classified as Black, the higher the percentage of students who qualify for free or reduced-cost lunches. Albert et al. (2020) found a relationship between poverty and students' academic achievement. Albert et al. contended that low-income backgrounds correlated with lower academic performance results on achievement tests and grades. However, the results of

this study failed to support this claim. Therefore, policymakers, administrators, and practitioners should ensure that programs exist to help all students.

Gender

The results of this study indicated that other factors were stronger predictors of student achievement than gender. Gender for this study referred to the physiological traits that distinguish people as male or female. Gender differences and their effect on academic performance have been studied widely. Coleman (1966) argued that students' social contexts were more significant contributors to student achievement when compared with the school environment. Vygotsky et al. (1962) suggested that human intellectual development is enhanced through symbolic and socioculturally constructed artifacts such as language, arts, and social interactions. Females exceed boys in most verbal performance facets such as speaking sooner, better articulation, and being more fluent during the early school years (Maccoby, 1974). However, Feingold (1988) found that gender differences decreased significantly over the years studied (1960-1983). Maccoby and Jacklin (1974) suggested that gender differences emerge by age 11 and are evident in verbal ability, visual-spatial ability, and aggression. Females demonstrate a slight superiority in verbal ability (Hyde & Linn, 1988). Evidence from this study suggested that other factors such as societal attitudes, perceptions, and expectations were more significant contributors than gender. In the present study, gender was only important in the model for predicting reading achievement at the Grade 8 level.

School districts should be wary of engaging in gender-driven initiatives that are not substantiated by data. For example, although gender was important for the model for predicting reading achievement at the Grade 8 level, gender was not important for the

model for sixth- and seventh-grade students. Halpern et al. (2007) found that males and females are more alike than different in academic skills. Matthews et al. (2009) also posited that no significant gender differences existed on academic achievement performance. Similarly, Hyde (2005) suggested that gender differences are exaggerated and could result in substantial costs educationally. Carvalho (2016) found that females exhibited better adaptation and impulse control, contributing to better academic performance. Academic achievement and gender differences in mean and variance are minor and have remained relatively unchanged since 1960 (Nowell & Hedges, 1998). Differences attributed to gender are often unsupported by research and frequently result in unnecessary costs or misguided initiatives. In the present, perhaps much of the gender differences that exist could be attributed to other factors such as societal, socialization, and media-driven perceptions.

Socioeconomic Status

In this study, SES was not significant in any of the models for predicting reading achievement at the sixth-, seventh-, or eighth-grade level. Poverty is not only prevalent across the United States but is also increasing, particularly in the Arkansas Delta. More than 52% of children in the United States are eligible for free and reduced-price lunches (National Center for Education Statistics, 2020). Additionally, the national percentage of children receiving free and reduced-price lunches continues to rise. Most of the total landmass in Arkansas is made up of the Arkansas Delta. Additionally, the impoverished area suffers from population loss, loss of local tax revenue, and declining school enrollment. Albert et al. (2020) found a relationship between poverty and student

performance on achievement tests. However, the results of this study failed to reveal that SES was a strong predictor of student achievement.

Higher concentrations of poverty seem to have an impact on student performance. Renchler (1993) suggested that adverse educational outcomes were attributed to factors often associated with increased concentrations of poverty. Higher concentrations of poverty were correlated with family structure instability, increased exposure to violence, and a prevalence of negative peer group influence. The Delta has higher concentrations of students classified as free and reduced-price lunch status. The increasing prevalence of poverty in the Arkansas Delta suggests that schools understand how SES affects student performance. The percentage of students classified as free and reduced-price lunch status correlates with district achievement levels (Areas, 2020). Carnoy and Garcia (2017) explored the deleterious effects of high concentrations of poverty on the achievement levels of students. Additionally, Reardon (2016) suggested a strong association between racial segregation and academic outcomes. Segregated educational facilities were inherently unequal and resulted in psychological damage to children (*Brown v. Board of Education*, 1954). Fram et al. (2007) found that educational inequality persists, particularly in the southern United States. Although the Arkansas Delta schools have high concentrations of minority and students who are classified as free and reduced-price lunch status, the findings of this study failed to indicate that SES was a predictor for reading achievement for any of the hypotheses. Many of the challenges resulting from poverty cannot be remedied by schools alone. Therefore, schools should forge partnerships to better support all students to enrich the educational experience and maximize educational opportunities for all.

The findings of this study indicated that well-trained educators who have high expectations for all students and provide the necessary academic support to students were stronger predictors of student achievement than SES alone. Classroom teachers have the formidable task of raising the educational outcomes for all students. Legislative accountability measures have been put in place to guide districts toward increased student performance for all students. The Arkansas Division of Elementary and Secondary Education (2020) sets rules and guidelines to ensure all teachers can demonstrate proficiency or awareness in scientific reading instruction pertinent to their position. School districts should ensure that all teachers are well trained to understand and address poverty and its effect on performance outcomes. Teach for America corps members' preparation program was found to correlate positively with affecting student achievement. In addition to a pedagogically rigorous curriculum, Teach for America corps members also engage in meaningful cultural training. Culturally constructed artifacts have a profound effect on the human mental activity of the child (Vygotsky et al., 1962). To raise achievement levels for all students, successful school districts implement research-based practices. Students classified as free and reduced-lunch status thrive in a supportive and highly engaged classroom setting (Dee, 2015). Teachers who foster high levels of student engagement have few classroom disruptions, high expectations for all students, and higher student achievement levels (Dee, 2015). High expectations coupled with guidance and support should help facilitate student success for all.

