Fall 8-2015

Exploring an ACT Preparation Course as an Intervention Method for African American Students

Theresa Linette Harris Badgett
Lindenwood University

Exploring an ACT Preparation Course as an Intervention Method for African American Students

by

Theresa Linette Harris Badgett

A Dissertation submitted to the Education Faculty of Lindenwood University

in partial fulfillment of the requirements for the

degree of

Doctorate of Education

School of Education

Exploring an ACT Preparation Course as an Intervention

Method for African American Students

by

Theresa Linette Harris Badgett

This dissertation has been approved as partial fulfillment of the requirements for the degree of

Doctor of Education

at Lindenwood University by the School of Education

Dr. Susan Isenberg, Chair	8/28/15 Date
Dr. Michael Rankins, Committee Member	8/28/15 Date
Dr. Sherrie Wisdom, Committee Member	8/28/15 Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

Full Legal Name: Theresa Linette Harris Badgett

Signature: Theresa L Badgett Date: 8/28/15

Abstract

In recent years, there has been an interest in the effectiveness of college assessment preparation, which has prompted many studies. The majority of these studies researched instruction/coaching on the Scholastic Assessment Tool (SAT). Notably, the college entrance exam has become a growing concern for minorities, particularly African American students. Prior research by ACT, Inc. (2012, p. 2) has shown African American students rank the lowest in American College Test (ACT) scores of all racial groups. Between 2006 and 2011 the average ACT composite scores increased for White, Asian, American Indian/Alaska Native, and American/Pacific Islanders. Hispanic scores remained unchanged and the scores of African Americans students declined by an average of two scale points. The focus of this research investigated whether instruction/coaching for the ACT would increase the scores of African American students. The participants of this study were African American high school students who attended a suburban high school in the Midwest. These students took a pre-test (PLAN) and a post-test (ACT) and were provided with reflective journals to document comments and attitudes of this six-week program. The average increase in the ACT scores after taking the ACT Preparation Course was 2.00 points. Considering other variables, it appeared that the increase in these scores could be attributed to the instruction they received taking the ACT Preparation Course and prior to taking the ACT. This research compared both scores of African American students over four semesters, analyzed questionnaire data, and reflective journaling data to examine if student attitudes and scores could be affected as a result of taking a preparation course. The resulting data suggest there was not only an improvement in ACT scores, but also an improvement in

student attitudes after completion of the ACT Preparation Course. Student attitudes were positively impacted towards taking the ACT in that the majority of students felt more confident when taking the test as well as acquiring a new perspective in testing skills and study strategies.

Acknowledgements

This dissertation would not have been possible without the inspiration, guidance, support and valuable contributions of Dr. Susan Isenberg, Dr. Michael Rankins, and Dr. Sherrie Wisdom in the preparation and completion of this study.

I would like to express my deepest appreciation to my committee Dissertation Chair, Dr. Susan Isenberg, for her valuable insight as I embarked upon this journey, who encouraged, motivated, and guided me to find my academic voice. Many thanks to Dr. Michael Rankins for his wisdom and guidance, and to Dr. Sherrie Wisdom who inspired me to take pride in my research and data. I thank the participants and parents of this study for their honesty and time; without them this research would not have been possible.

I thank my children – my personal cheerleaders - Ashlee Jewel Badgett, Melody Melita Cox, and Charles Robert Harris Badgett, IV. Without their love, support, and understanding this dream would not have come to fruition. I wish my parents were alive to take pride in my accomplishments. But to my father, Robert Harris, Jr. who always believed I had the "brain" and the wisdom to succeed academically, and mother, Jewel Francis Harris, who taught me that anything is possible. To my sister Jana Harris Williams and brother Ronald Montgomery who inspired to take my education seriously and to believe in myself. Lastly, I thank my dear friend Dr. Timothy Jackson for always believing in me and for pushing me to stretch myself when I wanted to give up. He saw in me what I could not see in myself.

Table of Contents

List of Tables

List of Figures

Chapter One: Introduction

Background of Study

At the time of this writing, in high schools across the United States, taking the American College Test (ACT) or the Scholastic Aptitude Assessment Test (SAT) college-entrance exam was a major event in the life of a student. Taking college-entrance exams was a process students embarked upon as they transitioned from high school to college. There appeared to be elements of both stress and trauma associated with these exams. The competitive edge of high scores for being admitted into their college of choice brought dimension of discomfort to an ordinarily normal process. In recent years, the college-entrance exams became a growing concern among minorities, particularly African American students. Research by ACT, Inc. (2012) showed African American students ranked the lowest in ACT scores of all racial groups.

> Average ACT Composite scores for American Indian/Alaska Native, Asian American/Pacific Islander, and White graduates increased between 2006 and 2010. Hispanic graduates' average ACT Composite scores remained essentially the same, while those of African American graduates declined by 0.2 scale points. (The Condition of College and Career Readiness, 2010, p. 7)

However, the ACT data from 2007 to 2011, in its report, *The Condition of College Readiness* (CCRR, 2011), concluded the average ACT composite scores for Asian (+1.0 scale point) and White graduates (0.3 point) increased between 2007 and 2011 (p. 22). African American and Hispanic graduates average composite score remained essentially the same, while American Indian graduates declined by a 0.3 scale point (p. 22).

