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A comparative analysis of read 180 and cultural literacy on the reading achievement and motivation of African American males in an alternative high school

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**A COMPARATIVE ANALYSIS OF *READ 180* AND
CULTURAL LITERACY ON THE READING
ACHIEVEMENT AND MOTIVATION OF AFRICAN
AMERICAN MALES IN AN ALTERNATIVE HIGH
SCHOOL**

By

Clifton F. Nicholson

A Dissertation
Submitted in Partial Fulfillment
of the Requirements for
the Degree of Doctor of Education
in Curriculum and Leadership

Columbus State University
Columbus, GA

May 2016

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DEDICATION

This dissertation is dedicated to the memories of my loving mother, Dorothy Nicholson, and brother, Collin Nicholson. To my wife, Sandra, thank you for your support and encouragement throughout this arduous process. To my children, Kendell and Kayla, you will forever be my source of inspiration.

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Dr. Obleton, your advice and expertise with my research population gave me more insight than you could have imagined. Thank you!

Dr. Frazier, thank you for your edits, suggestions, and resources. I know that my work is that much better because of you.

Dr. Yates, thank you for your positive disposition and encouraging emails. You showed me that this task was doable.

I am forever grateful.

VITA

Clifton F. Nicholson was born in Ontario, Canada. In 1999, he earned Associate of Science degrees in General Education and Secondary Teacher Education from Calhoun Community College in Decatur, Alabama. Before moving to Georgia, he attended Athens State University in Athens, Alabama, where he earned a Bachelor of Science in English Education and graduated with honors. In 2004, he graduated from Georgia State University, where he received a Master of Education in English. In 2006, Clifton earned his Educational Specialist degree in Educational Leadership from Columbus State University in Columbus, Georgia.

During his career in education, Clifton has been twice nominated for teacher of the year, he was a STAR teacher, and he was a finalist for the Atlanta Families Awards for Excellence in Education. Throughout his career, he has served as a teacher, teacher-mentor, department chair, instructional coach, and adjunct professor of research writing. Currently, Clifton is an assistant principal with Atlanta Public Schools. He lives in Atlanta, Georgia.

ABSTRACT

Nationwide, increased accountability measures require educational leaders to develop and implement instructional practices that expedite the narrowing of the achievement gap. Legislation in several states allows states to annex low-performing schools. With such pressure, school districts are looking to educational consultants to facilitate the transformation of reading instruction, thereby raising levels of academic achievement. A thorough vetting of these interventions, however, is necessary to determine if the potential benefits can be generalized to other populations.

The purpose of this quantitative, causal-comparative study was to compare the reading achievement and reading motivation of two groups of African American males in an alternative high school. One group ($n = 140$) was enrolled in *READ 180*, while their peers ($n = 141$) were enrolled in culturally relevant literature classes. Scholastic Reading Inventory scores were used to compare changes in reading achievement. Scholastic Independent Reader surveys were used to compare changes in reading motivation between the two groups over the course of one academic year.

A repeated-measures multivariate analysis of variance (MANOVA) was used to test the hypotheses. The two independent variables were (a) class with two levels (*READ 180* and culturally relevant literature class), and (b) time with two levels (pre-intervention and post-intervention). The MANOVA assessed the effect of the independent variables on the linear combination of the dependent variables (achievement and motivation). Significant main effects and interactions were investigated.

Students in *READ 180* exhibited statistically significant growth in reading achievement and motivation. Similarly, students in culturally relevant literature classes

also exhibited statistically significant growth in both reading achievement and motivation. While the changes in reading achievement and motivation were slightly higher for students who participated in culturally relevant literature classes, these differences were not statistically significant. The differences between groups at posttest were largely reflective of the differences that existed at pretest; it seems that differences between groups are more likely attributed to differences in the composition of the groups, rather than differences in the type of reading program. Both interventions had positive, statistically significant effects on the reading achievement and reading motivation of African American males in this study.

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CHAPTER I

INTRODUCTION

If history is any indication of the future challenges African American students will face in reading, then educators will encounter a formidable task (Lagana-Riordan et al., 2011; Thompson & Shamberger, 2015). The gap between the reading scores of African American and Caucasian students in the 12th grade is gradually widening (National Assessment of Educational Progress, 2013). Current data show that Caucasian students in the 12th grade score an average of 29 points higher than 12th-grade African American students do (National Center for Education Statistics, 2013).

Such gaps in reading achievement are not only significant but also pervasive (Reardon, 2011; Todd & Wolpin, 2007; Stevenson & Ross, 2015). The reading achievement gap is considerable, and the incorporation of high-stakes tests, as well as the No Child Left Behind (NCLB) mandate, has had little, if any, effect on the reading progression of African American students (Braun, Chapman, & Vezzu, 2010). Given the measures of accountability and the pressure on schools to increase test scores, more and more school districts are exhausting all avenues in an effort to help adolescents who struggle with reading (Hartry, Fitzgerald, & Porter, 2008; Lombardi, 2015).

Over the last 10 years, many school districts have invested heavily in programs to increase the reading achievement of their students. Programs such as Success for All, America's Choice, Achieve 3000, Kurzweil 3000, and Accelerated Reader have all been used to increase reading achievement. However, Scholastic's *READ 180* appears to be one of the most widely researched reading interventions (Hartry et al., 2008; Institute of Education Sciences, 2009; Lombardi, 2015; Papalewis, 2004).

READ 180 is a computer approach to raising reading achievement, and its adaptive technology allows students to receive individualized reading instruction (Shawgo, 2005). *READ 180* is an intensive reading intervention program developed for students who are reading below proficiency in their respective grades and is used by more than one million students in over 40,000 classrooms across all 50 states (Lang et al., 2009). The instructional model consists of 90-minute class periods in which all students begin with 20 minutes of a teacher-led, whole-group instructional segment. The students then move through three separate 20-minute rotations that consist of whole-group direct instruction, small-group direct instruction, personalized use of *READ 180* software, and independent reading of *READ 180* materials. Classes conclude with a 10-minute whole-group wrap-up session (Mims, Lowther, Strahl, & Nunnery, 2006).

While reports highlight the successes of the *READ 180* program (Kim, Samson, Fitzgerald, & Hartry, 2010; Melekoğlu, 2011; Mims et al., 2006; Papalewis, 2002, 2004; Pearson & White, 2004; Shawgo, 2005; White, Haslam, & Hewes, 2006), most of these studies have been contracted and narrated by Scholastic *READ 180* (Shawgo, 2005). Notwithstanding these self-reported successes, the What Works Clearinghouse (WWC) reviewed 101 *READ 180* studies and concluded that 94 of them failed to meet evidence standards. The remaining seven studies were found to have met WWC evidence standards with reservations, but none of these studies sampled any students beyond the ninth grade (Institute of Education Sciences, 2009). In addition to the absence of high school upperclassmen in any of the samples, the Little Rock School District *READ 180* Evaluation indicated that the *READ 180* reading program had not been effective in remediating African American students (Mims et al., 2006).

One practice that has shown some value in the remediation of African American males, however, is cultural literacy (Tatum 2006; West, 2012). While many reading interventions typically focus on strategies and measures of comprehension, they fail to account for the cultural, emotional, political, and social needs of students (Husband, 2012a; Tatum, 2006). Cultural literacy (culturally relevant literature), consequently, is a practice that promotes students' individualities and encourages them to find their voice. Culturally relevant literature provides struggling readers with opportunities to generate more in-depth reasoning skills through reading and discussions. Furthermore, it allows students to develop their confidence through a meaningful application of reading skills such as questioning, writing, and reflecting (Tatum 2006; West, 2012). Literature that is readily identifiable to African American males leads to an increase in reading engagement and achievement (Husband, 2012a; Stevenson & Ross, 2015).

PURPOSE OF THE STUDY

The researcher's purpose in this quantitative, causal-comparative study was to compare the reading achievement and motivation of two groups of African American males in an alternative high school setting. One group of students was enrolled in the reading intervention program *READ 180* while their peers were enrolled in culturally relevant (cultural literacy) language arts classes. The pretest and posttest Scholastic Reading Inventory (SRI) scores were used to measure the changes in reading achievement (Lexile level) between the two groups. Similarly, the Scholastic Independent Reader (SIR) surveys of both groups were used to measure any changes in reading motivation over the course of an academic year.

There is a lack of research regarding the effectiveness of *READ 180* for alternative high school students or African American students beyond the ninth grade

(Institute of Education Sciences, 2009). Therefore, this study may help to establish if there is any statistically significant change in reading achievement or reading motivation for African American males using the *READ 180* program in an alternative setting. This invaluable information can inform the decision-making process of school leaders as it pertains to the identification and procurement of effective reading intervention resources.

STATEMENT OF THE PROBLEM

In 2012, minority students accounted for 40% of the elementary through high school student population (National Center for Education Statistics, 2015). By 2022, minority students are expected to account for 44% of the student population (National Center for Education Statistics, 2015). By 2036, data suggest that African Americans, Latinos, and other non-Whites will account for more than half of the U.S. population (Center for Public Education, 2012; Sullivan, Mwanghi, Miller, Muhammad, & Harris, 2012). With this evolving trend in the demographics of America's students, there is a sense of heightened interest and concern in addressing the literacy needs of this growing population (Center for Public Education, 2012; Harmon, Hedrick, Wood, & Vintinner, 2011). Despite these statistics, however, the achievement gap persists, and African American high school seniors are reading at levels comparable to Caucasian students in the eighth grade (U.S. Department of Education, 2012).

While reading failure affects virtually every demographic, it is most widespread among minority students in inner-city schools (Musti-Rao & Cartledge, 2007). The gap in reading levels between African American and Caucasian students has not decreased since 1992, and this dilemma is evident across all stages of the K–12 spectrum (Hartry et al., 2008; National Center for Education Statistics, 2013; Robinson, 2010). While the causes of such academic gaps can be attributed to low SES households, poverty, and

educational expectations, effective reading interventions that emphasize phonics, phonemic awareness, reading fluency, vocabulary, and reading comprehension should be put in place to help struggling adolescent readers (Center for Public Education, 2012; Musti-Rao & Cartledge, 2007; Williams, 2011). A popular reading intervention appears to be Scholastic Incorporated's *READ180* (Kim et al., 2010; Lombardi, 2015; Mims et al., 2006; Papalewis, 2004; Pearson & White, 2004; Shawgo, 2005).

While research has indicated that *READ 180* can have potentially positive effects on reading efficiency, fluency, comprehension, and general literacy achievement, a closer examination of these studies revealed that only one study had actually sampled high school students and met WWC evidence standards with reservations (Institute of Education Sciences, 2009; Kim et al., 2010; Papalewis, 2004; Pearson & White, 2004). The sample in that one study, however, did not contain students beyond the ninth grade and only included African American students as 16% of its sample (Lang et al., 2009). With the population of non-White Americans expected to be the collective majority in the near future (Sullivan et al., 2012), the inclusion of research samples that are more reflective of this trend is critical.

The researcher examined reading achievement and reading motivation as measured by the Scholastic Reading Inventory (SRI) and the Scholastic Independent Reader (SIR). The quantitative data were analyzed to determine if there were statistically significant differences in reading achievement and motivation for both groups of African American males in a secondary alternative school. Each dataset contained three waves of data for each student, which represented the pretest, midyear test, and the posttest for SRI scores. Only the pretest and posttest scores were used for inferential testing. However, the midyear test was used for an examination of trend, which is included only in the

descriptive statistics. Each of the datasets also included pretest and posttest reading motivation survey data from the Scholastic Independent Reader (SIR) survey. This study will provide information regarding the effectiveness of READ 180 and cultural literacy, as well as their applicability for African American male students in an alternative setting.

RESEARCH QUESTIONS AND HYPOTHESES

The following research questions were developed to guide the research process:

- R_{Q1}: Are there differences in the *reading achievement* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school?
- R_{Q2}: Are there differences in the *reading motivation* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school?
- R_{Q3}: Is there an interaction between (a) class (*READ 180* vs culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) in the *reading achievement* of African American male students enrolled in an alternative high school?
- R_{Q4}: Is there an interaction between (a) class (*READ 180* vs culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) in the *reading motivation* of African American male students enrolled in an alternative high school?

The research null and alternative hypotheses are as follows:

- R_{HO1}: There is not a statistically significant difference in the *reading achievement* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school.

- R_{HA1}: There is a statistically significant difference in the *reading achievement* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school.
- R_{HO2}: There is not a statistically significant difference in the *reading motivation* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school.
- R_{HA2}: There is a statistically significant difference in the *reading motivation* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school.
- R_{HO3}: There is not a statistically significant interaction of the levels of the independent variables of (a) class (*READ 180* vs. culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) on the *reading achievement* of African American male students enrolled in an alternative high school.
- R_{HA3}: There is a statistically significant interaction of the levels of the independent variables of (a) class (*READ 180* vs. culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) on the *reading achievement* of African American male students enrolled in an alternative high school.
- R_{HO4}: There is not a statistically significant interaction of the levels of the independent variables of (a) class (*READ 180* vs. culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) on the *reading motivation* of African American male students enrolled in an alternative high school.

R_{HA}4: There is a statistically significant interaction of the levels of the independent variables of (a) class (*READ 180* vs. culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) on the *reading motivation* of African American male students enrolled in an alternative high school.

DEFINITIONS

For the purposes of this study, the following definitions were used throughout:

Achievement gap. The achievement gap is the difference in academic achievement between two established groups (Ray, 2012).

Adaptive technology. Software designed to collect data based on individual responses and adjust instruction to meet the needs of each student (Taylor, 2006).

Alternative high school. Schools designed to meet the needs of students who have not been served by traditional education (Morrissette, 2011).

At-risk/high-risk learner. High-risk learners are students who are predicted to experience failure (Beken, Williams, Combs, & Slate, 2009).

Common Core Standards. Common Core is a set of comprehensive, high-quality academic standards in mathematics and language arts/literacy. These academic goals outline what a student should know and be able to do at the end of each grade level (Porter-Magee & Stern, 2013).

Culturally relevant literature (cultural literacy). Culturally relevant literature for African American adolescents includes texts that are diverse in authorship and are intellectually exciting and challenging. Additionally, these texts allow students to associate the social, economic, and political themes with educational themes. As supported by the Common Core English language arts standards, these texts also engage

students in authentic discussion and writing while helping them better understand their own society (Husband, 2012b; Tatum, 2006; Tatum & Muhammad, 2012).

Direct instruction. Direct instruction is the explicit teaching of a specific strategy or concept (Taylor, 2006).

International Reading Association (IRA). The IRA, now known as the International Literacy Association, is a global advocacy organization that publishes cutting-edge research on literacy (International Literacy Association, 2015).

Involuntary minorities. Involuntary minorities are ethnic groups whose ancestors were brought here by force (Africans Americans) or were forced into minority status (Native Americans). These groups have had to form their identities in a society that was deemed oppressive. Therefore, the effects, according to oppositional cultural theory, have led to oppositional behaviors to the dominant culture (Ogbu, 1991).

Lexile. A Lexile is a numeric representation of a reader's ability or a text's difficulty (Lennon & Burdick, 2004).

Lexile scale. A reader ability or text difficulty scale ranges from 200L for beginning readers to beyond 1700L for the more sophisticated readers (Lennon & Burdick, 2004).

Normal curve equivalents (NCEs). A standardized scale that allows the conversion of raw scores to derived scores; thereby allowing different tests to be compared directly (Miller, Linn, & Gronlund, 2009).

Oppositional cultural theory. Oppositional cultural theory is a controversial theory that aims to explain Black underachievement (Harper & Davis, 2012).

Phonemic awareness. The ability to hear, identify, and isolate the smallest units of sound that can separate meaning (Hasselbring & Goin, 2004).

Phonological cognizance. The conscious knowledge of the structure of one's language is considered phonological cognizance (Hasselbring & Goin, 2004).

READ 180. *READ 180* is a computer adaptive reading intervention program that was developed as a result of 10 years of research from experts at Vanderbilt University. It is designed to tailor reading instruction to the needs of individual students, as well as increase reading support and motivation (Papalewis, 2004).

Reading comprehension. A multidimensional, developmental process that involves an active interaction between the content of a text and the experiences provided by the reader (Morsy, Kieffer, & Snow, 2010).

Reading fluency. Reading fluency is defined as the capacity to read texts quickly and accurately (Hasselbring & Goin, 2004).

Reading motivation. The degree to which an individual student intends to read a specific text in a particular setting (Schiefele, Schaffner, Moller, & Wigfield, 2012).

Reading vocabulary. Reading vocabulary refers to all of the words a reader recognizes when reading. Increasing students' reading vocabulary can increase their ability to construct meaning from texts (Hawkins, Hale, Sheeley, & Ling, 2011).

Response to intervention. A tiered method to the early identification, intervention, and support of students with learning and behavior needs (Tatum, 2012).

Scholastic Independent Reader (SIR) scale. For students who participate in *READ 180*, this protocol is used to measure the level of the three essential reading behaviors: motivation, engagement, and self-efficacy. For this study, however, only the questions related to motivation (1, 2, 3, 12, 15, 17, 18, 22, 23, and 25) were analyzed because this study focused only on the changes in reading achievement and motivation (Scholastic, 2007).

Scholastic Reading Inventory (SRI). A computer-based screening assessment used to determine the reading levels of students and to identify those students who are reading markedly below their expected grade level (Morsy et al., 2010).

Socioeconomic status (SES). An individual or group's position within a hierarchical social structure; it is often measured through an amalgamation of income, occupation, and education (American Psychological Association, 2015).

Voluntary minorities. Voluntary minorities are ethnic groups who immigrated to this country by choice (e.g., Asians and Europeans) with their identities already formed. These groups have positive beliefs about their adopted country, and as such, show no resistance to assimilating into the adoptive culture (Ogbu, 1991).

What Works Clearinghouse (WWC). WWW is a source of evidence for what works in education. Several education and research methodology firms manage WWC on behalf of the U.S. Department of Education (Institute of Education Sciences, 2009).