Recommendations

Potential for Practice/Policy

Fram et al. (2007) remarked that education is the leveler of opportunity. However, increasing student achievement for all students continues to challenge policymakers and practitioners. This study was conducted to determine whether race, gender, and SES contributed to predicting reading scores for students in the Arkansas Delta. The model indicated that race, gender, and SES were not significant predictors of reading achievement scores for sixth- or seventh-grade students. However, the model indicated both race and gender to be significant predictors of reading achievement for eighth-grade students. Vygotsky et al. (1962) suggested that cultural tools inclusive of books, computers, language, and symbols assisted in developing higher-order mental processes such as reasoning and problem-solving. A review of the literature (Brady, 2013; Carnoy & Garcia, 2017; Coleman, 1966; Feingold, 1988; Ferguson, 2008; Hyde, 2005) offered inconclusive evidence of the predictive effect of race, gender, and SES on reading achievement. Arkansas legislators, policymakers, and educational leaders should understand how race, gender, and SES affect student reading achievement. This understanding could be used to guide policymakers and practitioners to allocate funding better to improve student achievement. Policymakers, administrators, and practitioners should ensure that early intervention programs, wrap-around services, and school cultures with high expectations are available for all students. Schools should also partner with the business sector, civic organizations, and other community entities to better support all students, enrich their educational experience and maximize educational opportunities for all.

For students to learn at optimum levels, educators must understand where a student is on the learning continuum. Perhaps researchers should consider the historical progression of formal education efforts for the various races. Fram et al. (2007) emphasized that the negative influence of economically deprived contexts affects students in many ways. This study built on what Vygotsky et al. (1962) referred to as the zone of proximal development. Additionally, Vygotsky et al. found that children learn effectively through a collaborative learning process that involves the teacher and the students' peers. Practitioners could use this study to further their understanding of the importance of where students are educationally and for developing educational activities within student zones of proximal development as an opportunity to maximize student learning.

Additionally, administrators could use this information when scheduling staff and students, grouping students in a classroom setting, and providing training for teachers to maximize learning opportunities for all students. School districts should emphasize Vygotsky's work regarding zones of proximal development and provide the necessary scaffolding to support all students to higher academic achievement levels. The opportunity for all students, regardless of gender, to have access to highly qualified teachers in a safe, supportive, and collaborative learning environment that prepares all students for college and careers seems to be a better option for policymakers and districts rather than gender-specific initiatives. Districts should ensure that professional development opportunities include successfully managing a classroom, engaging students in the learning process, and creating a positive environment conducive to learning.

Future Research Considerations

This research study did not yield overwhelming evidence that race, gender, and SES were predictive of reading achievement for students in three Arkansas Delta schools. The research indicated that the models for Hypothesis 1 and Hypothesis 2 were not significant. However, the variables race and gender were significant for predicting reading achievement for Hypothesis 3. Additional research and studies should be conducted to understand better the predictive effect of race, gender, and SES on reading achievement. Further exploration could be examined on the following to add to the body of work related to the effect of race, gender, and SES:

1. Research should build upon the larger body of work related to students' reading achievement by fourth-grade. Students learn to read in the early grades but begin reading to learn in fourth-grade.

2. Research should be conducted to add to the limited research for reading achievement in the Arkansas Delta.

3. Research should be conducted to determine how different societal factors affect student achievement in other academic areas such as mathematics, science, and social studies.

4. Research should be conducted to focus on a broader geographical area and the effect of specific levels of poverty on student achievement.

5. Research should be conducted using societal variables and their effect on social-emotional factors beyond academic achievement.

Conclusion

This study investigated the predictive effects of race, gender, and SES on reading achievement for students from three Arkansas Delta schools. Findings were inconclusive and mixed. Of the variables investigated for this study, race and gender each significantly predicted one of the three hypotheses. However, no single predictor variable significantly predicted the dependent variable for all three models. Sociocultural Theory of Development emphasized the important interaction children have with parents, peers, and other adults. A child learns from the cultural tools provided them by the environment in which they develop. These cultural tools help shape initial learning and provide the framework for future learning. Many factors such as parenting styles, books in the home, school culture, and community environment can strongly predict student achievement. Although no single factor seemed to be dominant in predicting reading achievement, an emphasis should be on creating a culture of high expectations for all students who will have the freedom to learn in an environment with support from peers, professionals, and the home. This research contributed to the body of research on reading achievement to understand better sociocultural factors and their effect on reading achievement.

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