Gaining entrance into the college of his or her choice was one of the most exciting and important events in a young person's life. Consequently, considering the major impact college-entrance exams had in the admissions process, performing well on these exams became a high stakes course of action (Becker, 1990). Thus, there was a growing concern by educators at all levels because of gaps between the scores of African American students and their White counterparts.

In a study, conducted by ACT, Inc. (2007a), of students who graduated in 2007, "only a quarter of high school students who take a full set of college-preparatory courses, four years of English, and three years each of mathematics, science and social studies are well prepared for college" (p. 2). The study found that minority students were not taking the full set of college-preparatory courses because many of the urban schools did not offer them. The study focused on approximately 1.2 million students graduating high school in 2007, who took one of the two most common college-placement tests, either the SAT or ACT. Students who typically scored high on college-entry tests, such as the ACT and SAT, usually passed their college courses with a C or better (p. 5). There were only 14% who were prepared for college coursework in the four core content areas. It appeared that taking a core curriculum in high school and passing it did not necessarily result in college preparedness (p. 6). Some students chose to supplement their high school education with test-preparation courses or private tutoring, specifically designed to raise scores on college-entrance exams. However, the high cost of these courses was often out of reach for students of color, thus limiting access to higher education.

According to the website for high school students sponsored by the Princeton Review (2010), known for ACT and SAT Preparatory Courses, "A 23 on the ACT or an

1800 on the SAT may be above average at one university but below average at another" (p. 1), and "the higher your score, the more options are open to you" (p. 1). Based on the Princeton Review's research, the national average for the SAT was 1500, and between 20 and 21 for the ACT. If students scored around these averages, they were more than likely to be accepted at a considerable number of colleges. However, they must also have acceptable grades and realize these scores alone would not cause students to be accepted into more selective schools.

Schmeiser, as cited by Arensen (2007), then president of ACT, Inc., said, "What's shocking is since 'A Nation at Risk' was published we have been encouraging students to take this core curriculum with the unspoken promise that when they do, they will be college ready" (p. 1). He continued with, "What we have found now is that when they do, only one in four is ready for college-level work" (Arensen, p. 1). High school students may have enrolled in college-level courses, either for dual credit, Advanced Placement, or at a local community college. Adelman (2006), discovered the caliber of high school coursework in the four major areas of math, science, English, and reading was the greatest factor for determining college readiness and course success (p. 19). The purpose of the ACT was to measure the academic skills of high school students, aside from grades, earned in school. Hence, the ACT was administered in every state in the U.S., with a majority of high school students taking it in 26 states. The ACT was scored on a scale of 1 to 36, and was accepted at most colleges and universities in the United States.

In 2007, the average national scores on the four subject test areas were as follows: science, 21.0: math, 20.7: English 21.5: and reading 21.0 (Uzzell, Lewis, Simon, Guzman

& Casserly, 2012, p. 12). The ACT scores of most of the racial/ethnic groups have risen since 2003, with the exception of African American students. In fact, all groups except for African American students showed improved scores in 2007. African American student scores continued to change by plus or minus one-tenth of a point, which was not statistically significant. The ACT composite scores of African American and Hispanic students between 2007 and 2011 fluctuated nationally, before returning to 2007 levels (Uzzell et al., p. 12).

Gewertz (2009) cited Schaeffer of the National Center for Fair and Open Testing, or FairTest, a Massachusetts-based public 'watchdog' group, as stating,

> The 'stagnant' ACT scores reflect a failure of the promise of the Federal No Child Left Behind (NCLB) Act (2001) to boost achievement and improve college readiness. Schaeffer also pointed out that a FairTest analysis of 2008 and 2009 ACT score changes 'shows little narrowing in the gaps between racial and ethnic minority students and their White peers' consistent with other reports. (p. 2)

The ACT scores showed 4% of African American students and 10% of Hispanic students meeting college-readiness benchmarks in all four subject areas in 2009, compared with 28% of White students and 36% of Asian students (Gewertz, 2009, p. 12).

According to Gewertz (2009), the majority of students who met all of the college-readiness benchmarks in the four core subject areas (English, math, science, and reading) were not Hispanics (10%) or African Americans (4%), but rather Whites (28%) and Asian American (36%). The percentage of African American high school students taking the ACT since 2003 increased by 18%, and the percentage of Hispanic/Latino high

school students taking this test increased by an additional 5% over that of African American students (Gewertz, 2009).

The African American/White achievement gap was an issue to be addressed, rather than ignored. Much of the disparity could be placed on the lack of test-preparation skills and prior preparation for college-entrance exams. According to ACT, Inc. (2007), the four core areas offered in high schools in the U.S., such as English and math, required increased rigor, as measured by college coursework. ACT, Inc. (2007) also found that due to the lack of increased rigor in high school coursework, the failure rate was exceeding the success rate in preparing students for college (p. 11).