ASSUMPTIONS OF THE STUDY

For this study, an assumption was made that all participating *READ 180* teachers had classes with at least 90 minutes of instruction, as required by *READ 180*. It was also assumed that all *READ 180* teachers participated in the required number of trainings and followed the prescribed classroom rotations as suggested by Scholastic Incorporated, the developer of *READ 180* (Mims et al., 2006). Assumptions were also made that all students in both groups, *READ 180* and cultural literature, were administered all SRIs (pre, mid, and post) and SIRs (pre and post) in conditions that were conducive for testing. Further, it was assumed that student performance on the aforementioned tests provided accurate representations of the students' reading abilities.

SIGNIFICANCE OF THE STUDY

Because of the increased accountability measures with respect to reading, remedial reading programs that were once relegated to elementary and middle schools are now mainstays in many high schools. However, due to a lack of research on reading programs for secondary schools, there is minimal evidence to support the efficacy of such interventions in high schools (Slavin, Cheung, Groff, & Lake, 2008). One reading intervention program that is designed for students who are reading below their respective grade levels is *READ 180*. A primary goal of this program is to support and develop students' reading abilities (Shawgo, 2005). While Scholastic/*READ 180* studies have shown the program to have some success with various ethnic groups of all learning abilities (Mims et al., 2006), independent research is uncommon (Shawgo, 2005).

This study is significant in that it was not sponsored by *READ 180*, and it is independent of Scholastic Incorporated (distributors of *READ 180*). No other research on *READ 180* has used participants beyond the ninth grade, nor has any study focused specifically on African American males or students in alternative high schools. Additionally, this study is significant because it can inform the decision-making process of district personnel, teachers, and administrators regarding the applicability of *READ 180* and the practice of cultural literacy as reading intervention resources. Lastly, this research will add to the body of knowledge concerning the effects of *READ 180* and cultural literacy on African American males who are enrolled in alternative high schools.

LIMITATIONS OF THE STUDY

This study was limited in that only one alternative high school in this district offered the *READ 180* program as a reading intervention resource. The study was focused only on quantitative measures of reading and motivation. The data and classes

analyzed were preexisting; there was no indication that the groups were comparably matched at the beginning of their respective school years. There were no in-class observations or student participation.

This study only focused on the effect of READ 180 and culturally relevant literature on the reading achievement and motivation of African American males in an alternative school setting; therefore, this study was limited in that it did not attend to the many other factors that can account for changes in reading achievement. This study was further limited because the samples were not random; therefore, the results cannot be generally applied to other populations; they can only be suggested. Finally, validity and reliability information of the SIR instrument used to measure reading motivation was not readily available because the information had not yet been published. Only the overall scores are available in the retrospective data available to the researcher; therefore, the researcher could not perform validity and reliability statistical tests.

SUMMARY

Minority students will soon account for approximately half of all students in public schools (National Center for Education Statistics, 2015). While the percentage of minority students in schools is increasing, the reading achievement gap continues to widen (National Center for Education Statistics, 2015). School districts, therefore, have increased their efforts to reverse this trend with the implementation of reading interventions. One intervention that has received much acclaim is *READ 180*. There is a lack of research with respect to the effectiveness of *READ 180* for alternative high school students or African American students beyond the ninth grade (Institute of Education Sciences, 2009). This study was designed to help determine if there are any statistically

significant changes in reading achievement or reading motivation for African American males using the *READ 180* program in an alternative setting.

The purpose of this study was to compare the reading achievement and motivation of two groups of African American male students in an alternative high school setting. One group of students was enrolled in *READ 180* while their peers were enrolled in language arts classes that emphasized cultural literacy. The pretest and posttest Scholastic Reading Inventory (SRI) scores were used to compare the changes in reading achievement (Lexile level) between the two groups. Similarly, the Scholastic Independent Reader (SIR) surveys of both groups were used to compare any changes in reading motivation between the two groups over the course of one academic year.

CHAPTER II

LITERATURE REVIEW

Since the release of the report entitled *A Nation at Risk*, in 1983, the K-12 educational system has been heavily scrutinized (Rubin, 2011). Citing the growing educational gap between American students and the students of other globally competitive nations (Barrett, 2009), *A Nation at Risk* made an appeal for increased academic standards and greater accountability using a range of assessments (Rubin, 2011). Since the release of the report, there has been a seismic shift toward standardized testing, culminating with NCLB (Rubin, 2011). In short, the NCLB legislation focused on closing the achievement gap between minority and non-minority students, meeting the educational requirements of students in need of reading assistance, using state assessments to ensure all students met high standards, and having all students proficient in reading and math by 2014 (Rubin, 2011; U.S. Department of Education, 2012).

While the NCLB goals were admirable, they did not take into account issues that were outside schools' control. Factors such as parental involvement, cultural differences, previous educational experiences, and socioeconomic status all may be directly related to the academic potential of students (Rowley & Wright, 2011). Notwithstanding these barriers, research indicates that strong teacher development and an effective reading intervention program/curriculum can make a significant difference in the reading outcomes of students (Papalewis, 2004).

This literature review contains a summary of the challenges, both perceived and real, of the African American male, as well as some of the theories and solutions

pertaining to the historically low reading achievement scores of African American male students. The next section discusses the significance of the alternative/nontraditional high school and some of the challenges unique to these students. The affective domain of motivation is discussed as it relates to reading, and this discussion is followed by a brief history of reading instruction. The literature review concludes with a review of the research on Scholastic Incorporated's reading intervention program *READ 180*.

THE ALTERNATIVE HIGH SCHOOL

Far from being a monolithic group, the complexity of the African American male is exacerbated by the fact that he belongs to two of the most underperforming reading groups: Black and male (Donnor & Shockley, 2010; Husband, 2012b; Noguera, 2012; Pane & Salmon, 2009; Tatum, 2012). Historically, females on standardized tests of literacy outperform males, and African American males, specifically, trail their Caucasian peers in essentially every grade level and subject (Matthews, Kizzie, Rowley, & Cortina, 2010; Noguera, 2012; Stevenson & Ross, 2015). African American males who enter high school as struggling readers will encounter significant challenges. Additionally, research on effective reading interventions that target African American males is scarce (Stevenson & Ross, 2015; Tatum, 2012). While this predicament is a major cause for concern, the research to advance the literacy development of African American males who struggle with reading in alternative high schools is virtually nonexistent (Pane & Salmon, 2009; Tatum, 2012).

While there are several types of alternative schools in the United States today, these institutions are typically categorized into two main categories: choice and assignment. Choice alternative schools are typically for students who voluntarily enroll in alternative settings, while assignment alternative schools generally have students who

were placed in these settings by some form of administrative or legal action (Lehr, Tan, & Ysseldyke (2009). The impetus for these educational institutions, both choice and assignment, originally developed around the middle of the 20th century. These programs were designed to meet the educational needs of low-income and minority students who were unsuccessful or underserved in the traditional public school setting (Carswell, Hanlon, O'Grady, Watts, & Pothong, 2009). Alternative schools offer a second opportunity for adolescents to succeed without removing them from a public school environment (Carpenter & Kurtz, 2000). With the draw of smaller, more intimate student-to-teacher ratios, as well as a variety of student support services, alternative schools focus on preventing dropouts and averting failure (Zweig, 2003).

Because of their clientele, the focus on dropout prevention by alternative schools is paramount. Many of these schools serve students considered *at risk* due to their experiences with poverty, incarceration, drugs, and physical or emotional trauma (Carswell et al., 2009). These schools frequently face higher rates of class disruption, higher rates and lengthier periods of student suspension, increased rates of disciplinary action, and significantly lower rates of academic attainment (Paschall, Ringwalt, & Flewelling, 2003). Many students in these settings require heightened supervision and regular incentives to participate in instructional activities. Furthermore, alternative schools and their students lack the diverse groups of students found in traditional schools; this homogeneous grouping can lead to a lack of constructive peer influences, which in turn perpetuates a lack of student focus and motivation (Beken et al., 2009).

While the life experiences and circumstances surrounding students in alternative schools tend to forecast academic, social, and emotional gloom (De La Ossa, 2005), data continue to support the viability of such programs (Beken et al., 2009; Pane & Salmon,

2009). Smaller classrooms afford the cultivation of caring, non-authoritarian, teacher-student relationships, while supporting student goals and increasing student motivation. Such classrooms also give adults more opportunities to avert undesirable peer influences (Whitfield, 2012). Furthermore, research indicates that alternative schools with student support services and career academies can have an encouraging effect on academic performance and self-esteem, while helping to foster a positive attitude toward education (Carswell et al., 2009; Zweig, 2003).

With the growing popularity of the alternative school concept, the United States has experienced a surge in alternative schools with more than 20,000 programs currently being operated (Carswell et al., 2009). While these schools will inherently serve the most challenging students, at the core of alternative education lies the belief that its struggling readers require wide-ranging and groundbreaking methodologies that are too often absent from traditional schools (De La Ossa, 2005). While this supposition is justifiable, the research studies to advance the literacy development of African American males who struggle with reading in alternative high schools is virtually nonexistent (Pane & Salmon, 2009; Tatum, 2012). Because of this, many secondary schools, traditional and alternative, are guided in their reading instruction by research conducted primarily in the elementary grades (Tatum, 2012). Consequently, alternative schools inadvertently use elementary-level traditional methods of reading instruction for struggling readers in a secondary alternative setting. This conventional practice involves the remediation of reading skills, as well as the development of encoding and decoding skills. Although alternative secondary schools have good intentions, African Americans males, particularly those enrolled in alternative schools, are frequently failed and instructionally underserved by ineffective practices (Pane & Salmon, 2009).

Traditional schools teach reading as a skill isolated from economic, social, or cultural practices (Pane & Salmon, 2009). If alternative schools are to remain relevant in the reading education of the most challenging students, these methodologies must include culturally relevant texts that move beyond the cognitive focus; these texts should be attuned to the economic, social, and political environments of the students being served. Lastly, these innovative practices must use instructional methods that are effective with African American males (Husband, 2012a; Pane & Salmon, 2009; Tatum, 2006). While the aforementioned instructional practices clearly provide students with decoding and comprehension skills that are critical for any reading intervention, reading strategies alone will not suffice in closing the achievement gap (Gambrell, 2011).

THE AFRICAN AMERICAN STUDENT AND THE ACHIEVEMENT GAP

One need not conduct an exhaustive search to find evidence of the historical underachievement of African American students (Braun et al., 2010; Donnor & Shockley, 2010; Kirkland, 2011; Matthews et al., 2010; Tatum & Muhammad, 2012; Stevenson & Ross, 2015). African American males, more specifically, trail their Caucasian peers on all indicators of academic achievement at virtually every educational level and academic field (Matthews et al., 2010; Noguera, 2012). This difference in academic achievement, commonly referred to as the achievement gap, was first reported in 1966 in Coleman's *Equality of Educational Opportunity* (Lindo, 2006). Since that time, the National Assessment of Educational Progress has used national testing samples to track the academic performance trends of students (Lindo, 2006).

While the achievement gap between African American and European American students narrowed briefly during the 1970s and early 1980s, more recent statistics show that the achievement gap persists, and that the reading levels of African American high

school seniors are 29 points below those of their Caucasian counterparts (U.S. Department of Education, 2012). Additionally, the vocabulary average score for African American students is 35 points lower than their Caucasian peers (National Center for Education Statistics, 2013). While African American students are certainly not a homogeneous group, an understanding of some of the factors that contribute to these disparities can assist school administrators and teachers in the development of strategies to increase reading achievement and close the achievement gap (Husband, 2012a). The gaps in reading achievement between African Americans and Caucasians are well documented (Andrews, 2010; Cokley, McClain, Jones, & Johnson, 2011; Donnor & Shockley, 2010; Noguera, 2012; Pane & Salmon, 2009; Strayhorn & DeVita, 2009; Tatum & Muhammad, 2012). In addition, an equal amount of research exists that aims to explain the existence of these gaps, as well as the underperformance in reading achievement of African American males. If this historic underperformance is to be remediated, it is first necessary to understand some of the root causes, such as socioeconomic status and the oppositional cultural theory (Musti-Rao & Cartledge, 2007; Ogbu 1991, 2003; Walker, Greenwood, Hart, & Carta, 1994).

OPPOSITIONAL CULTURAL THEORY

One of the most popular, and ultimately controversial, theories to explain Black underachievement is Ogbu's oppositional cultural theory (Harper & Davis, 2012; Ogbu, 1991, 2003). This theory posits that minority students in the United States are split between two categories: voluntary minorities and involuntary minorities. The voluntary minorities are those ethnic groups, such as Asians and Europeans, who immigrated to this country by choice with their identities already formed. These groups, according to Ogbu (1991, 2003), have positive beliefs about their adopted country, and as such, show no

resistance to assimilating into the culture. The involuntary minorities are those ethnic groups whose ancestors were brought here by force (African Americans) or were forced into minority status (Native Americans). These groups have had to form their identities in a society that was deemed oppressive. This theory, therefore, proposes that these beliefs can lead to oppositional behaviors to the dominant culture (Ogbu 1991, 2003).

Oppositional cultural theory supports the assumption that some African American students will display varying cultural-specific survival mechanisms in educational settings (Tatum, 2006). Such devices include being disruptive, engaging in violence, and disassociating themselves from school because it is seen as a characteristic of the dominant culture; this disassociation ultimately threatens their chances of academic success (Brown & Brown, 2012; Harper & Davis, 2012; Tatum, 2006). Such behaviors, consequently, may lead to the suspension of African American males at disproportionate rates. Furthermore, the failure of school system administrators to recognize these coping mechanisms leads to inappropriate class designations and erroneous grade retentions, suspensions, and expulsions (Husband, 2012b; Pane & Salmon, 2009; Tatum, 2006). The absence of instruction during suspensions, then, has a direct and adverse effect on general academics, but it is even more disadvantageous because of the inadvertent penalties for African American males and their reading instruction (Husband, 2012a). Students miss the acquisition of basic reading skills, lose valuable engagement with texts that promote the developmental process necessary for reading comprehension, and do not receive full access to necessary curricula (Brown & Brown, 2012; Casserly, 2012; Husband, 2012b).

Notwithstanding the popularity and surface merits of the oppositional culture theory, it also has its share of detractors. One criticism of Ogbu's theory is that it lacks empirical evidence to support its claims about African American achievement (Brown &

Brown, 2012). Another criticism is that students often engage in oppositional behaviors simply for the sake of disrupting class. Many students who reject a mainstream education do so with little or no knowledge of social injustices or an awareness of a dominant, oppressive culture (Solorzano & Delgado-Bernal, 2001). Moreover, literacy research suggests that the underperformance of African American students is more likely to be related to a lack of prior literacy instruction, which includes the lack of culturally relevant texts (Husband, 2012a; Ray, 2012). The lack of rigor and effective educational pedagogies, as well as the marginalization of the language and experiences of African American males, has more to do with their underachievement in reading than their resistance to a dominant culture (Harper & Davis, 2012; Husband, 2012a; Ray, 2012).

THE EFFECT OF SOCIOECONOMIC STATUS

Researchers have cited a variety of reasons to account for the lack of academic achievement among African American students (Rojas-LeBouef & Slate, 2012; Rowley & Wright, 2011). Socioeconomic status (SES), however, is arguably the most examined factor linked to the achievement gap (Cokley et al., 2011; Gullan, Hoffman, & Leff, 2011; Harper & Davis, 2012; Howard, Flenbaugh, & Terry, 2012; Kirkland, 2011). SES is a construct that is seen as a barrier to academic achievement that disproportionately affects African American students. Students from low SES households are frequently included in definitions of the at-risk student and are generally associated with students who exhibit low phonological cognizance (Musti-Rao & Cartledge, 2007). Reardon (2011) demonstrated the relationship between SES and student achievement and found that the increase in the income gap since the 1960s has been matched by the increasing disparity in the achievement gap. Students from low SES households with average incomes of \$15,000 per year score significantly more than one full standard deviation

below students of high SES households (\$100,000 per year) in reading and math (Duncan & Magnuson, 2011). Still, more research suggests that SES may account for as much as 75% of the variance in a student's reading/academic achievement (Duncan & Magnuson, 2011; Marzano, 2000; Tatum & Muhammad, 2012). It is one of the most documented phenomena linked to both reading and general academic failure (Duncan & Magnuson, 2011; Musti-Rao & Cartledge, 2007; Reardon, 2011; Tatum & Muhammad, 2012).

Other negative traits of low SES students and poverty include a lack of health and nutrition, higher levels of chronic stress, lower levels of academic effort, little to no expectations about life outcomes, and poor or chaotic familial relationships (Jensen, 2013). While, individually, these outgrowths of low SES households have the capacity to inflict devastating educational losses on students, the most noticeable influence of SES is the level of vocabulary exposure. When compared to students from higher SESs, low SES students have more limited vocabularies and, ultimately, decreased opportunities for academic success (Walker et al., 1994). By the age of 4, high-SES students are exposed to more than three times as many words as low-SES students (Jensen, 2013).

Because vocabulary is an essential skillset for comprehension, this disparity in vocabulary exposure, a byproduct of SES, is often cited as an origin of the achievement gap between African American and Caucasian students (Jensen, 2013; Williams, 2011). While the quantity and quality of reading are significant, alterable factors in explaining the gaps in reading achievement, parents/students' SES, is considered to be the most substantial fixed factor that accounts for the variance in achievement by race (Hasselbring & Goin, 2004; Mathews et al., 2010). Notwithstanding the well-documented effect of SES on academic achievement, what is taught (curriculum) and how it is taught (instruction) are two significant variables still controlled by teachers and

schools (Tatum & Muhammad, 2012). Despite the socioeconomic status of students, effective teachers who use research-based instructional strategies can still dramatically affect student achievement (Marzano, 2003). Research strategies in isolation, however, have a minimal effect on reading achievement without students' reading motivation. Understanding the role of motivation is a key component of reading instruction, for if students are not motivated and inspired to read, they will never maximize their full reading potential (Gambrell, 2011; Unsworth & McMillan, 2012).

THE ROLE OF MOTIVATION IN READING

Schiefele (2009) defined reading motivation as the degree to which an individual intends to read a specific text in a particular setting. Given this definition, the role of motivation in the reading development process cannot be overstated. The International Reading Association has been consistent in highlighting the growth and preservation of a student's motivation to read in the process of reading comprehension, and other data support this supposition as well (Santa et al., 2000).