Gandara with Maxwell-Jolly (1999), in association with the College Board's National Task Force on Minority High Achievement, conducted a study for the purpose of developing recommendations to increase the number of minority students who achieve academic success. These minority groups included African American, Native American, and Latino students and were "extremely underrepresented among individuals" who graduated college or earned graduate or professional degrees (p. vii). Because of the limited presence of these minority students in standardized scores and academic achievement, they were less likely to gain accessibility to selective colleges and universities.

History of the ACT

ACT, Inc. was a non-profit organization and was founded in 1959 by Lindquist, a well-known educator and scholar in the area of large scale achievement testing (Grabianowski, 2010). He defined his goals for the introduction of a new college assessment, designing the assessment to test broad competencies versus rote

memorization, to encourage acquisition of knowledge and productive use of the knowledge. Its design was intended to provide information at the secondary and post-secondary levels for the purpose of (a) educational planning, (b) course planning and placement, (c) career counseling, (d) instructional planning, and (e) program evaluation (Grabianowski, 2010).

American College Test was the original name of the nonprofit organization, but changed to just ACT, Inc., which no longer stood for anything (Grabianowski, 2010).

> According to ACT (2012), the nation's view of education has evolved to embrace lifelong learning, both in school and in the workplace. ACT's programs and services reflect this, helping people plan for and assess learning and training throughout their lives. As a result, ACT has played an increasingly important role in the nation's educational enterprise, contributing to and supporting the nation's educational vision. (p. 1)

Core Curriculum

Since the ACT was based primarily on the core curriculum offered to students in high school it was intended to measure academic skills that students' earned grades may not accurately reflect. The definition of core curriculum by ACT, Inc. included four years of English, three years of mathematics, three years of science, and three years of social studies. With this as the basis for testing students, ACT, Inc. conducted years of research on the college readiness of high school graduates. In fact, ACT scores remained essentially the same for all race/ethnic groups between 2007 and 2011, according to ACT's *The Condition of College Readiness Report* (2011, p. 16).

Moreover, the U.S. Department of Education Office of Civil Rights (2014a, 2014b, 2014c, 2014d), which authorized Civil Rights Data Collection (CRDC), formerly known as the Elementary and Secondary School Survey (p. 1), collected data since 1968. The CRDC published data snapshots in 2014 from data collected in the 2011-2012 school year. In the Data Snapshot for College and Career Readiness (2014), CRDC established a disparity by race/ethnicity in high schools that offered a full range of math and science courses to students. The U.S. Department of Education (USDOE) Office of Civil Rights (2014c) considered a full range of math and science courses to include Algebra I, Geometry, Algebra II, Calculus, Biology, Chemistry and Physics (p. 8). The CRDC reported 81% of Asian American students, 71% of White students, 57% of African American students, and less than 50% of American Indian and Native Alaskan students attended schools that offered a full range of math and science courses.

> The CRDC (2014) also found nationwide there is limited access to high-level math and science courses. Only 50% of high schools offer calculus and only 63% offer physics. There is also a significant lack of access to other core courses. Nationwide, between 10-25% of high schools do not offer more than one of the core courses, the typical sequence of high school math and science education—such as Algebra I and II, geometry, biology, and chemistry. (CDRC, 2014, p. 1)

The report further mentioned there was even less access for African American, Latino, American Indian, and Alaska Native students. Algebra II was not offered in 25% of high schools serving the highest percentage of African American and Latino students, and only a third of these high schools offered chemistry (CDRC, 2014, p. 1).

Indicated in the ACT's *The Condition of College Readiness* report (2013), most African American students were not prepared to succeed in their first year of college, while 10% of African Americans were college ready (p. 4). The lack of preparation for college was related to a deficit in the core curriculum, and disparities of access to core courses in many high schools. Due to the lack of access to high-level math and science courses, which disproportionately affected students of color, as well as diminishing access to college-preparation courses, impacted their ability to attend college.

Table 1 reflects 2010 average ACT scores by the level of student preparation: core curriculum or less than core curriculum: and race/ethnicity of the study high school, for the state of Missouri, and in the entire nation. The percentage of students taking core or more equated to students who completed four years of the core subjects: less than core denoted the percentage of students who completed less than four years of the core subjects.

There was a statistically significant difference in ACT composite scores across the board, implying that taking at least the core curriculum should prepare a student to score higher on the ACT. The average composite score for all groups who took core or more than the core curriculum at the study high school was higher than those at the state and national levels. However, the average ACT composite score for African American students who took less than the core curriculum at the study high school (14.5) was lower than the average ACT composite score for African American students of the state (16.4) and national (15.8) levels.