To facilitate the development of reading, motivation must be an essential behavior as it is directly correlated with a student's quantity of reading. This, in turn, ultimately fosters a desirable quality of reading comprehension (Schiefele et al., 2012). Reading comprehension scores have been found to increase, or decrease, with the corresponding change in student interest and reading motivation (Unsworth & McMillan, 2012). Though the building and development of reading motivation by all students is necessary for meaningful comprehension, research indicates that the promotion of this behavior is especially beneficial for struggling adolescent readers (Melekoğlu & Wilkerson, 2013; Strommen & Mates, 2004). Zentall and Lee (2012) sampled motivation in students with historically high rates of reading failure and motivational deficits. Following a

motivational intervention, each student participant posted increased rates of reading fluency, as well as improved reading comprehension scores.

Students who are inherently motivated to read develop more than the cursory understanding of their peers; their cognitive processes afford a deeper level of comprehension, and they share a predisposition to engage with more complex reading strategies than their peers do (Schiefele et al., 2012). In the absence of this essential reading behavior, however, adolescent students showed declines in critical reading skills, significantly lower levels of vocabulary, and a substantial surge in discipline issues (Melekoğlu & Wilkerson, 2013). In addition to these negative trends, a lack of reading motivation can lower academic competence, thereby diminishing the chances of meaningful comprehension (Schiefele et al., 2012).

The pedagogy of encoding, decoding, and comprehension skills, though necessary, is an ineffective reading instructional strategy when taught in isolation (Pane & Salmon, 2009). The positive correlation between student motivation and reading achievement, therefore, indicates that effective reading instruction at the secondary level should incorporate a component dedicated to the development and nurturing of reading motivation (IRA, 2000; Melekoğlu & Wilkerson, 2013). Gambrell (2011) recommended increasing motivation by allowing students to have a voice in their reading assignments. Giving students an opportunity to choose texts from a wide range of interests will increase their reading engagement. Additionally, teachers can substantially increase reading motivation when students are assigned texts and activities that are relevant to their lives. Texts that acknowledge and address their economic, political, social, and cultural environments give students the prospect of discussion, which, in turn, promotes

understanding and improves reading comprehension (Gambrell, 2011; Husband, 2012a; Tatum, 2006).

Guthrie and Wigfield (1997) further suggested the development of reading motivation by improving attainment value. In order for students to value reading as an integral part of their academic development, they must believe that their success with this essential skill is attainable (Guthrie & Wigfield, 1997). Any failure or lack of success in this core competency, whether it is perceived or real, will erode students' confidence in their ability to be successful in reading. This loss of confidence ultimately leads to a decline in reading motivation (Taylor, 2006). However, when students are given many opportunities to be successful with reading, their motivation to read will greatly increase (Guthrie & Wigfield, 1997).

African American males living in economically disadvantaged communities are continuously clustered in jurisdictions of failure; chief among these failures is the consistent gap in reading achievement that distinguishes African American males from every other educational demographic (Carswell et al., 2009; Noguera, 2012; Tatum, 2006). While achievement gaps in all respective disciplines are significant, the gap in reading achievement between African American males and every other educational subgroup is paramount because education, to a large degree, is contingent upon written materials (Schiefele et al., 2012). While research indicates a positive correlation between reading motivation and reading achievement (Becker, McElvany, & Kortenbruck, 2010; Melekoğlu, 2011; Melekoğlu & Wilkerson, 2013; Schiefele et al., 2012; Unsworth & McMillan, 2012), African American students are consistently found to express lower levels of reading motivation, as well as substandard levels of reading performance (Mucherah & Yoder, 2008; Noguera, 2012; Tatum, 2006). For many African American

males of low SES, high school is the end of their formal education. Hence, the identification and implementation of effective reading interventions at this level is of the utmost importance (Cuevas, Russell, & Irving, 2012; Slavin et al., 2008). A student's motivation to read is widely acknowledged as a predictor of reading success (Becker et al., 2010; Melekoğlu, 2011); consequently, researchers and educators are investigating cultural literacy as a solution to increase reading motivation and achievement (Husband, 2012a; Tatum & Muhammad, 2012).

CULTURAL LITERACY

With the development and endorsement of countless theories seeking to explain the historical underperformance of African American males, particularly with respect to their reading achievement, an equal amount of reading strategies and educational literacy reforms/programs have been proposed (Guy, 2015; Rojas-LeBouef & Slate, 2012; Rowley & Wright, 2011; Tatum & Muhammad, 2012). While programs like Achieve 3000, Reading Plus, and Kurzweil 3000 have shown potential in identifying students' needs and providing models of reading fluency and affirmations of success, the scarcity of empirical evidence does not support the implementation of these reforms and practices as tools for stimulating the literacy development of adolescent African American males. Many literacy practices and educational reforms in public schools, namely response to intervention and differentiated instruction, simply fail to comprehend the extent of students' needs as they pertain to African American adolescent males, and they rely primarily on research from studies that have been conducted with elementary students (Tatum, 2012; Tatum & Muhammad, 2012). Irrespective of where the research was derived, reading strategies and literacy initiatives in isolation will not have any significant effect on the reading achievement of African American adolescent males.

These strategies and initiatives must be used in conjunction with meaningful, culturally relevant texts (Tatum, 2006).

Theories like Ogbu's oppositional theory suggest that American educational standards are culturally biased, and as such, they fail to acknowledge the individuality of minority groups (Harper & Davis, 2012). This oversight, then, leads to an inadvertent marginalization of differing perceptions while creating inequitable teaching and learning opportunities for African Americans (Brown & Brown, 2012; Husband, 2012a; Ladson-Billings, 2009; Pane & Salmon, 2009). The inclusion of culturally responsive literacy instruction, therefore, mirrors the societal experiences of its students. Adolescent African American males, especially those from low-income households who are labeled as *at-risk* and *struggling readers*, demonstrate increased learning when they are engaged with texts that reflect positive outcomes for readers. Customarily, schools have promoted the technical features of reading with a focus only on cognition; the necessary shift, however, should take into account and include the cultural, emotional, political, and social needs of students (Husband, 2012a; Tatum, 2006).

Culturally relevant literature, therefore, fosters students' individualities and aids them in finding their voice. It can be customized to work within the confines of any traditional classroom, and because there are no programs or training materials to purchase, culturally relevant literacy only requires a shift in the approach to teaching reading. For students relegated to the remedial reading tracks, culturally relevant literature affords them opportunities to develop more in-depth cognitive strategies through reading (Tatum, 2006; West, 2012). Texts in which settings, events, speech, and character interactions are readily identifiable to African American males will lead to an

increase in reading motivation, which in turn will lead to an increase in reading achievement (Husband, 2012a).

Attributes of culturally relevant literature for African American adolescents include texts that are intellectually exciting and academically challenging, while allowing students to associate the social, economic, and political themes with the educational. These texts, as supported by the Common Core English language arts standards, can also engage students in authentic discussion and writing, while helping them better understand their own society (Husband, 2012; Tatum, 2006; Tatum & Muhammad, 2012). Texts that are reflective of African American culture are encouraged, but cultural literacy should also be implemented with texts from other writers when students are allowed to explore various themes through their own unique perspectives (Lester, 2006; West, 2012).

As a starting point, literacy experts recommend texts be diverse in authorship. They should range from the literary canon (i.e., Shakespeare, Poe, Wordsworth) to the historical and cultural pieces (i.e., Gregory, Dubois, Washington), and to the more diverse, contemporary writings of American authors (i.e., Soto, Angelou, Cisneros, Alvarez, Tan, Walker). Additionally, these texts should cover a diverse range of content and subject matter (Lester, 2006; Tatum & Muhammad, 2012). Some examples of these subjects could include illiteracy, race, violence, and the environment (Tatum, 2012).

While advantageous for the development and maintenance of reading fluency and comprehension, cultural literacy also affords students opportunities to build their confidence and become empowered through a meaningful application of reading skills such as questioning, discussion, and authentic writing exercises that allow students to reflect on their own reality (Tatum, 2006; West, 2012). Muhammad and Behizadeh (2015) contended that many schools employ routine writing practices that are too

frequently teacher centered. While this style of conditioned writing is antiquated and largely ineffective, it is considerably less effective when used in the instruction of writing with African American adolescents (Muhammad & Behizadeh, 2015). Writing in a culturally relevant classroom, therefore, becomes authentic for students when they see the connection to their reality (Muhammad & Behizadeh, 2015). Tatum (2013) suggested that writing in a culturally relevant classroom is authentic and powerful when it is aligned with the four historical writing patterns of African Americans: (a) self-define (writing their own narratives), (b) nurture/resilience (fight oppression), (c) the engagement of others (collaborate with peers for a better society), and (d) to build capacity (create building blocks for future generations of writers with similar causes). Culturally relevant classrooms not only encourage writing, but also value it. When teachers design reading and writing instruction around the identities of students, writing becomes more complex and achievement and engagement are significantly increased (Muhammad & Behizadeh, 2015; Tatum, 2015).

While culturally relevant texts belong at the heart of any curriculum that purports to improve the reading achievement of African American males, the texts by themselves will not reverse the tendencies of underperforming students. It is judicious to combine those texts with research-based reading instruction and other teacher behaviors that have been shown effective in the reading instruction and remediation of African American males (Tatum, 2006). Effective reading instruction should include the teaching of phonemic awareness, fluency, vocabulary, word recognition, and comprehension strategies (National Institute of Child Health and Human Development, 2000). These practices are sound reading strategies for students irrespective of race or gender (Casserly, 2012). From a research-based perspective, effective teaching behaviors for

African American males should include a mutually respectful teacher-student relationship, a concern for the social and emotional development of students, and a willingness to have open discussions about literature when these discussions aid students in developing cultural aptitude (Tatum, 2006).

Other strategies that are likely to increase the reading engagement of African American males include any endeavor that includes them as active participants. Music, poetry, debates, projects, and graphic organizers afford students the opportunity to move, as opposed to learning by sitting and listening (Husband, 2012b). Lastly, teachers must recognize that African American males who are deficient in reading bring a multitude of cultural, emotional, and social experiences to school; teachers should, therefore, have a plan to build on and develop this knowledge by planning rigorous lessons that focus on the convergence of reading, writing, and critical thinking (Tatum, 2012; Walker, Fergus, & Bryant, 2012). Such practices have shown increased reading motivation and reading achievement outcomes for Black males (Husband, 2012a).

With all of the disheartening research that projects a dismal outlook for the academic opportunities of African American males, it is important to note that not all are struggling readers. Successful African American male readers are helped by teachers who recognize that increasing the opportunities of students to interact with texts correlates with their overall reading achievement (Tatum, 2006). Further, their success in reading can likely be increased through discipline and vocabulary knowledge. Effective teachers of reading comprehension who employ classroom discussions to make meaning of the texts students encounter can further ensure the reading success of African American males (Tatum, 2012). While each of those strategies and practices in isolation is unlikely to be effective with every African American adolescent male, the

amalgamation of these reforms, along with the inclusion of technology, can improve their reading achievement and life outcomes (Casserly, 2012; Husband, 2012b; Tatum, 2006).

THE USE OF TECHNOLOGY IN READING INSTRUCTION

With the many advances in modern technology, school districts are seeing a spike in the use of technology-based reading interventions. These interventions, once used primarily in elementary and middle schools, are now commonplace in secondary institutions. While there is an abundance of research to support the effectiveness of these reading interventions in the elementary and middle school settings, the opposite is true for secondary educational institutions (Hasselbring & Goin, 2004; Slavin et al., 2008; Tatum, 2012; Tatum & Muhammad, 2012). Consequently, African American males entering secondary institutions with reading deficits are more likely to be received by teachers who are ill equipped to provide research-based technological forms of reading instruction. Furthermore, the probability of implementing successful interventions for struggling readers is remote (Hawkins et al., 2011).

Struggling readers require groundbreaking forms of reading and reading instruction (Hasselbring & Goin, 2004; Taylor, 2006), and within the spiral of the new Common Core Standards, the concept of college and career readiness underscores the importance of innovative ways of reading (Jensen, 2013). With the many similarities between screen-based reading and page-based reading, increasingly more classrooms are finding it easier to transition to screen-based text, as well as the use of technology as a form of cutting-edge reading instruction (Kist, 2013). The use of technology in reading instruction for secondary students shows promise in that embedded hyperlinks in texts encourage inferencing and vocabulary development, which is less likely to be nurtured through text-based reading (Allbritton, 2004). Similarly, technology-based reading

instruction that can pronounce unfamiliar terms and model reading fluency for struggling readers is more likely to develop students' reading strategies, as opposed to paper-based text (Cuevas et al., 2012). Students must be able to draw on their own experiences to unearth meaning from text, and research indicates that technology aids students in making these connections (Hasselbring & Goin, 2004). Computer-based instruction, therefore, can efficiently differentiate instruction while creating favorable literacy development opportunities for at-risk learners (Melekoğlu, 2011).

A key factor in the push for technology-based reading instruction is its potential to affect the all-essential reading behavior of motivation (Cuevas et al., 2012). The formatting and structure of screen-based texts, as well as the sensory stimulation associated with technology-based platforms, have all been shown to affect student engagement and interaction positively (Guthrie et al., 2006). Most importantly, however, is the fact that technology-based reading instruction has shown particular effectiveness in increasing the reading achievement of struggling readers, and has increased the reading effort and motivation of African American students (Bailey & Boykin, 2001; Howard, Ellis, & Rasmussen, 2004). Without motivation, students are much less likely to achieve their full literacy potential (Gambrell, 2011).

THE STRUCTURE OF *READ 180*

The potential effect of instructional technology on the reading achievement and reading motivation of struggling readers has generated an interest by school officials in the selection and implementation of technology-based reading interventions. In this ever evolving collage of computer-based reading instruction, *READ 180* boasts more than one million student users in over 40,000 classrooms in every state and is arguably one of the most recognizable reading software programs on the market (Hartry et al., 2008; Lang et

al., 2009; Melekoğlu, 2011; Papalewis, 2004). *READ 180* was the brainchild of Dr. Ted Hasselbring, of Vanderbilt University, in collaboration with the University of Central Florida's noted reading specialist, Dr. Janet Allen. The earliest form of this collaboration was dubbed the Orange County Literacy Project, but its alliance with Scholastic Incorporated led to the official release of *READ 180* in 1999 (Shawgo, 2005). The program was developed for students in Grades 4 through 12, and it is a comprehensive reading intervention platform designed to cultivate and enhance the reading aptitudes of struggling readers (Melekoğlu, 2011). Its combination of research-based teaching and learning practices includes reduced class sizes (capped at 15 students), small-group instruction, whole-group instruction, sustained independent reading, high-interest literature, and technology-rich reading instruction (Pearson & White, 2004).

The recommended instructional period for a *READ 180* class is a 90-minute block. Classes begin with a 20-minute, whole-group instructional session in which teachers target specific reading skills through activities such as attention-grabbers/bell-ringers, vocabulary activities, working with graphic organizers, or watching short video clips to engage students and acclimate them to specific topics (Papalewis, 2004). Occasionally, class discussions can be an extension of the whole-group instructional session. The next 60 minutes of the class consist of three arranged groups who rotate through a sequence of three separate 20-minute sessions. Each group spends 20 minutes working with instructional software, 20 minutes reading individually, and 20 minutes in small-group instructional time. The instructional software rotation allows students to work on reading skills specific to their individual deficits (Melekoğlu, 2011). The modeled/independent reading rotation allows students to choose hard copies of high-interest books from the *READ 180* class library or listen to audiobooks. These high-

interest texts use video introductions/trailers and art to engage students by helping them to develop images, ideas, and draw conclusions about the text before turning a single page. The collections cover various genres, from the arts to the sciences, and include a variety of titles from both fiction and nonfiction texts. A few of the titles include *Weird Science: How Freaky Animals Get That Way*, *Don Quixote*, *First Jobs*, *Life After High School*, and *Malcolm X*.

These books are categorized according to Lexile levels so students may select books that are matched to their individual readability levels. Independent reading is generally, though not always, assessed through some form of written response. The small-group instructional rotation allows students the opportunity to gain immediate feedback on their reading development. During this stage, teachers can offer specific, individualized reading strategies to students to advance reading and comprehension (Mims et al., 2006). The final 10 minutes of the instructional block consists of a whole-group wrap-up session when teachers provide students with a summary of the learning targets, encourage student reflection, and then conclude the lesson (Melekoğlu, 2001; Mims et al., 2006; Pearson & White, 2004).

AN EVALUATION OF RESEARCH PERTINENT TO *READ 180*

With more than one million student users in all 50 states, *READ 180* has garnered support among researchers, teachers, and school districts who employ this form of technology-based reading instruction (Hartry et al., 2008; Hasselbring & Goin, 2004; Lang et al., 2009; Melekoğlu, 2011; Pearson & White, 2004; Scholastic, 2013; Shawgo, 2005; Zapata, 2015). Still, for all the publicity and familiarity with *READ 180*, a surprisingly limited amount of credible, independent research exists (Institute of

Education Sciences, 2009; Shawgo, 2005). This section contains an evaluation of the *READ 180* research that has been published.

Studies Meeting WWC Evidence Standards with Reservations

Most of the studies pertaining to *READ 180* were authored or subsidized by the distributors of the reading intervention, Scholastic Incorporated (Shawgo, 2005).

Furthermore, of the 101 studies reviewed by the U.S Department of Education, none of them met the What Works Clearinghouse (WWC) evidence standards, and only seven met the WWC's evidence standards with reservations (Institute of Education Sciences, 2009). These seven studies of *READ 180* were conducted in New York, Virginia, Arizona, California, Florida, Ohio, and Texas with mixed outcomes.

Study 1: New York. In Brooklyn, New York, reading outcomes were compared between *READ 180* and non-*READ 180* students in 16 different schools. Approximately 362 *READ 180* students (Grades 4–8) were compared with 2,528 of their non-*READ 180* peers with similar, initial reading proficiency levels. Slightly more than 85% of the participants were African American, with just over 90% qualifying for free and reduced lunch. Using the pretest/posttest analysis after one year of the program's implementation, none of the outcomes from both groups indicated any statistically significant differences (White, Williams, & Haslem, 2005).