Table 1

Average ACT Composite Scores for Race/Ethnicity by Level of Preparation (2010)

Level of Student Preparation	Race/Ethnicity	Number of Students Tested	% Taking Core or More	Average ACT Composite Scores for Students Taking Core or* More	Average ACT Composite Scores for Students Taking Less Than* Core	Average ACT Composite Score for Both Groups
Study High School	**All Students**	**239**	**96**	**26.6**	**21.1**	**23.8**
	African American	30	93	20.2	14.5	**17.4**
	American Indian/ Alaska Native	0	-	-	-	-
	White American/White	173	97	27.4	25.2	**26.3**
	Hispanic	2	100	29.0	-	**29.0**
	Asian American/Pacific Islander	14	100	27.9	-	**27.9**
State of Missouri	**All Students**	**48,290**	**71**	**22.6**	**19.9**	**21.3**
	African American	5,829	65	17.8	16.4	**17.1**
	American Indian/Alaska Native	344	62	22.2	19.2	**20.7**
	White American/White	37,044	72	23.3	20.4	**21.8**
	Hispanic	1,241	68	21.1	19.1	**20.1**
	Asian American/Pacific Islander	949	79	24.3	21.2	**22.7**
National	**All Students**	**1,568,835**	**71**	**22.0**	**18.9**	**20.4**
	African American	214,836	65	17.5	15.8	**16.6**
	American Indian/Alaska Native	16,382	60	20.2	17.4	**18.9**
	White American/White	979,329	74	23.1	20.0	**21.5**
	Hispanic	157,579	68	19.4	17.0	**18.2**
	Asian American/Pacific Islander	65,362	81	23.9	21.5	**22.7**

Note. From ACT National, State, and Study High School Profile Report – High School Academic Achievement – Graduating Class of 2010.

College Readiness Benchmarks

College Readiness Benchmarks were defined by ACT, Inc. as the minimum tests scores for students, which indicated a high probability of success in college. The ACT Benchmarks were

> the minimum test scores on the ACT English, Mathematics, Reading, and Science that reflects at least a 50% chance of achieving a B or higher grade, or at least a 75% chance of a C or higher grade, in entry-level, credit-bearing college English Composition, College Algebra, social science, and Biology courses, respectively. (ACT, Inc., 2009, p. 3)

In 2013 study by ACT, Inc. on the Condition of College Readiness, 1.8 million high school students took the ACT test nationwide—an increase of 22% since 2009 (p. 1). According to the report, 26% of all ACT tested students met College Readiness Benchmarks in all four subjects. In the 2013 study,

> 64% of all ACT-tested high school graduates met the English ACT College Readiness Benchmarks: 44% of graduates met the Reading Benchmark: 44% met the Mathematics Benchmark, and only 36% met the ACT College Readiness Benchmark in Science: 31% of all graduates did not meet any of the ACT College Readiness Benchmarks. (p. 1).

Research conducted by the Council of Greater City Schools indicated that failure to meet these benchmarks suggested that students were not prepared academically for their first year of college courses in English Composition, College Algebra, Biology, and social sciences (Uzzell et al., 2012, p. 14). Further, the researchers noted in relation to the achievement, the gap between average ACT composite scores of White and African

American students increased nationally from 5.1 to 5.4 points between 2007 and 2011. The gap also increased nationally between average ACT composite scores of White and Hispanic students from 3.4 to 3.7 points over the same period (Uzzell et al., 2012, p. 12).

College readiness benchmarks by race/ethnicity. ACT, Inc. began collecting data on students' academic readiness in 1959. In 2009, ACT, Inc. published its first report on the Condition of College Readiness using data compiled from its ACT Profile Report – National Graduating Class of 2009. This report was published annually using data from the national graduating class of the current year. Table 2 exhibits data from each annual report from 2009 to 2013, on the percent of high school graduates who met all four of the ACT College Readiness Benchmarks, by race/ethnicity.

Table 2

Percent of High School Graduates Who Met all Four ACT College Readiness Benchmarks by Race/Ethnicity: 2009 to 2013

Race/Ethnicity	**2009**	**2010**	**2011**	**2012**	**2013**
African American	4	4	4	5	5
American Indian/Alaska Native	11	12	11	11	10
Asian American/Pacific Islander	36	39	41	42	43
White American/White	28	30	31	32	33
Hispanic	10	11	11	13	14
Pacific Islander	-	-	15	17	19

Note. From ACT Condition of College Readiness Reports (2009 – 2013) ACT College Readiness Benchmarks Scores by Race/Ethnicity.

The ACT College Readiness Benchmark Report (CCRR, 2009), found more than one-third (36%) of all Asian American/Pacific Islander graduates met all four College Readiness Benchmarks: more than students from all other racial/ethnic groups (p. 15).

African Americans were least likely to meet the Benchmarks, only 4% met all four (CCRR, 2009, p. 15). In the ACT College Readiness Benchmark Report (CCRR, 2010), almost 4 in 10 (39%) of all Asian American/Pacific Islander graduates met all four College Readiness Benchmarks, more than graduates from all other racial/ethnic groups (p. 15). African American graduates were least likely to meet the Benchmarks, only 4% met all four (p. 15).