Study 2: Virginia. In southeastern Virginia, reading outcomes were compared between *READ 180* students and traditional reading remediation students in an urban middle school. Approximately 58 *READ 180* students (Grades 6–8) were compared with 58 of their traditional reading program peers with similar, initial reading proficiency levels. Additionally, both groups of students were enrolled in 55-minute language arts classes and 20 minute sustained silent reading sessions each day. Using the

pretest/posttest analysis of data after a full year of the program's implementation, it was determined that the measured differences between the reading achievement outcomes of both groups were neither substantively important nor statistically significant (Institute of Education Sciences, 2009; Woods, 2007).

Study 3: Arizona. In Phoenix, Arizona, 2,660 ninth graders in *READ 180* from three cohorts (2003–2005) were matched with their non-*READ 180* peers who had similar reading proficiency levels. All of the participants in this study were reading at least one or more years below their respective grade levels. Using the pretest/posttest method of analysis, it was determined that the mean outcome of the *READ 180* students (31.4) was substantively higher than that of the non-*READ 180* group (30.1). The Institute of Education Sciences (2009) and White et al. (2006) found that the differences between the treatment and control group were statistically significant (effect size = 0.13).

Study 4: California. In the Desert Sands Unified School District, California, 285 students in Grades 6, 7, and 9 were identified for the *READ 180* intervention based on their performance on the California Standards Test/English language arts. More than half (58%) of the participants were English language learners. Each student in the sample was matched with a member of the comparison group based on pretest reading scores. A pretest/posttest analysis showed that the *READ 180* group had a mean outcome of 293.05 as compared to a mean outcome of 280.16 for the controlled group. The mean difference was 12.89, and the WWC determined that this difference (effect size = 0.45) was statistically significant (Institute of Education Sciences, 2009; Scholastic, 2008).

Study 5: Florida. In a large school district, 599 ninth-grade participants from seven comprehensive high schools were classified as high-risk and moderate-risk students. The sample of high-risk *READ 180* students totaled 100 while the control (non-

READ 180) group included 90 high-risk students. The sample for moderate-risk students in *READ 180* used 207 participants while the control group (non-*READ 180*) included 202 moderate-risk students. After one year of implementation, a pretest/posttest analysis indicated that the difference between the treatment ($M = 196.92$) and control group ($M = 236.27$) of the high-risk students was neither substantive nor statistically significant (effect size = -0.21). Results from the moderate-risk group (Lang et al., 2008), however, indicated that the treatment group ($M = 134.15$) had a statistically significant (effect size = 0.26) result when compared to the control group ($M = 130.09$).

Study 6: Ohio and Texas. This 2002 study included students from five schools in Columbus, Ohio (sixth and seventh graders); four schools in Dallas, Texas (eighth graders); and two schools in Houston, Texas (eighth graders). In Columbus, Dallas, and Houston, the *READ 180* sample included 119, 101, and 59 students, respectively. The non-*READ 180* students in the Columbus, Dallas, and Houston sample were in groups of 52, 142, and 36, respectively. The comparison group in this particular study did not receive any alternative reading intervention; only the standard school curriculum was used for these students. After one year of the program's implementation, the improvement indexes for Columbus (+23), Dallas (+9), and Houston (+6) were not found to be statistically significant (Scholastic, 2002).

Study 7: Texas. In the Austin Independent School District, Texas, 307 seventh- and eighth-grade students who were reading at least one level below their grade were enrolled in *READ 180*. In the comparison sample, another 307 students (control group) were matched with the *READ 180* students using a pretest achievement measure. The comparison group received the school's standard curriculum, and no further reading interventions were used. After one year of the program's implementation, the student

outcomes indicated that the mean difference between the *READ180* group (23.9) and the control group (22.1) was 1.80. The effect size, as calculated by the WWC, was 0.14. The researchers and the WWC, therefore, concluded that the difference in reading achievement between the treatment and control group was not statistically significant (Haslam, White, & Klinge, 2006; Institute of Education Sciences, 2009).

Of the seven studies that met WWC standards with reservations, only two gave an indication that the growth of *READ 180* students, when compared to a control group, was statistically significant (Institute of Education Sciences, 2009; Scholastic, 2008; White et al., 2006). While the remaining five studies indicated growth for *READ 180* participants, this change in reading achievement was not statistically significant when compared to the reading achievement of the control groups (Haslam et al., 2006; Lang et al., 2009; Scholastic, 2002; White et al., 2005; Woods, 2007). Many of the research studies were rejected for two primary reasons: the researchers neglected to use control groups for comparisons, and when control groups were used, there were no measures developed to ensure that the intervention and control groups were equal at the baseline (Institute of Education Sciences, 2009). Although many of the rejected studies did not meet the requirements of the WWC, they did yield some practical and potentially useful information. Some of the rejected studies, for example, included high school students, who were noticeably absent from most of the WWC accepted studies. Additionally, some of the rejected studies addressed the program's effectiveness with English language learners, students with learning disabilities, and African Americans. Lastly, these studies investigated the effect of *READ 180* on reading motivation and measured its potential to increase reading achievement in comparison to other reading interventions.

STUDIES THAT FAILED TO MEET WWC EVIDENCE STANDARDS

One study conducted in the Los Angeles Unified School District sampled 1,073 students, with 78% identified as Hispanic. The study found that English language learners enrolled in *READ 180* increased their scores by at least three NCEs. By contrast, the nonparticipants indicated a statistically significantly lower average (Papalewis, 2002). In Fairfax County, Virginia, another study found that 66% of the participants gained at least one year in reading ability. More than 48% of these participants gained 2 years of reading ability, and 31.4% gained 3 or more years. Most notable was that 18% of students who participated in the program gained the equivalent of 4 or more years of reading ability (Pearson & White, 2004). Additionally, this study found that those students who began the *READ 180* program with the lowest Lexile levels experienced larger gains than the students who began with higher Lexile levels.

These achievements, therefore, support the claim by *READ 180* that it explicitly tackles the essential elements of effective reading instruction: critical thinking, spelling, fluency, vocabulary, and comprehension (Taylor, 2006). Another factor in the program's reported success is that, in accordance with guidelines of the Common Core Standards, *READ 180* prioritizes its use of content-area informational text. The increased use of science and social studies reading passages, as well as high-interest young adult literature, increases student engagement and motivation (Taylor, 2006).

In addition to this high-interest literature focus, *READ 180* employs computer adaptive software that generates and analyzes data based on student responses. The software then individualizes instruction accordingly, and this technology supports the instructional process in that it continuously differentiates and adjusts instruction to address student weaknesses (Mims et al., 2006; Taylor, 2006). A main component of this

differentiation is that, with headphones and a microphone, students can access software to practice decoding speed, fluency, and blending (Hasselbring & Goin, 2004).

A tenet of *READ 180* is its documented effect on students' reading motivation. The promotion of this reading behavior is essential "because competency in reading is necessary but insufficient by itself to engender better academic performance" (Biancarosa & Snow, 2004, p. 16). With struggling readers, particularly, motivation is critical. To address this need, *READ 180* invests in high-interest texts that generate student-teacher discussions about current, social, and cultural events. Subsequently, these discussions allow students to make connections between texts and their personal experiences, leading to an increase in their motivation to read (Tatum, 2006; Taylor, 2006).

Independent research reported by Scholastic Incorporated further substantiates its positive correlation with students' reading achievement and motivation. In a study of *READ 180* in schools operated by the U.S. Department of Defense, program participants gained more than five times the NCEs as nonparticipants (Shawgo, 2005). Furthermore, pretest and posttest *READ 180* data indicated that the number of students who disliked reading fell by 80% after one year in the course. At the conclusion of the program, 92% of the participants indicated favorable attitudes toward reading (Taylor, 2006).

In Seminole County, Florida, researchers from the Florida Center for Reading Research and Florida State University studied the effects of *READ 180* on 286 high school students from seven participating schools (Aguhob, 2006). Students were measured for growth in the middle of the intervention and at the end. The Florida Comprehensive Assessment Test reading assessment was used at the midpoint, while *READ 180's* assessment, Scholastic Reading Inventory, was used to measure growth at the end of the intervention. The results from the state reading assessment indicated that

ninth-grade *READ 180* students gained at least one year of growth, and 10th-grade students averaged almost 2 years of reading growth (Aguhob, 2006).

In the Phoenix Union High School District, Policy Studies Associates, an independent research firm, evaluated the effect of *READ 180* on ninth-grade students. This study used only ninth-grade students whose reading levels were at least one grade level below the norm. More than 4,000 student participants were observed in three different cohorts between 2003 and 2006. The impetus for this study was to determine if the reading achievement results for students in the reading intervention program could be replicated with consistent results. Additionally, the study evaluated the longitudinal effect of *READ 180* on the reading achievement of students approximately one year after they were removed from the program (White et al., 2006). *READ 180*, when fully implemented, addresses reading failure by allowing students to make connections with text and experience success (Taylor, 2006). The results of this study offered the strongest support of this concept. Each of the three *READ 180* cohorts (from 2003–2006) outperformed their non-*READ 180* peers by an average of 17.3 NCEs. Furthermore, in an analysis of the disaggregated data, African American and Hispanic students averaged gains of 11.9 and 9.4 NCEs, respectively (White et al., 2006). The benefits of *READ 180*, however, were not limited to the duration of the intervention. English language learners who were enrolled in *READ 180* outperformed the nonparticipant group by almost 9 points in the year following the reading intervention, and the approximate average was consistent across each of the cohorts evaluated (Scholastic, 2013; White et al., 2006).

INDEPENDENT RESEARCH NOT EVALUATED BY THE WWC

Melekoğlu (2011) documented the effect of *READ 180* on 25 general education students, as well as 13 students who were identified as learning disabled (LD) and reading below grade level. Students from three schools in a Midwestern state participated for one academic year. Students were assessed for growth in reading achievement with the SRI, and they were evaluated for changes in motivation using the Adolescent Motivation to Read Survey. The results indicated that LD students gained a statistically significant average of 169 Lexile points. Although the survey did not reveal any changes in motivation for LD students, students without learning disabilities showed statistically significant increases in their motivation (Melekoğlu, 2011).

Meisch et al. (2011) studied 19 Title I schools in Newark, New Jersey, where students were grouped into a *READ 180* cohort (treatment) and a traditional curriculum (control) cohort. Data for this research were collected and analyzed over a 5-year period, and the achievement outcomes were measured using the reading and language arts subscales of the Stanford Achievement Test. The study investigated the effects of *READ 180* on students in three distinct groups; students who received 1 year of the reading intervention, students who received 2 years, and students who received 3 years. These groups were subsequently compared to control group students. The results indicated that students who received 1 year of the treatment had higher mean scores on the Stanford Achievement Test than their peers in the control group; however, the differences were not found to be statistically significant. Students who received the treatment for 2 years, on the other hand, outperformed their peers in the control group in the reading comprehension subtest. Notably, these reading achievement results were consistent with special education students, males, and African Americans (Meisch et al., 2011).

In one particular study in rural Georgia, Peek (2010) studied 17 low-SES upper middle school students who were observed as participants in both the treatment and control group. The objective of this study was to determine the effect, if any, of *READ 180* on the reading achievement and reading motivation of students. For the first four weeks of reading instruction, students were taught the traditional reading curriculum. This 4-week period concluded with students being assessed with the SRI. The same group of students spent the next 4 weeks receiving reading instruction through the *READ 180* program. This instructional period also concluded with an SRI student assessment. The analysis compared the growth in Lexile scores from the traditional instruction to the growth in Lexile scores during the intervention. Students during *READ 180* instruction indicated statistically significant improvement that was an average of 27.27 Lexiles higher than the growth during the traditional instruction (Peek, 2010).

In another independent study by The Education Alliance at Brown University, an evaluation of the reading programs *READ 180* and Xtreme Reading was conducted between 2006 and 2011 in the Title I school districts of Springfield and Chicopee in Massachusetts (Scholastic, 2013). As a condition of enrollment in the reading programs, students had to be reading at least two grade levels below the norm. With 1,029 participants, of which 71% were identified as minority students, 347 were randomly assigned to *READ 180*, 338 were randomly assigned to Xtreme Reading, and the remaining 344 students were randomly assigned to a traditional English language arts control group (Scholastic, 2013).

As a measure of growth, the Stanford Diagnostic Reading Test, Series 4, was administered at the beginning of the school year as a pretest, and again at the conclusion of the school year as a posttest (Scholastic, 2013). The change in scores for each of the

reading interventions was analyzed and compared to that of the control group (traditional English class) to determine the effectiveness of the reading programs. Additionally, analysis was conducted to determine what, if any, effect would be observed for student reading performance based on the level of classroom implementation for each program.

Results indicated that the Xtreme Reading group outscored the control group by 0.20 NCEs; this, however, was not determined to be of any statistical significance (Scholastic, 2013). The *READ 180* group, conversely, outperformed the control group and their peers in Xtreme Reading by statistically significant averages of 2.39 and 2.19 NCEs, respectively. Furthermore, *READ 180* classrooms that exhibited moderate to high implementation levels demonstrated higher, and statistically significant, scores on the posttest than their peers in the control group. The relationship between levels of implementation and reading outcomes for participants in the Xtreme Reading program, however, were not statistically significant (Scholastic, 2013).

While independent research not evaluated by the WWC indicated favorable outcomes for students in *READ 180*, there were two notable exceptions. A 2005–2006 independent evaluation of *READ 180* in the Little Rock School District was directed by the Center for Research in Educational Policy (Mims et al., 2006). This study was neither conducted by, nor affiliated with, Scholastic Incorporated. The primary objective of this evaluation sought to determine the program's viability in remediating deficiencies and improving the reading achievement of African American students. Approximately 1,000 students were selected from five middle schools and five high schools, and both qualitative and quantitative measures were employed in the collection and analysis of data. At the conclusion of the evaluation, the findings were in stark contrast to the outcomes generally reported by Scholastic Incorporated.

The evaluation found that the reading scores of the *READ 180* and control groups were statistically equivalent for the sixth and eighth graders. Among seventh graders, the evaluation found *READ 180* students achieved significantly lower scores than the control group in reading comprehension and overall reading. Likewise, *READ 180* ninth graders performed significantly lower than the ninth graders in the control group on vocabulary, reading comprehension, and overall reading (Mims et al., 2006). Finally, after a careful analysis, Mims et al. (2006) concluded that *READ 180* was ineffective in remediating or improving the reading achievement of African American students. Although the participants surveyed (parents, teachers, and students) reported that they found the program beneficial, Mims et al. hypothesized that the underperformance of African American students might be a result of the reading assessments not being aligned to the *READ 180* curriculum. The researchers further rationalized the underperformance of African Americans by stating the students were grouped based on their reading levels and they were not randomly assigned to treatment groups (Mims et al., 2006).

The Albuquerque, New Mexico Public School investigated the effect of *READ 180* on reading achievement during the 2010–2011 school year (Damle, 2012). More than 500 *READ 180* students were compared to their peers who were not participating in the reading intervention. After the intervention, student growth was measured by achievement on the state's assessment. An analysis of variance compared the reading achievement of the groups. The Lexile gains for the *READ 180* groups were the same as the students who did not participate in the intervention. While there were concerns about the fidelity of the program's implementation, specifically classes not meeting the recommended time commitment, the school district concluded that *READ 180* students did not outperform their non-*READ 180* peers in the same school (Damle, 2012).

Many of the *READ 180* studies, including the ones accepted by the WWC, are not without some common limitations. These studies are limited in that the surveys and assessments used to measure reading achievement and reading motivation are expected to provide valid and reliable information; however, researchers have no control over the level of effort put forth by students on these instruments. These studies are also limited in that *READ 180* teachers participating in this research range in levels of training and teaching experience. Finally, these studies are limited in that the time recommendation by *READ 180* for students varies from classroom to classroom (Damle, 2012; Institute of Education Sciences, 2009; Mims et al., 2006).

SUMMARY

While the success of *READ 180* has been well documented (e.g., Kim et al., 2010; Melekoğlu, 2011; Mims et al., 2006; Papalewis, 2002, 2004; Pearson & White, 2004; Shawgo, 2005; White et al., 2006), many of these studies have been commissioned by Scholastic *READ 180* (Shawgo, 2005). While the *READ 180* reading intervention has shown some promise, the absence of empirical data related to the literacy development of adolescent African American males is troubling. Many literacy practices and educational reforms simply fail to account for the literary needs of African American adolescent males, and they rely chiefly on data from studies conducted on the elementary level (Tatum, 2012; Tatum & Muhammad, 2012). Furthermore, none of these studies has focused on *READ 180*'s effect in an alternative setting (Institute of Education Sciences, 2009).

The purpose of this quantitative, causal-comparative study, therefore, was to compare the reading achievement and motivation of two groups of African American males in an alternative high school. One group of students was enrolled in the reading

intervention program *READ 180*, while their peers were enrolled in a culturally relevant (cultural literacy) language arts class. Those literacy classes placed an emphasis on social, political, and cultural forms of literature. The pretest and posttest Scholastic Reading Inventory scores were used to measure the changes in reading achievement between the two groups. Likewise, the results of the Scholastic Independent Reader surveys for both groups were used to measure any changes in reading motivation.

This study is significant in that it is not sponsored by, nor is it affiliated with, Scholastic Incorporated and *READ 180*. Additionally, this study is significant because it can inform the decision-making process of district personnel, teachers, and administrators regarding the applicability of *READ 180* as a reading intervention resource. It will add to the existing body of knowledge concerning the effect of *READ 180* on the reading achievement and motivation of African American males who are enrolled in alternative high schools.

Chapter 3 contains a review of the research purpose, questions, and hypotheses, while providing insight into the research setting and participants. Instrumentation used for data analysis, collection methods, and interpretation is included. The chapter concludes with a discussion of the implications and expectations of this study.

CHAPTER III

METHODS

The purpose of this quantitative, causal-comparative study was to analyze the effect of *READ 180* on the reading achievement and reading motivation of African American males in an alternative high school as compared to African American male students enrolled in culturally relevant (cultural literacy) language arts classes. The Scholastic Reading Inventory was used to compare the changes in reading achievement for both groups of students, while the Scholastic Independent Reader was used to measure the reading motivation levels of the students. The scores of both groups were analyzed for comparison.