The 2011 ACT College Readiness Benchmark Report affirmed just over 4 in 10 (41%) of Asian graduates met all four College Readiness Benchmarks, more than graduates from all other racial/ethnic groups. African American graduates were least likely to meet the Benchmarks, only 4% (1 in 10) met all four (2011, p. 5). The achievement of Asian graduates in the ACT College Readiness Benchmark Report (2012) was similar to 2011 in that just over 4 in 10 (42%) met all four College Readiness Benchmarks. There was an increase from 4% to 5% of African American graduates who met all four of the Benchmarks (2012, p. 5). The trend remained consistent with African American students trailing Asian American, White, Pacific Islander, Hispanic, and Pacific Islander in ACT scores.

Table 3 provides the comparison of ACT composite scores on a national level from 2007 to 2013 by race/ethnic groups. The comparison illustrates the African American achievement gap in ACT test scores among all aggregate groups.

In 2011, ACT changed how the race/ethnic groups are represented to reflect the updated U.S. Department Education reporting requirements. The USDOE (2008) affected this change to authorize individuals to more accurately reflect their racial and ethnic background by not limiting responses to only one racial or ethnic category, and expands

reporting options to seven categories (American Indian or Alaska Native, Asian, African American or African American, Hispanic, Native Hawaiian or Other Pacific Islander, White, and Two or More Races). However, prior to this change race/ethnic groups were represented as African American, American Indian/Alaska Native, Asian American/Pacific Islander, White American/White, and Hispanic. For the purpose of consistency in reporting ACT score data, the researcher retained the original groupings that ACT, Inc. (2010) utilized before updating its reporting requirements.

Table 3

ACT Composite Scores by Race/Ethnicity: 2007 to 2013

Race/Ethnicity	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
African American	17.0	16.9	16.9	16.9	17.0	17.0	16.9
American Indian/Alaska Native	18.9	19.0	18.9	19.0	18.6	18.4	18.0
Asian American/Pacific Islander	22.6	22.9	23.2	23.4	23.6	23.6	23.5
White American/White	22.1	22.1	22.2	22.3	22.4	22.4	22.2
Hispanic	18.7	18.7	18.7	18.6	18.7	18.9	18.8
Pacific Islander	-	-	-	-	19.5	19.8	19.5

Note. From ACT Condition of College Readiness (2009, 2013) ACT scores over time by Race/Ethnicity.

Tables 4, 5, 6 and 7 provide a comparison of actual benchmark scores by race/ethnicity in English, Reading, Mathematics and Science on a national level from 2007 to 2013.

Table 4 indicates African American English benchmark scores remained consistently close to 16.0, while scores for the White American/White subgroup ranged from 21.7 to 22.1. The Asian American/Pacific Islander category scored highest with 22.8 in 2011.

Table 4

ACT English Scores by Race/Ethnicity: 2007 to 2013

Race/Ethnicity	2007	2008	2009	2010	2011	2012	2013
African American	16.1	16.1	16.0	15.7	15.9	16.0	15.7
American Indian/Alaska Native	17.9	18.1	17.9	17.9	17.6	17.1	16.6
Asian American/Pacific Islander	21.8	22.1	22.6	22.6	22.8	22.7	22.5
White American/White	21.7	21.7	21.9	22.0	22.1	22.1	21.8
Hispanic	17.6	17.7	17.7	17.3	17.5	17.7	17.7
Native Hawaiian/Pacific Islander	-	-	-	-	18.6	18.9	18.6

Note. From ACT Condition of College Readiness (2009 - 2013) ACT scores over time by Race/Ethnicity.

Table 5 indicates African American reading benchmark scores ranged from 16.8 to 17.2, through the years from 2007 to 2013. The White American/White subgroup ranged from 22.5 to 22.9. The Asian American/Pacific Islander and White American/White categories scored highest with 22.9 in 2010 and 2011.

Table 5

ACT Reading Scores by Race/Ethnicity: 2007 to 2013

Race/Ethnicity	2007	2008	2009	2010	2011	2012	2013
African American	17.1	17.0	16.9	16.8	17.0	17.2	17.0
American Indian/Alaska Native	19.4	19.6	19.4	19.4	19.1	18.7	18.3
Asian American/Pacific Islander	22.1	22.4	22.7	22.9	22.9	22.9	22.9
White American/White	22.5	22.5	22.7	22.9	22.9	22.7	22.6
Hispanic	18.8	18.9	18.9	18.7	18.9	19.0	18.9
Pacific Islander	-	-	-	-	19.4	19.8	19.5

Note. From ACT Condition of College Readiness (2009 - 2013) ACT scores over time by Race/Ethnicity.

Table 6 indicates African American mathematics benchmark scores ranged from 17.0 to 17.3, through the years from 2007 to 2013. The White American/White subgroup ranged from 21.7 to 22.0. The Asian American/Pacific Islander category scored highest with 24.7 in 2010.

Table 6

ACT Mathematics Scores by Race/Ethnicity: 2007 to 2013

Race/Ethnicity	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
African American	17.0	17.0	17.1	17.1	17.2	17.3	17.2
American Indian/Alaska Native	18.7	18.8	18.7	18.8	18.6	18.5	18.2
Asian American/Pacific Islander	23.6	24.1	24.5	24.7	25.1	25.2	25.0
White American/White	21.7	21.8	21.9	22.0	22.1	22.1	21.9
Hispanic	19.0	19.0	19.1	19.0	19.2	19.4	19.3
Pacific Islander	-	-	-	-	19.9	20.4	20.1

Note. From ACT Condition of College Readiness (2009 - 2013) ACT scores over time by Race/Ethnicity.

Table 7 indicates African American science benchmark scores ranged consistently close to 17.2 throughout the 2007 to 2013 timeframe. The White American/White subgroup ranged from 21.7 to 22.6. The Asian American/Pacific Islander category scored highest with a range of scores between 22.3 and 23.2, with a high score of 23.2 in 2012.

Table 7

ACT Science Scores by Race/Ethnicity: 2007 to 2013

Race/Ethnicity	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
African American	17.2	17.2	17.2	17.2	17.1	17.2	16.9
American Indian/Alaska Native	19.2	19.2	19.1	19.3	18.9	18.7	18.3
Asian American/Pacific Islander	22.3	22.3	22.7	23.0	23.1	23.2	23.1
White American/White	21.9	21.7	21.9	22.0	22.1	22.1	22.6
Hispanic	18.8	18.7	18.8	18.7	18.8	18.9	18.8
Pacific Islander	-	-	-	-	19.5	19.7	19.5

Note. From ACT Condition of College Readiness (2009 - 2013) ACT scores over time by Race/Ethnicity

The research reported by ACT's *The Condition of College Readiness* (2013) ascertained that none of the Benchmarks were met by at least 50% of African American students (p. 5). It further stated that none of the benchmarks were met by at least 50% or more of American Indian or Hispanic students (p. 5). This data was symptomatic of the academic plight of students of color. In the subsequent data from the ACT Condition of College Readiness Report (2013), 64% of all students met the English ACT College Readiness Benchmarks regardless of racial/ethnic makeup (p. 1). There were 26% of students who met the ACT College Readiness Benchmarks in all four subjects, 44% who met the Mathematics Benchmarks, and 36% who met the ACT College Readiness Benchmark in Science (p. 1). The ACT Condition of College Readiness also found that White and Asian students met three of the four subject college readiness benchmarks. Conversely, the report also found that more than 50% of African American, Hispanic, or American Indian students failed to meet any of the remaining benchmarks.

Test Preparation in the United States

Since the 1980s, there was greater interest in the effectiveness of 'coaching' high school students prior to taking college-entrance exams. However, most of these studies focused on the Scholastic Assessment Test, also known as SAT (Becker, 1990). Many high schools offered ACT preparation courses or coaching, generally after school, and some charged fees exceeding $300. Since they were not offered as part of the regular school day at a minimal or no cost, the economic feasibility became an issue, because the cost of these courses excluded many at-risk students (Putka, 1992).

Donnelly (1987) explained, at-risk students were those who were not experiencing success at school and were potential dropouts. Donnelly further suggested, minority students who came from lower income households tended to be generally at a higher risk for not achieving academic success. These students tended to be low achievers academically, and exhibited levels of low self-esteem. Disproportionate numbers of them were males and minorities. Generally they came from low socioeconomic status families (p. 1).

There were several factors that contributed to at-risk students being less likely to attend college. These factors were outlined in a statistical report by Horn and Carroll (1997) for the National Center for Education Statistics (NCES) stating "There are critical junctures in the pipeline to college enrollment where at-risk high school graduates leave at substantially higher rates than their counterparts not at risk" (p. iii). Additionally, Horn and Carroll stated, "Second, it identifies factors that contribute to at-risk students' successful navigation of the pipeline to college enrollment" (p. iii). According to this report factors that indicated students were at-risk included, but were not limited to

coming from a single parent home, changing schools more than twice what is considered the normal progression from elementary to middle school, having a sibling that dropped out of high school, having grades of C or lower in middle school, coming from a lower socioeconomic household, or repeating a grade.

One method students used to improve their ACT/SAT scores was coaching or test preparation. The interest in the effectiveness of test coaching and test preparation prompted several studies. Most of these studies, such as those by Lauderdale (1989) and Seaton (1992), focused on whether coaching provided a beneficial effect on the achievement scores of students who took the SAT college-entrance examination. The study by Moss (1995), focused specifically on African American students. It was one of the first studies to research whether coaching or preparation for the ACT college-entrance examination could increase the test scores of African American students. The basis of his research included a pre-test, post-test, and professional instruction provided to 19 students every Saturday for six weeks, by the program titled Focus on Learning, with a small private learning center offering test preparation services in Missouri.

The results of the study found an average increase of 1.34 points. The variability showed the increase in scores resulted from the coaching students received. Even though it was a modest increase, it effectively demonstrated that, with professional intervention, test scores of African American students could be increased (Moss, 1995). The study also examined the effect of coaching or test preparation on African American students both quantitatively, through pre-test and post-test scores and questionnaires, and qualitatively, through observation and student reflective journaling.