This chapter contains seven divisions. The first division contains a discussion of the implications of this study. The research questions, as well as the null and alternative hypotheses, are outlined in the second division. An overview of the study's design is in the third division, while the fourth division contains the descriptive characteristics of the sample and site. The concepts, definitions, sources of evidence, and measures of reliability and validity are presented in the fifth division and data collection procedures and the operationalization of variables are discussed in the sixth division. The seventh and final division contains the plan for data analysis. The chapter concludes with a summary and expectations.

IMPLICATIONS OF THE STUDY

The implications of this study are beneficial on multiple levels. Dissimilar to most *READ 180* studies, this research was conducted without any sponsorship from the

developers and distributors of *READ 180*. Additionally, few other studies on *READ 180* have ever sampled students beyond the 9th grade, or focused specifically on African American males (Lang et al., 2009). Finally, the results of this research may inform the decision-making processes of school districts in search of reading intervention programs, as well as add to the body of knowledge concerning the effects of *READ 180* on students who are enrolled in nontraditional/alternative high schools.

RESEARCH QUESTIONS AND HYPOTHESES

The following research questions were developed to guide the research process:

- R_{Q1}: Are there differences in the *reading achievement* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school?
- R_{Q2}: Are there differences in the *reading motivation* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school?
- R_{Q3}: Is there an interaction between (a) class (*READ 180* vs culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) in the *reading achievement* of African American male students enrolled in an alternative high school?
- R_{Q4}: Is there an interaction between (a) class (*READ 180* vs culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) in the *reading motivation* of African American male students enrolled in an alternative high school?

The research null and alternative hypotheses are as follows:

- R_{HO1}: There is not a statistically significant difference in the *reading achievement* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school.
- R_{HA1}: There is a statistically significant difference in the *reading achievement* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school.
- R_{HO2}: There is not a statistically significant difference in the *reading motivation* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school.
- R_{HA2}: There is a statistically significant difference in the *reading motivation* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school.
- R_{HO3}: There is not a statistically significant interaction of the levels of the independent variables of (a) class (*READ 180* vs. culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) on the *reading achievement* of African American male students enrolled in an alternative high school.
- R_{HA3}: There is a statistically significant interaction of the levels of the independent variables of (a) class (*READ 180* vs. culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) on the *reading achievement* of African American male students enrolled in an alternative high school.
- R_{HO4}: There is not a statistically significant interaction of the levels of the independent variables of (a) class (*READ 180* vs. culturally relevant

literature) and (b) time (pre-intervention vs. post-intervention) on the *reading motivation* of African American male students enrolled in an alternative high school.

R_{HA4}: There is a statistically significant interaction of the levels of the independent variables of (a) class (*READ 180* vs. culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) on the *reading motivation* of African American male students enrolled in an alternative high school.

DESIGN OF THE STUDY

A quantitative, causal-comparative design was used for this study. Quantitative research seeks to address questions about the relationships between measured variables in order to explain, predict, and control events (Leedy & Ormrod, 2005). A quantitative approach reduces potential bias by focusing on direct responses from participants without the need for interpretation. In quantitative research, specific, narrow questions are used to target measuring and explaining variable relationships (Cooper & Schindler, 2005; Creswell, 2005). In this study, both reading achievement and reading motivation were quantified in order to test the difference between the two class types (*READ 180* and culturally relevant literature).

A causal-comparative design is used when attempting to find relationships between independent and dependent variables after an event has already taken place (Brewer & Kuhn, 2010). In a causal-comparative study, two or more independent groups are compared on at least one dependent variable; however, the independent variable cannot be manipulated (as it can with an experimental design). For the current study, data are retrospective; therefore, individuals were already placed in their designated

classes, implying the independent variable could not be manipulated and the event has previously occurred. A causal-comparative design allows for the comparison of quantified dependent variables (reading achievement and reading motivation) between specific groups of the independent variables of class (*READ 180* and culturally relevant literature class) and time (pre-intervention and post-intervention).

SAMPLE AND SITE

This study analyzed the data from a retrospective sample of 300 African American male high-school students who have completed coursework in either the *READ 180* reading intervention program or the culturally relevant literature classes. The participants, ranging in ages from 16–18, were all enrolled in an alternative high school (choice) in a large, urban, Southeastern school district. Demographic information (socioeconomic status, ethnicity, and gender) for each of the three school years can be seen in Table 1.

The dataset contained at least three waves of achievement data for each student, which represented the pretest, midyear test, and posttest SRI scores. Only the pretest and posttest scores were used for inferential testing. However, the midyear test was used for examination of trend. The dataset also included pretest and posttest reading motivation data from the Scholastic Independent Reader survey. The data were drawn from archived data from school years 2010–2011, 2011–2012, and 2012–2013.

To ensure confidentiality and the protection of data, all data were stored and retrieved without any identifying traits such as student names or ID numbers. Approximately 150 sampled students were African American males from an alternative high school who completed 36 weeks of *READ 180*. The remaining 150 sampled

students were African American males from the same alternative school who completed 36 weeks of culturally relevant literature.

TABLE 1

DEMOGRAPHIC DATA FROM SCHOOL POPULATION

Demographic	2010–2011*	2011–2012	2012–2013
Socioeconomic status			
Free/reduced lunch	97.1	98.9	87.8
No assistance	2.9	1.1	12.2
Ethnicity			
African American	98.5	97.0	98.2
Hispanic	1.0	2.0	1.0
White	0.5	1.0	0.8
Gender			
Male	49.0	52.0	56.0
Female	51.0	48.0	44.0

**Percent of enrollment*

Power analyses were performed for each of the three analyses that could potentially be performed during the inferential testing associated with this study: (a) repeated-measures multivariate analysis of variance (RM-MANOVA), (b) repeated-measures analysis of variance (RM-ANOVA), and (c) Pearson's product moment correlational analysis. Pearson's product moment correlation was used to test the assumed correlation between the two dependent variables, as well as test for multicollinearity among these dependent variables (Pallant, 2010).

G*Power 3.1.9.2 does not have an option for a RM-MANOVA; therefore, the sample size estimation for this analysis was performed using simulations of the data. One possible method for estimating sample size when no formulas are available for the type of analysis being used is to conduct a computer simulation of the study (Guo, Logan,

Glueck, & Muller, 2013). The data from the treatments (*READ 180* and culturally relevant literature classes) were used to estimate the means and standard deviations of the reading achievement and reading motivation scores at both pre-intervention and post-intervention times (see Table 2).

TABLE 2
CALCULATED MEAN AND STANDARD DEVIATION FOR READING
ACHIEVEMENT AND READING MOTIVATION MEASURES

Measure/class	Pre-intervention		Post-intervention	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Reading achievement				
<i>READ 180</i>	662.2	258.8	816.8	226.7
Culturally relevant literature class	869.5	146.5	1028.1	141.0
Reading motivation				
<i>READ 180</i>	32.2	6.9	37.2	7.5
Culturally relevant literature class	34.2	7.1	39.9	6.5

A simulation of the data was performed using the estimated means and standard deviations. This simulation estimated if the sample size accessible to the researcher was large enough to power the between-groups test, the within-groups test, and the interaction effect of the RM-MANOVA. The simulation was performed three times using a sample of 300 (150 from each of the class groups) to reflect the sample obtainable by the researcher. The average of the three observed power values for the multivariate between-groups test was 1.0 (all three observed powers were 1.0), the average observed power for the multivariate within-groups test was 1.0 (all three observed powers were 1.0), and the average observed power for the multivariate interaction effect test was .99 (with observed

power values of .993, 1.0, and .972). Results indicated that a sample size of 300 was sufficient to conduct the testing at 80% power.

Power analyses for the RM-ANOVA were performed three times using G*Power 3.1.9.2. The power analysis for the between-factors RM-ANOVA was performed using an alpha level of .05, a power of .80, number of repeated measures set to 2, a total number of groups set to 2, correlation among repeated measures was estimated conservatively at .30, and a medium effect size of $f = .25$. Results indicated that a sample of 116 was necessary to conduct the between-factors RM-ANOVA at 80% power. The power analysis for the within-factors RM-ANOVA was performed using an alpha level of .05, a power of .80, number of repeated measures set to 2, a total number of groups set to 2, correlation among repeated measures was estimated conservatively at .30, a nonsphericity correction of 1, and a medium effect size of $f = .25$. Results indicated that a sample of 46 was necessary to conduct the within-factors RM-ANOVA at 80% power.

The power analysis for the interaction effect of the RM-ANOVA was performed using an alpha level of .05, a power of .80, number of repeated measures set to 2, a total number of groups set to 2, correlation among repeated measures was estimated conservatively at .30, a nonsphericity correction of 1, and a medium effect size of $f = .25$. Results of the power analysis indicated that a sample of 46 was necessary to conduct the interaction effect of the RM-ANOVA at 80% power.

Power analysis for the Pearson's product moment correlational analysis was performed using G*Power 3.1.9.2 for a two-tailed test using an alpha level of .05, a power of .80, a correlation under the null hypothesis set to $\rho = 0$, and a correlation under the alternative hypothesis set to $\rho = .30$ (representing a medium effect size). Results of the power analysis estimated that a total sample of 84 was necessary to conduct the

Pearson's product moment correlations. The sample obtainable by the researcher was 300. The power analyses performed indicated that using a sample of this size would sufficiently power all three analyses of this study.

CONCEPTS, DEFINITIONS, AND SOURCES OF EVIDENCE

READ 180 is a comprehensive reading intervention program designed to assist underperforming readers (Pearson & White, 2004). The program uses an array of high interest literature (i.e., Sharon Flake's *Money Hungry*, Angela Johnson's *Looking for Red*, Walter Dean Myers's *The Greatest: Muhammad Ali*), sustained reading and writing, and computer adaptive software to spur gains in reading achievement (Mims et al., 2006). A typical *READ 180* class begins with 20 minutes of whole-group instruction, after which students participate in three 20-minute rotations of small-group independent reading, use of instructional software, and small-group instruction (Pearson & White, 2004). A 10-minute whole-group lesson summarizes the learning activity and brings the session to a close (Mims et al., 2006). Students spend 18–36 weeks in the program. In this study, however, only the students who were enrolled for 36 weeks were included in the sample.

Cultural literacy promotes students' individualities and encourages self-reflection. For struggling readers, culturally relevant literature provides them opportunities to enhance cognitive strategies by reading and discussions. Culturally relevant literature empowers students through an authentic application of reading skills such as questioning, writing, and reflecting on their real-life circumstances (Tatum, 2006; West, 2012). Texts with themes and characters readily recognizable to African American males have been linked to an increase in reading engagement and reading achievement (Husband, 2012a). Features of cultural literacy for African American students incorporate texts that are academically stimulating, while allowing students to identify connections among

education, society, the economy, and politics. Culturally relevant classrooms incorporate authors from the literary canon (i.e., Shakespeare, Poe, Wordsworth), historical and cultural pieces (i.e., Gregory, Dubois, Washington), as well as the contemporary writings of American authors (i.e., Soto, Angelou, Cisneros, Alvarez). Such texts engage students in meaningful discussions and writing topics, while helping them better understand their own society (Husband, 2012a; Tatum, 2006; Tatum & Muhammad, 2012).

SCHOLASTIC READING INVENTORY

The primary tool for assessing the reading achievement of participants in this study was the Scholastic reading inventory (SRI). The SRI is a research-based screening tool that has been reliable (with 89% agreeability in reading consistency) in identifying students' reading comprehension and reading vocabulary levels (Morsy et al., 2010). The SRI uses a series of short narratives and expository passages that students process and demonstrate their mastery through a series of cloze strategies (e.g., "At least they allow me to write. Indeed, I believe they think my writing is something extraordinary. Each time I take out my copybook and quill, I see looks of approval pass from one to another. They a. influence b. appreciate c. memorize d. condemn my writing"). Although the test is not timed, students generally use between 35 and 60 minutes to complete the assessment. The SRI generates a Lexile score that allows teachers to identify students' reading ability, as well as track the progress of students over time (Morsy et al., 2010). Lexile scores range between 200L and 1700L (Lennon & Burdick, 2004). A student who has a Lexile score between 1050 and 1150 is reading within the ninth-grade band. Students scoring between 1100L and 1200L are within the 10th-grade band. A score between 1100L and 1300L is considered the average range for high school juniors and

seniors. Scores below 1000L are in the middle school reading band and scores 850L and below are considered elementary level (Scholastic, 2008).

SRI validity. Construct validity of the SRI was shown by Scholastic (2007) through the development of the instrument. Texts chosen for use in the SRI are authentic, developmentally appropriate, and the questions asked with these texts are relevant to the genre of the text (text from fiction draws different responses than text from nonfiction; Scholastic, 2007). Each item is drawn from content, which is chosen based on the tested ability of the student; therefore, students will develop appropriately based on their past and present achievement levels (Scholastic, 2007).

To show the test-retest reliability of the SRI, Scholastic (2007) performed numerous studies. The first study examined the reading levels by grade level. Reading levels, as measured by the SRI, grew steadily through elementary school, before beginning to level off through middle school. This is to be expected due to the curriculum of each of the grades, with more focus on reading through elementary and less focus on reading in middle school (Scholastic, 2007). Additionally, the study showed growth from pretest to posttest, with a mean gain of 85.2, what would be expected to happen (Scholastic, 2007). Both aspects within this study show the validity of the SRI. Four other studies from Scholastic found positive relationships between SRI scores and enrollment in a reading intervention program, which was to be expected and therefore enhanced the validity of the SRI in assessing reading performance.

SRI reliability. The SRI was developed to minimize sources of measurement error in order to minimize the standard error of measurement (SEM), which in turn increases the reliability of the results of the measure (Scholastic, 2007). The number of test items, the quality of test items, and the match between item difficulty and student

ability are test characteristics on which the SEM magnitude depends (Scholastic, 2007). The SRI analyzes and balances each of these characteristics to ensure an acceptable SEM, which improves the reliability of the measure. The SRI increases or decreases the difficulty of questions during the test to match the difficulty of questions to student ability, thereby decreasing the SEM (Scholastic, 2007). Additionally, when less prior knowledge is known about a student, the number of items to complete the test increases. An increase in test length is used to balance the increase in SEM due to a potential gap between the item difficulty and the student ability with a decrease caused by a longer test (Scholastic, 2007).

Test-retest reliability was also used to express the reliability of the SRI.

Scholastic (2007) reported that the SRI was administered to students in Grades 3–10 in a large urban school district. Reader consistency estimates were used to show the reliability of measures. Reader consistency estimates are derived when alternate-form reliability and test-retest reliability are taken together (Scholastic, 2007). The overall reader consistency estimate for the SRI reported by Scholastic was .89 (showing agreeable classification of students 89% of the time).

SCHOLASTIC INDEPENDENT READER SURVEY

The primary tool for measuring the change in the reading motivation of students in this study was the Scholastic Independent Reader (SIR) survey. The SIR survey is an element of the *READ 180* program and is used to evaluate claims that the program increases the critical domain of reading motivation (Taylor, 2006). The survey was established to measure students' levels of motivation, engagement, and self-efficacy (Scholastic, 2007). However, only 10 questions (1, 2, 3, 12, 15, 17, 18, 22, 23, and 25) related to motivation were analyzed (e.g. "Knowing how to read well is not very

important to me”). The survey consists of 30 questions (10 per domain) and requires approximately 15–20 minutes for students to complete. The survey employs a 5-point Likert scale (*strongly agree, agree, undecided, disagree, and strongly disagree*).

Based on the student responses to specific statements, each response is valued with a range of 1 to 5 points. Domain scores are calculated by totaling the responses to questions in the respective domain (Scholastic, 2007). Readers with a total score between 0–24 are considered to have a low level of reading motivation. Students who score between 25 and 39 are considered moderately motivated, and the highly motivated readers are students who score between 40 and 50 in the reading motivation subtest. As recommended by *READ 180*, the SIR survey is given twice per year (Scholastic, 2007).

SIR validity and reliability. Validity and reliability information was sought through the school being studied and the research and validation department with Scholastic; however, validity and reliability of the SIR was not available because the information had not been published. Additionally, only the overall scores were available in the retrospective data available to the research; therefore, the researcher could not perform validity and reliability statistical tests. This lack of validity and reliability information for this measure limited the interpretation of the results in regards to reading motivation of African American male students enrolled in an alternative high school.

DATA COLLECTION PROCEDURE

All reading achievement and reading motivation scores for students in this school were stored on the Scholastic Achievement Manager, a comprehensive online management system. Additionally, these scores were backed up onto a drive maintained by the school’s reading specialist. The principal of the alternative school and the school district granted use of the reading scores for African American males who completed the

READ 180 reading intervention program, as well as the data for African American males who completed the culturally relevant literature classes. The datasets contained at least three waves of data for each student, which represented the pretest, midyear test, and the posttest for SRI achievement scores. Only the pretest and posttest scores were used for inferential testing. The data also included pretest and posttest reading motivation survey data from the Scholastic Independent Reader survey. None of the data contained student names, student ID numbers, or any other identifiable information.

OPERATIONALIZATION OF VARIABLES

The two dependent variables used in this study were reading achievement and reading motivation. Reading achievement (achievement) was a continuous variable measured by the SRI. Achievement represents the reading achievement level of an individual. Possible values for achievement range from 200 to 1700 Lexiles with higher scores indicating a higher level of reading ability. Reading motivation (motivation) was a continuous variable measured by the SIR. Motivation represents the reading motivation level for an individual. Possible values for motivation range from 10 to 50 with higher scores being indicative of higher levels of reading motivation.

Two independent variables were used in this study. Class is a dichotomous variable that represented the between-groups measure of the study. Class was used to indicate which of the two class types the student took during the school year (*READ 180* or culturally relevant literature class). Time is a dichotomous variable that represented the within-groups measure of the study. Time was used to indicate which period the test was taken, either before the class (pretest) or after the class (posttest).

DATA ANALYSIS PLAN

Multivariate testing was performed using a level of significance set at 95%. Using multivariate analysis of variance allowed the researcher to remain conservative in hypothesis testing by limiting the potential of Type I error (Field, 2005). Prior to assumption checking and hypothesis testing, descriptive statistics were used to provide insight into the characteristics of the sample. The assumptions necessary for the appropriate use of a RM-MANOVA were checked. Assumptions checked included (a) participants were only part of one group, (b) the dependent variables were normally distributed for each group, and (c) the covariance matrix of the dependent variables was equal (Tabachnick & Fidell, 2013). Additionally, sample size requirements, outlier restrictions, and linearity and multicollinearity were checked prior to the use of the MANOVA (Pallant, 2010).

Sample size. Each cell of the MANOVA must have a minimum number of cases indicated by the number of dependent variables in the study (Pallant, 2010). This is ensured from the data collection performed in this study. Each cell contained more than the two minimum cases (as indicated by the use of two dependent variables).

Outliers. Univariate outliers were examined using box-plots and scatterplots of the dependent variables of the study. Multivariate outliers were examined using Mahalanobis distances (Pallant, 2010). Outliers were removed from the dataset (Tabachnick & Fidell, 2013).

Normal distribution. To test univariate normality, a Shapiro-Wilk test was used to determine if the distributions of the dependent variables were normal. For multivariate normality, the Mahalanobis distances were examined (Pallant, 2010). However, MANOVA is robust to deviations from normality with larger sample sizes and equal

independent groups; therefore, no large differences in the mean, median, and 5% trimmed mean were detected and the untransformed, raw dependent variables were used.

Homogeneity of variances. Levene's test of homogeneity was used to determine if there were equal variances between the two groups of student scores. A violation of this assumption (indicated by a significance less than .05), could lead to a more conservative alpha level (.025) being used for determining significance within the study (Tabachnick & Fidell, 2013).

Homogeneity of covariances. Box's test of equality of covariance determines if this assumption is violated ($p < .001$). This statistical result would warrant the analysis of data to be run as two separate repeated measure ANOVAs (Lund & Lund, 2013).

Linearity. Linearity between the dependent variables was assessed using a scatterplot matrix between achievement and motivation for each possible grouping between the independent variables of class and time (Pallant, 2010). Examining these scatterplots provided insight into the straight-line relationship between the variables.

DATA INTERPRETATION

The focus of this study was to determine if *READ 180* is a viable option for the reading remediation of African American males who are enrolled in alternative schools. The change in reading scores for this group over time, therefore, was juxtaposed with any changes in the reading scores of African American males who completed culturally relevant literature classes. SPSS was used to test for the simple main effects of group (*READ 180* or culturally relevant literature) and time (pre and post), in addition to the interaction effect.

Testing the main effects of time (pre and post) determined if there were any statistically significant differences in reading achievement and/or reading motivation at

any of the two different points of time, regardless of group membership. Likewise, the testing of main effects of between-group membership determined if there were statistically significant differences in achievement and/or motivation between the two groups, regardless of the testing times (Lund & Lund, 2013). Finally, the testing of the interaction determined if there were statistically significant differences in changes in achievement and/or motivation scores between levels of independent variables.

A repeated-measures multivariate analysis of variance (RM-MANOVA) was used to test the hypotheses of this study. The two independent variables were (a) class with two levels (READ 180 and culturally relevant literature class), and (b) time with two levels (pre-intervention and post-intervention). The two-way interaction between the independent variables was investigated first. The MANOVA was conducted to assess the effect of the independent variables on the linear combination of the dependent variables (Tabachnick & Fidell, 2013).

SUMMARY AND EXPECTATIONS

Prior research has indicated that *READ 180* can have a significant effect on the reading achievement and reading motivation of students (Kim et al., 2010; Lombardi, 2015; Mims et al., 2006). However, due to a lack of research with respect to high school students, African Americans students (particularly African American males), or students who are enrolled in alternative high school settings (Institute of Education Sciences, 2009), the generalizability of this success should not be expected.

CHAPTER IV

RESULTS

The researcher's purpose in conducting this quantitative, causal-comparative study was to compare the reading achievement and motivation of two groups of African American males in an alternative high school setting. One group of students ($n = 150$) was enrolled in the reading intervention program *READ 180*, while their peers were enrolled in culturally relevant (cultural literacy) literature classes ($n = 150$). The pretest and posttest Scholastic Reading Inventory scores were used to compare changes in reading achievement (Lexile level) between the two groups. The Scholastic Independent Reader surveys of both groups were used to compare any changes in reading motivation between the two groups over the course of one academic year.

DATA SCREENING

The dataset was screened to check the assumptions necessary for the appropriate use of a RM-MANOVA. Assumptions included (a) participants were only part of one group, (b) the dependent variables were normally distributed for each group, and (c) the covariance matrix of the dependent variables was equal (Tabachnick & Fidell, 2013). Additionally, the dataset was screened for outliers and the presence of singularity was tested (Pallant, 2010). Although skewness and kurtosis values were within normal (-2 and +2) ranges (George & Mallery, 2010), the Shapiro-Wilk test indicated a lack of normality ($p < .05$) for several variables in both groups (see Table 3). Therefore, the distributions of each dependent variable in each group were examined for univariate outliers using box-plots and multivariate outliers were examined using Mahalanobis

distances. Eleven cases were removed as multivariate outliers and another eight were identified as univariate outliers; therefore, the total sample was reduced to 281.

TABLE 3

DESCRIPTIVE STATISTICS OF DEPENDENT VARIABLES BY GROUP AND TIME: ORIGINAL SAMPLE

Group/variable	<i>M</i>	<i>SD</i>	Median	5% trimmed mean	Skew	Kurtosis	Shapiro- Wilk <i>p</i>
<i>Culturally relevant literature (n = 150)</i>							
Motivation-pretest	34.23	7.07	34.00	34.37	-.28	.07	.09
Motivation-posttest	39.93	6.53	40.00	40.07	-.27	-.75	.02
Achievement-pretest	869.48	146.49	882.50	875.27	-.60	.67	< .01
Achievement-posttest	1028.13	141.02	1030.00	1025.67	.17	.37	< .01
<i>READ 180 (n = 150)</i>							
Motivation-pretest	39.93	6.53	40.00	40.07	-.27	-.75	.01
Motivation-posttest	37.23	7.51	38.00	37.47	-.44	-.47	< .01
Achievement-pretest	662.19	258.80	721.50	675.49	-.76	.00	.51
Achievement-posttest	816.83	226.66	845.00	824.46	-.60	.32	< .01

After removal of the univariate and multivariate variables found in the initial data screening, the remaining dataset ($n = 281$) was again screened to determine if the study sample met the assumptions of MANOVA. Table 4 contains the correlation among the dependent variables for each group. Singularity is evident if bivariate correlations are above .90 (Tabachnick & Fidell, 2013). No correlations reached that value; therefore, the data met the assumption of multicollinearity.

Although the Shapiro-Wilk test (see Table 5) indicated that several dependent variables were not normally distributed ($p < .01$), scatterplots showed linear relationships between the variables in each group and no heteroscedasticity was evident (Figure 1). Although a test of homogeneity of variance was found to be significant for achievement (Box's $M = 41.79$, $p < .01$), most statistics, such as Box's M , are considered conservative

and RM-MANOVA is considered robust for most assumptions of the procedure (Tabachnick & Fidel, 2013). Transformations of the achievement variable and removal of more outliers were considered; however, the results of the RM-MANOVA were the same. Therefore, conserving sample size was considered more important and the sample size of 281 was used in the analysis of the research questions.

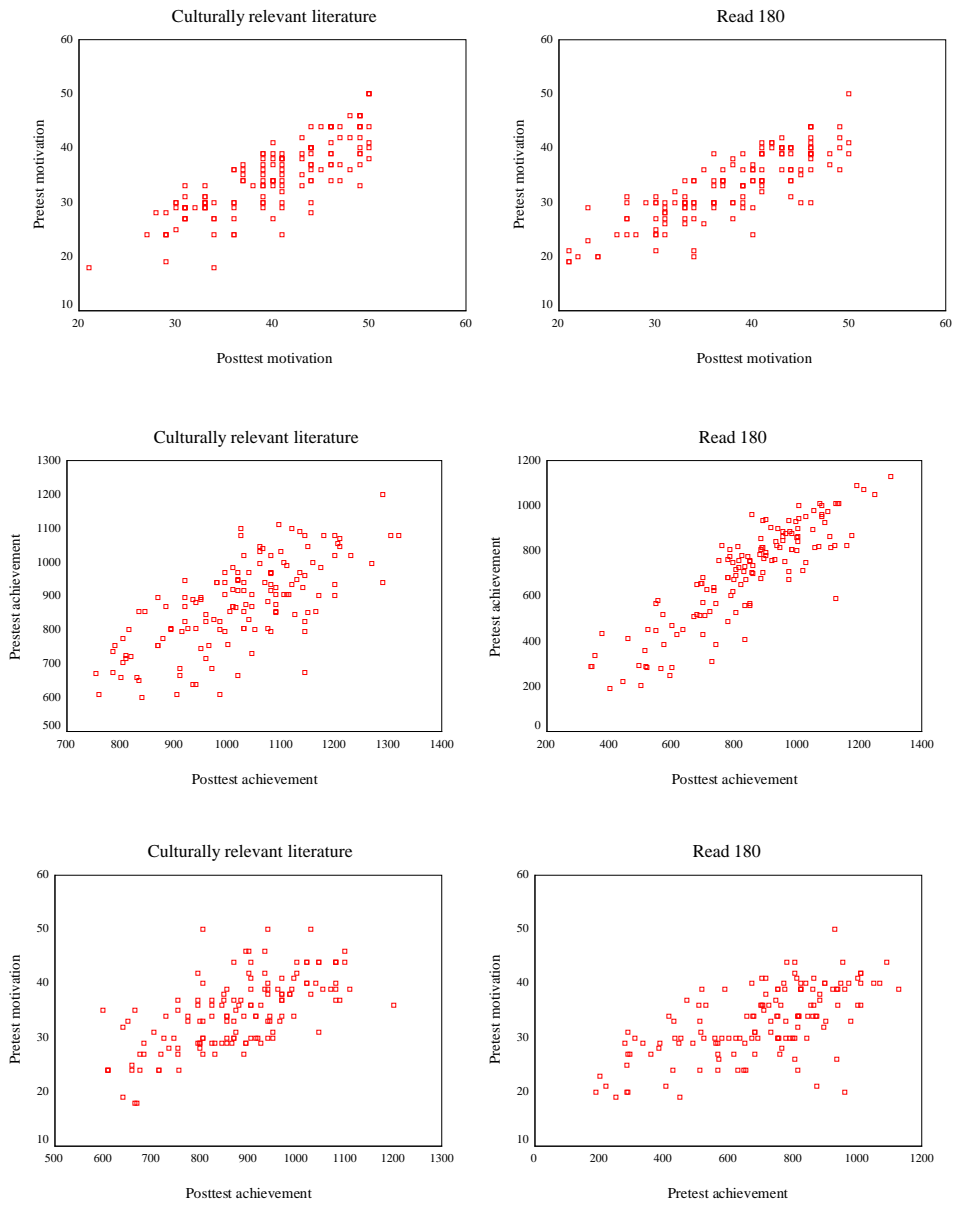
TABLE 4
CORRELATIONS AMONG DEPENDENT VARIABLES BY GROUP AFTER OUTLIERS REMOVED

	Motivation-posttest	Achievement-pretest	Achievement-posttest
Cultural relevant literature (<i>n</i> = 141)			
Motivation-pretest	.81	.66	.58
Motivation-posttest		.47	.58
Achievement-pretest			.70
<i>READ 180</i> (<i>n</i> = 140)			
Motivation-pretest	.83	.63	.61
Motivation-posttest		.55	.65
Achievement-pretest			.88

TABLE 5
DESCRIPTIVE STATISTICS OF DEPENDENT VARIABLES BY GROUP AND TIME AFTER OUTLIERS REMOVED

Group/variable	<i>M</i>	<i>SD</i>	Median	5% trimmed mean	Skew	Kurtosis	Shapiro-Wilk <i>p</i>
Culturally relevant literature (<i>n</i> = 141)							
Motivation-pretest	34.63	6.60	34.00	34.63	-.02	-.25	.19
Motivation-posttest	39.98	6.56	40.00	40.12	-.28	-.75	< .01
Achievement-pretest	876.57	128.62	885.00	877.78	-.14	-.50	.15
Achievement-posttest	1022.52	124.78	1030.00	1021.90	-.06	-.38	.28
<i>READ 180</i> (<i>n</i> = 140)							
Motivation-pretest	32.94	6.35	33.50	33.04	-.18	-.47	.02
Motivation-posttest	37.65	7.12	39.00	37.86	-.37	-.55	< .01
Achievement-pretest	701.15	216.68	750.50	706.99	-.51	-.43	< .01

Group/variable	<i>M</i>	<i>SD</i>	Median	5% trimmed mean	Skew	Kurtosis	Shapiro- Wilk <i>p</i>
Achievement-posttest	841.14	203.60	849.50	846.12	-.38	-.23	.09



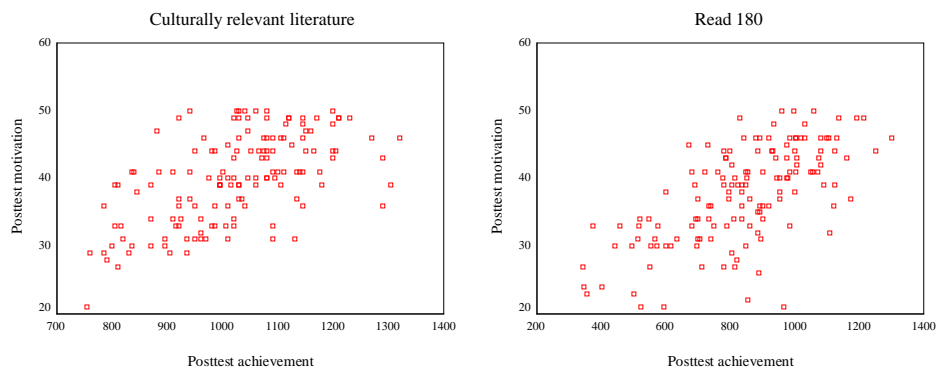


FIGURE 1. SCATTERPLOTS OF DEPENDENT VARIABLES IN EACH GROUP.

ANALYSIS OF THE RESEARCH QUESTIONS

- R_{Q1}: Are there differences in the *reading achievement* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school?
- R_{Q2}: Are there differences in the *reading motivation* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school?
- R_{Q3}: Is there an interaction between (a) class (*READ 180* vs culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) in the *reading achievement* of African American male students enrolled in an alternative high school?
- R_{Q4}: Is there an interaction between (a) class (*READ 180* vs culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) in the *reading motivation* of African American male students enrolled in an alternative high school?

Table 6 contains the results of the RM-MANOVA. Significant differences were found between the two groups of students on one or more of the dependent variables ($F [2, 278] = 48.48, p < .01, \eta^2 = .26$). The main effect of time was also significant ($F [2, 278] = 354.06, p < .01, \eta^2 = .72$). However, the interaction between time and group was not significant ($F [2, 278] = 0.88, p < .42, \eta^2 < .01$). Wilks' Lambda is the criterion of choice to evaluate the results of the analysis, unless there is reason to use Pillai's criterion (Tabachnick & Fidell, 2013). In this analysis, the statistical tests were the same and Wilks' Lambda was reported.

TABLE 6
MULTIVARIATE RESULTS OF REPEATED MEASURES MANOVA

	Statistic	<i>F</i>	Hypothesis <i>df</i>	Error <i>df</i>	<i>p</i>	η^2
Between subjects						
Group	Wilks' Lambda	48.48	2	278	< .01	.26
Within subjects						
Time	Wilks' Lambda	354.06	2	278	< .01	.72
Time * Group	Wilks' Lambda	0.88	2	278	.42	< .01

Table 7 contains the univariate results of the analysis. The dependent variables of achievement and motivation were significantly different across time ($F [1, 279] = 547.27$, $p < .01$, $\eta^2 = .66$) and ($F [1, 279] = 432.92$, $p < .01$, $\eta^2 = .61$), respectively. Table 8 contains the results of a series of paired-samples *t* tests. The *t*-test results indicated that in each group of students, change was significant from pretest to posttest in both motivation and achievement.