Purpose

The purpose of this study was to investigate whether there would be an improvement in the attitudes and ACT scores of African American students who participated in an ACT preparation course prior to taking the ACT. The study analyzed the ACT scores of African American students in the 2008-2009 and 2009-2010 school years generated by those who participated in an ACT preparation course given at the study high school. Among all students who take the ACT or SAT college-entrance exams, African American students (16.9 mean score) were still the lowest performing according to the national statistics of ACT, Inc., (2010): even below the test scores of Hispanics (18.6 mean score) (see Table 1).

According to Dillon (2009), actions related to NCLB were not closing the achievement gap (p. A1).

> The achievement gap between White and minority students has not narrowed in recent years, despite the focus of the NCLB on improving the scores of African Americans and Hispanics according to the results of a federal test considered to be the nation's best measure of long-term trends in math and reading proficiency . . . Between 2004 and 2008, the test scores of minority students did, in fact improve, but so did the scores of their White counterparts, thus suggesting the achievement gap has not closed despite the well-intended efforts of NCLB. (Dillon, 2009, p. A1)

The Research Problem

Across the United States, a gap in academic achievement persisted between minority and disadvantaged students and their White counterparts. Thus, the achievement

gap was considered a matter of race and class and seemed to be one of the most pressing education policy challenges that schools across the country were facing. Historically, the ACT scores of African American students were lower than all aggregated groups.

The sponsors of the African American student group at the study high school were desirous of finding tools to assist in closing the achievement gap since its inception in 1994. Interestingly, this was one of the 2009-2010 SMART (Specific, Measurable, Attainable, Realistic, and Timely) goals of the subject school - to close the achievement gap. In 2003, in an effort to close the achievement gap, the study high school offered an ACT preparation course for credit. The students who enrolled in the course were those whose ACT scores had fallen to the upper 20s, but were aiming for higher scores. The college and guidance counselors at the study high school began encouraging students whose scores were in the teens and who were aiming for higher scores to enroll in the class, as well. There was little success with this process and the course was cancelled due to lack of enrollment. Students were not interested in taking an extra class for credit, but only in taking the classes needed to graduate.

After a close review of attempts to provide an ACT/SAT preparation course, the study high school's College and Career Office organized two preparation course options to be held after school in 2007. The first option was a structured class taught by a test preparation company. The second option was a series of practice and support sessions held in the library, conducted by high school English teachers. Both the feedback from the test preparation company and the demonstrated score improvements were positive, but due to the cost of the course, only a few scholarships were available to those students who were in financial need.

The feedback from students who participated in the practice and support sessions held in the library were dissatisfied because the sessions did not include instruction or coaching. Students were given the ACT Test Preparation book and were instructed by the teachers in the session to begin reading and working the problems. Instead of receiving instruction or coaching, they were working with teachers who utilized the time to grade papers, while students worked individually in the test book. Teachers were available to answer questions or provide assistance, as needed. The overall consensus of participants was that the sessions were a waste of time and they did not learn anything to prepare them to take the ACT test. Because there was no coaching or direct instruction of the material, the class was not viewed as beneficial. This class was also cancelled. The researcher was privy to feedback from her daughter who was a participant in this class.

In 2008, the study high school, at the request of the sponsors of the support group for African American students, offered a structured preparation course to help students prepare to take the ACT. The class was specifically designed for African American seniors and juniors wanting to improve their ACT scores or those taking the test for the first time. The structure of the course included coaching and instruction by an experienced instructor. At the beginning of class students address any concerns, there was a wrap-up class at the end, and an opportunity to devote more quality time to English, math, reading, and science was offered. There was 40 minutes of instruction and 20 minutes of practice per session. This course lasted six weeks and was available to students during academic lab from 9:30 am until 10:30 am. The class met an average of two to three times a week. Following this six-week session, the consensus from students was that this class actually prepared them to take the ACT.

Research Questions

In this mixed-methods exploratory study, the qualitative data analysis answered the following research questions:

1) How will the attitudes of African American students change toward the ACT after taking the ACT preparation course?
2) How does taking an ACT preparation course affect the test scores of African American students?
3) What impact does the ACT preparation course have in preparing African American students for what was on the actual ACT?

Alternate Hypotheses

1) Following implementation of an ACT preparation course for African American students, there will be a difference in subsequent achievement scores measured by the ACT test, when compared to prior achievement scores measured by the PLAN exam prior to the preparation course.
2) There will be a relationship between pre-test scores on the PLAN exam and post-test scores on the ACT for African American students participating in the ACT preparation course.

Limitations of the Study

This study utilized African American students as the study sample, which included only junior and senior high school students. It was conducted in a suburban high school and was limited to data collected from ACT score records of African American students during the 2008-2009 and 2009-2010 school years. Samples drawn from rural and urban schools may provide different responses and results. Not included in the study

were students who had already earned a 26 or higher on the ACT, those who had not yet reached math beyond geometry, and students who had previously taken an ACT preparation course. These qualifications were established by the test-preparation sponsors, the African American Student Alliance, and the College and Career Office at the study high school. These criteria were beyond the control of the researcher.