TABLE 7
UNIVARIATE RESULTS OF REPEATED MEASURES MANOVA

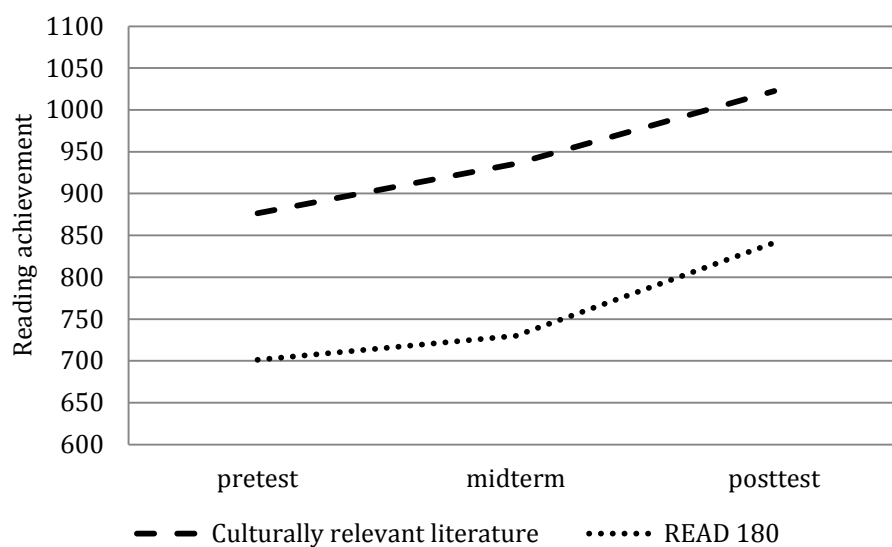
Source	Measure	SS	df	MS	<i>F</i>	<i>p</i>	η^2
Time	Achievement	2871521.34	1	2871621.34	547.27	< .01	.66
	Motivation	3550.96	1	3550.96	432.92	< .01	.61
Time * Group	Achievement	1246.65	1	1246.54	.24	.63	< .01
	Motivation	14.40	1	14.40	1.76	.19	.01
Error (Time)	Achievement	1463969.76	279	5247.20			
	Motivation	2288.48	279	8.20			

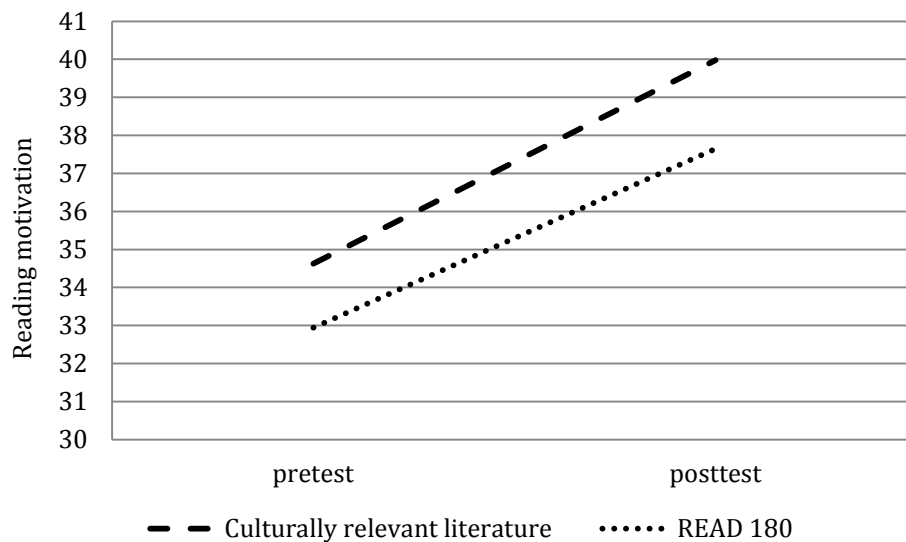
TABLE 8**UNIVARIATE POST HOC RESULTS**

Group/variable	Paired differences		95% CI		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	Lower	Upper		
Culturally relevant literature (<i>n</i> = 141)						
Motivation-pretest/posttest	-5.35	4.07	-6.03	-4.67	-15.59	< .01
Achievement-pretest/posttest	-145.94	98.92	-162.41	-129.47	-17.52	< .01
<i>READ 180</i> (<i>n</i> = 140)						
Motivation-pretest/posttest	-4.71	4.03	-5.38	-4.03	-13.83	< .01
Achievement-pretest/posttest	-139.99	105.87	-157.68	-122.29	-15.64	< .01

Figures 2 and 3 illustrate the change across time in both groups of students.

Figure 2 also includes the midyear score in achievement to provide further insight into the growth of the students. In both groups, statistically significant growth occurred in





reading motivation and reading achievement. However, there was no interaction between type of reading program and time.

FIGURE 2. CHANGES IN READING ACHIEVEMENT ACROSS TIME BY GROUP.

FIGURE 3. CHANGES IN READING MOTIVATION ACROSS TIME BY GROUP.

INTERPRETATION OF NULL HYPOTHESES

The null hypotheses stating no change across time were rejected. Students in both groups did experience significant, positive growth in reading motivation and reading achievement. However, null hypotheses stating no significant interaction effect on the dependent variables of reading motivation and reading achievement and time were not rejected. Because the differences between groups at posttest are largely reflective of the differences that existed at pretest, it seems that differences that existed between groups

are more likely attributed to differences in the composition of the groups, rather than differences in the type of reading program.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Historically, African American males have performed near, or at, the bottom of every academic classification when compared to most other ethnicities. Their performance in literacy and reading is no exception. While many school districts have implemented literacy programs and strategies to increase the reading achievement of this population, the research on the effectiveness of these interventions remains scarce. Chapter 1 contains the purpose of the study, a statement of the problem, the research questions, and the assumptions, significance, and limitations of this study. Chapter 2 contains a review of the related literature, while the research design, data collection, data analysis, and data interpretations were outlined in Chapter 3. Chapter 4 contains a presentation of the results of the statistical analyses related to the research questions, and this chapter contains an overview of the entire study, as well as a summary of the major findings, implications for action, and recommendations for further research.

SUMMARY OF THE STUDY

This study analyzed the data from a retrospective sample of 300 African American male high school students who participated in 36 weeks of either the *READ 180* reading intervention or the culturally relevant literature (cultural literacy) classes. The participants, ranging in ages from 16–18, were all enrolled in a choice alternative high school in a large, urban, Southeastern school district. The purpose of this study was to determine if either reading intervention had a statistically significant effect on the reading achievement and reading motivation of the participants in their respective groups.

The results from the data analysis indicated that students in *READ 180* did exhibit statistically significant growth in reading achievement and reading motivation. Similarly, the results from the data analysis of students who participated in culturally relevant literature classes also indicated statistically significant growth in both reading achievement and reading motivation. While the changes in reading achievement and reading motivation were marginally higher for students who participated in culturally relevant literature classes than for students who participated in *READ 180* classes, these differences were not statistically significant.

OVERVIEW OF THE PROBLEM

By 2035, population trends indicate that African Americans, Latinos, and other non-Whites will account for more than half of the U.S. population (Center for Public Education, 2012; Sullivan et al., 2012). With this shift in the demographics of U.S. students, there is a movement among school districts to address the literacy needs of this growing population with effective, specialized interventions and strategies (Center for Public Education, 2012; Harmon et al., 2011). One of the more popular reading interventions being used appears to be Scholastic Incorporated's *READ180* (Kim et al., 2010; Mims et al., 2006; Papalewis, 2004; Pearson & White, 2004; Shawgo, 2005). The implementation of cultural literacy has also gained traction as an intervention to support the reading development of African American students. Although research shows that *READ 180* can have potentially positive effects on reading achievement for African Americans, only one study sampled high school students beyond the ninth grade, one included African American students as 16% of the sample, and none of the studies investigated the program's viability in alternative schools (Lang et al., 2009).

Because of a lack of research with respect to the effectiveness of *READ 180* for alternative high school students or African American students beyond the ninth grade, this study may help to establish if there is any statistically significant change in reading achievement or reading motivation for African American males using the *READ 180* program in an alternative setting. Additionally, this study may also identify potential benefits of cultural literacy for high school students in an alternative setting. This valuable information can inform the decision-making process of school district leaders as it pertains to the identification and procurement of effective reading intervention resources for African American males, particularly those served in alternative settings.

PURPOSE STATEMENT AND RESEARCH QUESTIONS

The purpose of this quantitative, causal-comparative study was to compare the reading achievement and motivation of two groups of African American males in an alternative high school setting. One group was enrolled in the reading intervention *READ 180*, while the other group was enrolled in culturally relevant literature classes. The pretest and posttest Scholastic Reading Inventory (SRI) scores were used to compare the changes in reading achievement between the two groups. Similarly, the Scholastic Independent Reader (SIR) surveys of both groups were used to compare any significant changes in reading motivation over the course of one academic school year.

The following research questions were developed in order to guide the research process:

R_{Q1}: Are there differences in the *reading achievement* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school?

- R_{Q2}: Are there differences in the *reading motivation* of African American male students enrolled in *READ 180* and culturally relevant literature classes in an alternative high school?
- R_{Q3}: Is there an interaction between (a) class (*READ 180* vs culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) in the *reading achievement* of African American male students enrolled in an alternative high school?
- R_{Q4}: Is there an interaction between (a) class (*READ 180* vs culturally relevant literature) and (b) time (pre-intervention vs. post-intervention) in the *reading motivation* of African American male students enrolled in an alternative high school?

REVIEW OF METHODOLOGY

This quantitative, causal-comparative study analyzed archived data from an alternative high school in a large, urban, Southeastern school district. The data from 300 African American male students were used. Approximately half of the data were from students enrolled in *READ 180*, while the other half of the data belonged to students who were enrolled in culturally relevant literature classes. This study consisted of two independent variables: class and time. The first independent variable of class identified the two reading groups (*READ 180* or cultural literacy) in which students were enrolled. The second independent variable of time identified when (pretest and posttest) the student participants were tested on the Scholastic Reading Inventory (SRI) and the Scholastic Independent Reader (SIR). This study also consisted of two dependent variables: reading achievement and reading motivation. The SRI measured the reading achievement of students in both groups, and the SIR survey measured the reading motivation of the same.

Because this study included two factors (class and time) with two levels (READ 180/cultural literacy and pretest/posttest), a repeated-measures multivariate analysis of variance was used to test the hypotheses.

MAJOR FINDINGS

African American males who were enrolled in *READ180* demonstrated statistically significant growth in reading achievement over the course of one academic year. As measured by the Scholastic Reading Inventory (SRI), the average change from pretest to posttest was +139.99. Similarly, the same students who were enrolled in *READ 180* demonstrated a statistically significant change in reading motivation. As measured by the Scholastic Independent Reader (SIR), the mean change in reading motivation from the beginning of the course to the end of the course was + 4.71 points. *READ 180*, therefore, demonstrated a potential to improve both the reading achievement and reading motivation of African American males enrolled in alternative high schools.

The growth in reading achievement and reading motivation, however, was not exclusive to students enrolled in *READ 180*. African American males who were enrolled in culturally relevant literature (cultural literacy) classes also demonstrated statistically significant growth. As measured by the Scholastic Reading Inventory, the mean change in reading achievement from pretest to posttest was +145.95. Similarly, the students in the culturally relevant literature classes demonstrated statistically significant growth in reading motivation. As measured by the Scholastic Independent Reader, the mean change in reading motivation from beginning of the course to the end of the course was +5.38 points. Results from the tests of reading achievement and surveys of reading motivation indicate that cultural literacy has the potential to remediate the reading

deficiencies and increase the reading motivation of African American males who are enrolled in alternative high schools.

The test of interaction did not indicate any statistically significant difference in the reading achievement and reading motivation scores between the levels of the independent variables. Culturally relevant literature students demonstrated a mean change of +5.9 Lexiles greater than their peers in the READ 180 reading class. Similarly, culturally relevant literature students demonstrated a mean change of +0.67 points greater than their *READ 180* peers in reading motivation. Though there were statistically significant gains from pretest to posttest for each group (*READ 180* and cultural literacy) across both dependent variables (reading achievement and reading motivation), the differences in the growth demonstrated by both levels of the independent variable were not determined to be of any statistical significance.

FINDINGS RELATED TO THE LITERATURE

African American males who struggle with reading and are enrolled in alternative schools require a wide range of innovative practices to remediate their deficiencies. The results of this study both support and refute the claims and benefits of reading interventions and practices identified in Chapter 2. Any development of a reading intervention should include a development of reading motivation (Schiefele et al., 2012). The development and promotion of this behavior is especially important for adolescent readers, and it has been directly linked to an increase in the quantity and reading achievement of students (Unsworth & McMillan, 2012). In both levels of the independent variable of class (*READ 180* and culturally relevant literature), there was a statistically significant increase in reading motivation and reading achievement. This

finding aligns with Zentall and Lee (2012), who found that a reading motivation intervention led to increased rates of reading fluency and comprehension.

The results of this study also indicate that the practice of cultural literacy might increase reading motivation and reading achievement. The typical growth in reading achievement of students who are in general education classes can average approximately +50 Lexiles per academic year (Achieve 3000, 2011). African American males who were enrolled in culturally relevant literature classes increased their scores by an average of 145.95 Lexiles in one academic year. The participants in this study, therefore, indicated a growth of almost three times the general expectation. Reading motivation also increased by more than 5 points, indicating that African American males in culturally relevant literature increased their reading motivation from *moderately* motivated to *highly* motivated. These findings are in agreement with Husband's (2012a) assertion that culturally relevant literature encompassing reading, writing, classroom discussions, and critical thinking can lead to an increase in reading motivation and improved reading achievement for Black males.

The effectiveness of *READ 180* with African Americans, as indicated in the literature review, is in stark contrast to the results of this study. White et al.'s (2005) study, in which approximately 85% of the 362 *READ 180* participants were African American, did not find any statistically significant difference in reading outcomes. Similarly, Mims et al. (2006) indicated that African American sixth and eighth graders in *READ 180* earned scores that were statistically equivalent to their peers who were not enrolled in the program. Further, seventh graders in *READ 180* generated scores that were statistically significantly lower than their peers who were not enrolled in the *READ 180* reading intervention.

The results from the current study are in contrast to studies in the literature review. African American males in an alternative school who were enrolled in *READ 180* for one academic year increased their reading performance significantly by an average of 139.99 Lexiles. This performance exceeded the average growth of 50 Lexiles per academic year from students who are not enrolled in any intervention or program (Achieve 3000, 2011). Additionally, the Scholastic Independent Reader survey indicated that average reading motivation of students grew by 4.71 points, moving students from the lower end of the *moderately* motivated scale to the higher end of the scale. The findings of this study, therefore, indicated that *READ180*, when used as prescribed by Scholastic Incorporated could have a positive effect on both the reading achievement and the reading motivation of African American males who are enrolled in alternative secondary schools.

IMPLICATIONS FOR PRACTICE

With the current level of accountability expected from school systems, schools, and teachers, as well as the recent pressure from the state and federal government to reform low-performing schools, many districts are looking for immediate help. As is often the case, school leaders must sift through an abundance of programs and interventions that are marketed as research-based techniques and solutions to address the performance of targeted groups of students. *READ 180* is one such intervention that has been widely researched and asserts that it can markedly improve the reading achievement and reading motivation of all students. The findings of this study, accordingly, suggest that *READ 180* can be effective in advancing the reading achievement of African American males who attend alternative secondary institutions. Evidence further indicated that *READ 180* could also effectively increase reading motivation, a critical

behavior necessary to build reading capacity of African American males enrolled in alternative secondary institutions.

Results from the current study also indicated that culturally relevant literature (cultural literacy) could be used as an alternative to more costly reading interventions such as *READ 180*. According to the results of the current study, students enrolled in culturally relevant literature classes actually outperformed *READ 180* students over the course of one academic year in reading achievement (+5.96 Lexiles) and reading motivation (+.67), although these differences were not found to be statistically significant. The results, therefore, suggest that culturally relevant literature classes have the potential to effect positively the reading achievement and reading motivation of African American males who are enrolled in alternative secondary schools.

LIMITATIONS

This study was limited in that only one of the alternative high schools in this district offered the *READ 180* program as a reading intervention. The prospect of examining this program's effect in similar settings within the district would have allowed comparisons to be made between the levels of instruction, teacher training, and student performance. The ability to compare the student growth of similar students across similar educational settings could have given additional insight into the program's viability.

The study was focused only on quantitative measures of reading. Quantitative measures, while essential, could not account for all elements that factor into student growth. Qualitative research, although not used in this study, could further explain the role of other factors that might have contributed to the growth of students. Factors such as previous educational experiences, the educational background and expectations of

parents, students' personal goals, and observations of the learning environment through a qualitative lens could more closely identify the impact of the reading interventions.

The data and classes (*READ 180* and cultural literature) used in the study were preexisting; there was no indication that the groups were comparably matched at the beginning of their respective school years. Both groups of students were measured based on their total growth from pretest to posttest without consideration of the differences that initially existed between the groups. The opportunity to group and teach students with similar pretest scores could have given a more concise assessment of the interventions' effectiveness. Additionally, there were no in-class observations or student participation in the study. Factors such as student attendance, student levels of participation, teacher-student engagement, and class disruptions are all important determinants that could have been documented by physically observing students in these reading interventions.

This study only focused on the effects of *READ 180* and culturally relevant literature; therefore, the study did not attend to the many other factors that can account for changes in reading achievement. The inclusion of a control group that did not participate in either reading intervention would have allowed the researcher to determine how much growth was attributable to the reading interventions, instead of other factors. In addition, the samples were not random; therefore, the results cannot be generally applied to other populations; they can only be suggested. Finally, validity and reliability information of the SIR instrument used to measure reading motivation was not readily available because the information had not yet been published. This lack of validity and reliability information for this measure limited the interpretation of the results.

DELIMITATIONS

This study was delimited to an alternative high school in a large Southeastern school district. Study participants were limited to 300 students enrolled in the *READ 180* or cultural literacy project over the course of three academic years (2010–2013). Two assessments, the Scholastic Reading Inventory and the Scholastic Independent Reader, were used to evaluate the reading achievement and reading motivation of the students in the study. The Scholastic Reading Inventory was administered at the beginning, middle, and end of each school year. The Scholastic Independent Reader, however, was only administered at the beginning and end of each academic school year. These delimitations, therefore, may affect the generalizability of the study's findings.

RECOMMENDATIONS FOR FURTHER RESEARCH

As the school used in this research continues to develop its use and implementation of reading interventions, recommendations for further research can be made. The first recommendation calls for the addition of a control group. In addition to the data analysis of students from *READ 180* and cultural literacy, growth measurements from a control group that does not participate in any reading intervention would be able to identify how much growth, if any, could be attributed to the reading interventions.

The second recommendation is for the consideration and use of alternative growth measures. The Scholastic Reading Inventory (SRI) and the Scholastic Independent Reader (SIR), assessments of reading achievement and reading motivation, were both created and developed by the creators of *READ 180*. Although the reliability and validity of the SRI has been studied, reviewed, and published by independent researchers, formal independent research on the validity and reliability of the SIR has yet to be published.

Consequently, other assessments of reading motivation, such as the Rhody Secondary Reading Assessment, could be used to validate the results of the SIR. Similarly, other reading assessments, such as the Gates-MacGinitie Reading Test, could be used to compare and validate the reading achievement results of the SRI. The performance of students on state assessments (ninth-grade literature milestones/end of course and/or the American literature milestones/end of course) could also be used to evaluate the potential effects of *READ 180* and cultural literacy on reading achievement.

The third recommendation is to incorporate a qualitative module into a study. Physical observations of students and class procedures in these reading interventions can help researchers describe student behaviors, document the frequency and effect of class disruptions, and identify levels of student participation and effort. Student surveys could identify socioeconomic status, the amount of time students spend reading for pleasure (at home or in school), and student attendance patterns. Additionally, qualitative measures could help to explain some of the changes in reading motivation and reading achievement by surveying teachers to understand their level of comfort with the implementation of *READ 180* and cultural literacy.

CONCLUSION

At the heart of this study was a desire to identify an effective approach to reading instruction for African American males, one of the most underrepresented groups in reading research. Further, this study intended to expand on the limited body of research pertaining to reading interventions for students who are enrolled in alternative secondary schools. To that end, the results of this study indicate that both *READ 180* and cultural literacy can have a statistically significant effect on the reading achievement and reading motivation of African American males in alternative secondary schools. While the

growth in reading achievement and reading motivation of students enrolled in cultural literacy classes was marginally higher than the students enrolled in *READ 180*, the difference between both interventions was not statistically significant. As school districts seek to meet the needs of their struggling readers, it is vital that all new and proposed reading interventions be thoroughly vetted in order to meet the demands of the populations they intend to service.

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APPENDICES

APPENDIX A: SCHOOL DISTRICT'S RESEARCH APPROVAL



Office of Research & Evaluation for School Improvement
Georgia 30303 | P: 404.802.2672 | F: 404.802.1601

| Atlanta

November 4, 2015

Mr. Clifton Nicholson

Your request to conduct research within the XXX School District was reviewed by the Research Screening Committee in accordance with its guidelines. Your research study entitled, “A comparative analysis of READ 180 and cultural literacy on the reading achievement and motivation of African American males in an alternative high school,” has been approved by the research committee. Although there are no required modifications to the activities described in your proposal, the committee does recommend that special attention be given to the following points:

1. The principal of the proposed school must give approval for you to conduct the planned research study. This letter of permission does not in any way ensure approval from the principal. Neither does this letter of permission grant you access to data not available to the general public.
2. The activities of this study must not interrupt instructional time.
3. Your assurance of maintaining confidentiality of the participants must be strictly followed. Pseudonyms for individuals and the schools, as well as references to XXX School District as “a large urban school system,” are required in the title and text of your study before publication or presentation.
4. If you make changes in the implementation of your study or, particularly, revise the instruments used, please notify the Office of Research and Evaluation prior to the beginning of your study.
5. A completed copy of the final research study must be submitted to the Office of Research and Evaluation.

Please contact XXXX if you need any further assistance.

Sincerely,

Director, Office of Research and Evaluation

APPENDIX B: IRB APPLICATION



COLUMBUS STATE UNIVERSITY

INSTITUTIONAL REVIEW BOARD

Human Research Application

SECTION A: PROJECT INFORMATION

1. Title of Project: A Comparative Analysis of the Effect of *READ 180* and Cultural Literacy on the Reading Achievement and Reading Motivation of African American Males in an Alternative High School.

2. Application Type

- New Project
 Resubmission
 Continuing Project (Previous IRB number: _____)

3. Principal Investigator:

(There is only one principal investigator. List the primary contact person as the PI.)

Name: Clifton F. Nicholson

Title: _____

Department Name: _____

Mailing Address: _____

Phone: _____ E-Mail: Nicholson_Clifton@columbusstate.edu

4. Co-Principal Investigator:

(For student project, thesis, or dissertation, the faculty supervisor serves as the Co-PI.

If you are not affiliated with CSU, then you must list a faculty member as the Co-PI.)

Name: _____

Title: Director of Graduate Studies COEHP

Department Name: _____

Mailing Address: 4225 University Avenue, Columbus, Georgia

Phone: _____ E-Mail: _____

5. Other Personnel of the Research Team:

(If additional space is needed, insert more rows in the table.)

Name	Email

6. **A) Do any of the Investigators or Other Personnel listed in this application have a real, potential, or perceived conflict of interest associated with this study?** (See the FAQ webpage for more information.)

Yes No

- B) If Yes, identify the individual(s) and explain:**

(The conflict must be disclosed in the informed consent process.)

7. **Dates of Proposed Research:** Begin: 11/5/15 End: 3/5/16

8. **Is this research project for a CSU dissertation?** (If *Yes*, the signed “Proposal Defense Form” must be included in the Addendum.)

Yes No

SECTION B: PROJECT SUMMARY

Within 100 words, clearly describe the purpose of the study using lay terminology.

The researcher will investigate if/how two reading programs impact the reading achievement and reading motivation of two groups of students. Historical data (scores only) will be analyzed and no identifying information of any student will be used.

SECTION C: HUMAN RESEARCH PARTICIPANTS

1. **Number (or Range) of Participants Needed:** 300

2. **Age of Participants:**

under 18 (Specify age(s): (16-18))
 18 to 64
 65 and older

3. **Identify the criteria for including, or selecting, participants.**

300 data sets (scores only) of African American males will be selected for data analysis

4. A) Are there any criteria for excluding potential participants?

Yes No

B) If Yes, identify the criteria for excluding potential participants.

Female students, and males other than African Americans, will be excluded.

5. A) Indicate whether any of these groups will be targeted participants.

(Check all that apply.)

- Pregnant women, neonates, or fetuses
- Prisoners
- Individuals who are cognitively impaired
- Individuals who are economically disadvantaged
- Individual who are mentally ill
- Individuals who are terminally ill
- Individuals who have HIV or AIDS
- Individuals who have limited English proficiencies

B) Explain the justification for targeting the group(s) checked above in this research project.

C) What additional safeguards will be added to protect the rights and welfare of these groups?

6. A) Do you plan to target individuals who belong to a particular gender, racial, or ethnic group?

Yes No

B) If Yes, specify the targeted group(s) and explain the justification for targeting the particular group(s) in this research project.

African American males are severely underrepresented when it comes to reading research for high schools. This population will add to the body of knowledge for effective reading instructional practices for this demographic.

7. What is your current and/or future relationship to the participants?

Only archived data will be used. There is no current or future relationship to any participant.

SECTION D: RECRUITMENT PROCEDURES

1. How will the participants be recruited? (Check all that apply.)

- | | | |
|---|--|---|
| <input type="checkbox"/> In person | <input type="checkbox"/> Printed Materials | <input type="checkbox"/> Television/Radio |
| <input type="checkbox"/> Phone call | <input type="checkbox"/> Letters | <input type="checkbox"/> Listserv/Email |
| <input type="checkbox"/> Social Media/Web-based | <input type="checkbox"/> SONA | <input checked="" type="checkbox"/> Other (Archived Data) |

2. Describe when, where, and how participants will be initially contacted.

(Attach a copy of any printed and/or electronic materials that will be used for recruiting as an addendum.)

3. Describe any follow-up recruitment procedures.

4. A) Will participants receive any incentives and/or compensation for their participation?

- Yes No

B) If Yes, describe amount and quantity:

SECTION E: OUTSIDE PERFORMANCE SITE

1. A) Does this project involve any collaborating institution and/or performance site outside of the CSU campus (e.g., local public school, participants' workplace, military base, or hospital)?

- Yes No

B) If Yes, list all institutions and sites involved with this research project.

(If additional space is needed, attach a separate sheet as an addendum. For each listed site, attach a Letter of Cooperation written on the institution's letterhead and signed by the appropriate authorized official(s). See the FAQ webpage for more information.)

Name of Institution	Location (City, State)	written permission and/or current IRB approval
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Georgia

Attached

SECTION F: METHODS

1. Describe all research study procedures in concise and sequential lay terminology.

The participating school administers achievement tests and reading motivation surveys to students each year. All SRI (reading achievement) and SIR (reading motivation) scores for students in this school are stored by the school on the Scholastic Achievement Manager, a comprehensive online management system. The principal of the alternative school has agreed (pending system approval) to grant use of the datasets of reading scores for African American males who completed the *READ 180* reading intervention program, as well as the datasets for African American males who completed the culturally relevant literature classes. Each data set used will contain at least three waves of data for each student, which will represent the pretest, midyear test, and the posttest for SRI scores. Only the pretest and posttest scores will be used for inferential testing. However, the midyear test will be used for examination of trend, which will be included with the descriptive statistics section of the study. Each of the datasets will also include pre and post reading motivation survey data from the Scholastic Independent Reader (SIR) survey. None of the data to be used will contain any student names, student ID numbers, or any other personally identifiable information in order to maintain confidentiality.

SCHOLASTIC READING INVENTORY (SRI)

The primary tool for assessing the reading achievement of participants in this study will be the Scholastic Reading Inventory (SRI). The SRI is a computerized, research-based screening tool that the participating school uses in identifying students' reading comprehension and reading vocabulary levels. The SRI utilizes a series of short narratives and expository passages that students process and demonstrate their mastery through a series of cloze strategies (e.g. "At least they allow me to write. Indeed I believe they think my writing is something extraordinary. Each time I take out my copybook and quill, I see looks of approval pass from one to another. They a. influence b. appreciate c. memorize d. condemn my writing"). Although the test is not timed, students generally use between 35 and 60 minutes to complete the assessment. The SRI then generates a Lexile score that allows teachers to identify a student's reading ability, as well as track the progress of students over time. Student Lexile scores range between 200L and 1700L. A student who has a Lexile score between 1050 and 1150 is considered to be reading within the ninth grade band. Students scoring between 1100L and 1200L are within the tenth grade band. A score between 1100L and 1300L is considered to be the average range for high school juniors and seniors. Scores below 1000L are in the middle school reading band, and scores with 850L and below are considered to be elementary level.

Scholastic Independent Reader. The primary tool for measuring the change in the reading motivation of students in this study will be the Scholastic Independent Reader (SIR) survey (Please see addendum). This survey is an element of the *READ 180* program and will be used to evaluate claims that the program increases the critical domain of reading motivation. The survey is used by the cooperating school to measure

students' levels of motivation, engagement, and self-efficacy. However, only the questions (1, 2, 3, 12, 15, 17, 18, 22, 23, and 25) related to motivation will be analyzed (e.g. "Knowing how to read well is not very important to me") since this study will focus only on the changes in reading achievement and motivation. The survey consists of 30 questions (10 per domain) and requires approximately 15–20 minutes for students to complete. The survey employs a Likert scale with five possible responses: *strongly agree*, *agree*, *undecided*, *disagree*, and *strongly disagree*.

Based on the student responses to specific statements, each response is valued with a range of one to five points. Domain scores are calculated by totaling the responses to questions in the respective domain. Readers with a total score between 0–24 are considered to have a low level of reading motivation. Students who score between 25 and 39 are considered to be moderately motivated, and the highly motivated readers are the students who score between 40 and 50 in the reading motivation subtest. As recommended by *READ 180*, the SIR survey is given twice a year.

The focus of this study will be to determine if *READ 180* is a viable option for the reading remediation of African American males who are enrolled in alternative schools. The change in reading scores for this group over time, therefore, will be juxtaposed with any changes in the reading scores of African American males who completed culturally relevant literature classes.

Testing the main effects of time (pre and post) will determine if there are any statistically significant differences in reading achievement and/or reading motivation at any of the two different points of time, regardless of group membership. Likewise, the testing of main effects of between-group membership (*READ 180* or culturally relevant

literature) will determine if there are statistically significant differences in reading achievement and/or reading motivation between the two groups, regardless of the testing times.

A repeated-measures multivariate analysis of variance (MANOVA) will be used to test the hypotheses of this study. The two independent variables will be (a) class with two levels (READ 180 and culturally relevant literature class), and (b) time with two levels (pre-intervention and post-intervention). The two-way interaction between reading achievement and reading motivation will be investigated first. If significance is found, then simple effects will be investigated via two analysis of variance (ANOVA) tests to determine which reading program had the greatest effect. The MANOVA will be conducted to assess the impact of the READ 180 and Cultural Literacy on the combined dependent variables (reading achievement and reading motivation). Statistically, significant results from the MANOVA analysis will be further investigated for specifics via Roy Bargmann stepdown analyses and Bonferroni post-hoc tests

2. Indicate the type of data collection. (Check all that apply.)

Behavioral or Physiological Observation

Describe the focus, duration, and number of observations (e.g., EEG, body composition, blood pressure, or time out of seat). Specify how the observations will be recorded.

Specimen Collection

Describe the type of specimen (e.g., blood, saliva, or urine), method of collection, frequency of collection, amount for each collection, and total volume to be collected.

- Document and Artifact Collection
Describe any documents or artifacts (e.g., historical papers or student writing samples) that will be collected and used.
- Survey, Interviews, and Questionnaires
Describe the setting, mode of administration, and anticipated duration. Attach a participant copy of each measure.
Only archived data will be used. All surveys and assessments were administered by the school and the principal has agreed to allow access to data in order to perform statistical analyses.
- Internet Research
Describe the measures that will be taken to ensure security of data transmitted over the internet (e.g., internet surveys) to remove IP addresses and to protect from unauthorized access.
- Audio or Video Recording
Describe the setting and anticipated duration. Describe how the audio/video recordings will be stored and how they will be disposed when this research is completed.

SECTION G: RISKS AND BENEFITS

1. A) Estimate the level of risk for participants.

Potential Risk	Not applicable	No More than Minimal Risk	Greater than Minimal Risk
A. Physical	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Psychological	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Social or Economic	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Use of deceptive technique	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Other (Specify: _____)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B) If any of the above risks are greater than minimal risk, describe the severity and likelihood of the indicated risk(s).

2. **Explain what steps will be taken to reduce the impact of the indicated minimal and/or greater than minimal risks and protect the participant's welfare.**

Only anonymous, archived data will be used. Data were generated from survey/test scores of former students, and no identifying information was collected.

3. **Describe the potential benefits to the participants and/or others as a direct result of this research project.**

As a result of this project, teachers and educational leaders will have a better understanding of the effectiveness of certain reading instructional programs. Additionally, new knowledge of best instructional practices will be extracted from the data after all statistical tests have been performed.

SECTION H: CONFIDENTIALITY OF DATA

1. A) **Will demographic information be collected?**

Yes No

- B) **If *Yes*, list all demographic information that will be collected and describe how the information will be used.**

Archived data is stored by race and gender only. The researcher will be given access to the archived data set through an excel spreadsheet (flash drive). The demographic information of race and gender will only be used to identify achievement scores because this study focuses on evaluating effective reading instructional practices for African American males.

2. A) **Indicate the degree of confidentiality.** (See the FAQ webpage for more information.)

Anonymous
 Confidential
 Confidential with indirect coding
 Confidential with direct coding

- B) **If *Confidential with indirect or direct coding*, indicate where, how long, and in what format (e.g., paper or electronic files) will the data be kept. Describe the security provisions that will be taken to protect this data.**

- C) If *Confidential with indirect or direct coding*, explain why it is necessary to keep indirect or direct identifiers.
- D) If *Confidential with indirect or direct coding*, identify who will have access to the coding and/or individually identifiable information.

SECTION I: INFORMED CONSENT PROCESS

1. **Describe the specific procedures (i.e., how, where, and when) for obtaining informed consent.** (Use provided template available on the CSU IRB website to create an informed consent form and attach a copy as an addendum.)
2. **Provide justification for requesting a waiver to document informed consent.**
(See the *FAQ webpage* for more information.)

This dissertation will only use data that has been generated and archived by the cooperating school. There are no names, student identification numbers, or teacher information connected to the data set. Further, a waiver to document informed consent is requested because the dataset will come from students who are no longer enrolled in the school.

SECTION J: ELECTRONIC SIGNATURES

The Research Team, including the Principal Investigator, Co-Principal Investigator, and other personnel, must read and comply with all Columbus State University Institutional Review Board (IRB) Policies and Procedures. In addition, they must abide by all federal, state, and local laws regarding protection of human subjects in research. As the Principal and Co-Principal Investigators, if applicable, you agree to follow these governing guidelines that include, but not limited to, the following policies and procedures. Failure to follow these guidelines may result in delays with the processing of this application and/or future applications.

1. Complete the Human Subjects Research training and submit a training certificate as an addendum.
2. Merge all addendums into one file.
3. Begin recruitment and data collection after receiving notification of final IRB approval.
4. Obtain approval from the IRB prior to instituting any change in project protocol.
5. Obtain informed consent from all participants, and legal parent or guardian, prior to commencing this research study when applicable.
6. Maintain copies of all records and signed consent forms, if required, from each participant for the duration of the project.
7. Notify the IRB regarding any adverse events, unexpected problems, or incidents that involve risks to participants and/or others.
8. Submit the Final Report Form within 12 months from the date of IRB approval using the template available on the CSU IRB website (if applicable).

If this research study is a student-led project, the Co-Principal Investigator, the student's faculty supervisor, must agree to complete the following tasks prior to the submission of the Human Research Application:

- Collaborate with the student to develop the research study.
- Read and review this application with its addendums for content and clarity.
- Guide and oversee the procedures outlined in this application.
- Ensure that all of the Research Team responsibilities are fulfilled.

Enter Principal Investigator's email as an electronic signature. (For authentication purposes, the email address must match the email address on file with Columbus State University.)

Electronic Signature: Nicholson_clifton@columbusstate.edu

Date:

09/24/15

Enter Co-Principal Investigator's email as an electronic signature. (For authentication purposes, the email address must match the email address on file with Columbus State University.)

Electronic Signature: _____

Date: 09/28/15

APPENDIX C: IRB APPROVAL

Exempt Approval Protocol 16-023

Inbox x

CSU IRB irb@columbusstate.edu
Institutional Review Board

Columbus State University

Date: 10/12/15

Protocol Number: 16-023

Protocol Title: A Comparative Analysis of the Effect of READ 180 and Cultural Literacy on the Reading Achievement and Motivation of African American Males in an Alternative High School

Principal Investigator: Clifton Nicholson

Co-Principal Investigator:

Dear Clifton Nicholson:

The Columbus State University Institutional Review Board or representative(s) has reviewed your research proposal identified above. It has been determined that the project is classified as exempt under 45 CFR 46.101(b) of the federal regulations and has been approved. You may begin your research project immediately.

Please note any changes to the protocol must be submitted in writing to the IRB before implementing the change(s). Any adverse events, unexpected problems, and/or incidents that involve risks to participants and/or others must be reported to the Institutional Review Board at irb@columbusstate.edu or (706) 507-8634.

If you have further questions, please feel free to contact the IRB.

Sincerely,

Amber Dees, IRB Coordinator
Institutional Review Board
Columbus State University