To allow student participation in the study, parents had to return a signed contract (Appendix C), in addition to provision of proof the student was registered to take the ACT. This was a limiting factor with regard to the participants in the study. In addition, not all students who enrolled in the course attended all sessions or fulfilled all aspects of the participation contract, thereby excluding the use of their data in this research study.

As a member of the faculty at the study high school, some limitations of study existed because of the academic and extra-curricular involvement of the researcher, who was also one of the sponsors of the African American Student Alliance. Many students involved in the study were students the researcher taught in past or then-current coursework, at the time they were taking the ACT preparation course. In addition, one of the students was the researcher's son. In an effort to eliminate bias by the researcher, the College and Career Office collected the pre- and post-questionnaires, as well as the reflective journals from the student participants. Both the pre-test (PLAN) and the post-test (ACT) were administered under standardized conditions. The researcher observed unobtrusively during the ACT preparation course and examined the reflective journals only after the preparation course was complete.

The PLAN test was designed to help sophomore high school students measure current academic development, and was taken in the fall of the sophomore year. The

PLAN test was a pre-ACT consisting of 'retired' ACT exam questions, allowing students to experience taking an ACT. ACT developed the PLAN and claimed it predicted success on the ACT test (ACT, Inc., 2015, p. 1). However, as of June 2014, the PLAN test was no longer utilized by ACT. According to ACT, Inc. (2015), a new student college readiness assessment system was launched, called ACT Aspire. The ACT Aspire was "the first computer-based longitudinal assessment system connecting student progress from the elementary grades through high school in the context of college and career readiness" (p. 1).

Campbell and Stanley (1963) suggested other possible limitations for a study of this type may include history, and maturation, and testing might affect the gains in the average score. These gains affect the average ACT score from beginning to the end of the course, which could be caused by any one of these factors. Disregarding any effect of previous history, the researcher looked at the possibility of maturation process and testing factors. The testing factors suggested there was a tendency for students to increase their scores when taking the test more than once, merely because they could recall answers to some of the questions and were familiar with the format of the test. The maturation process may also have an effect on test scores, due to the passage of time with students getting older.

Methodological Framework

The methodology used in this research study was a mixed-method exploratory design. This design begins with qualitative analysis and was best suited for exploring phenomenon, and based on the premise that an exploration was needed for one of several reasons (Creswell, 2004: Creswell, Plano Clark, Gutmann, & Hanson, 2003). At the time

of this study the researcher was a teacher at the study high school. As a co-sponsor of the African American Student Alliance, the researcher was also involved in the structure of a new program implemented in the 2008-2009 school years designed to specifically focus on improving the ACT scores of African American students.

According to Miller and Salkind (2002), the researcher was to provide an accurate accounting of a treatment program applied to a social problem. The treatment program would be the ACT preparation course: simply put, "evaluation research involves making a judgment about the merit or value of the program" (p. 4). The school had utilized this program for one semester (a session beginning in October and ending in December, 2008) prior to this research study. The class enrollment ranged from 20 to 30 students and 90% were African American. However, when the program was changed in the spring of 2010 to offer the course to all students, an influx of White students reduced the percentage of African American students actively involved in the program.

The quantitative data collected was first day of class questionnaire results, which provided information about each student's gender, grade level, and grade point average (GPA). The qualitative data were answers to questions about his/her thoughts or expectations of the course and core subject information. Secondly, the quasi-experiment quantitative approach—the non-equivalent groups design was utilized. This design required a pre-test (PLAN) and post-test (ACT) for the treatment group. The groups given these tests were comprised of African American students who took the ACT without taking an ACT preparation course and PLAN Test (the baseline group) and African American students who took an ACT preparation course and PLAN Test prior to taking the ACT test (treatment group). The treatment group was chosen based on a set of

criteria established prior to the course's assimilation. These criteria included a signed participation contract, attendance at all of the course sessions, ACT composite scores below the study high school average of 25.1 or taking the ACT test for the first time, and enrollment in the upcoming ACT examination session, which required proof of registration (ACT ticket).

Thirdly, data was collected from the reflective journals of the students who were asked to share their thoughts and feelings about the ACT preparation course. Students knew the purpose of the reflective journals and were aware these were meant to reinforce their thought processes. The open-ended questions were designed to encourage students to consider the personal and educational impact of the course, as well as their thoughts after receiving their test scores (Appendices F & G). Simmons-Mackie and Damico (2001) concluded journal writing could provide a key piece of authentic data. "Descriptive data provides a socially valid and consumer-focused method of tracking outcomes" (Simmons-Mackie & Damico, 2001, p. 21).

Finally, the researcher handed out a paper post-questionnaire for the students to complete during the last day of the six-week preparation course. The purpose of this post-questionnaire was to determine whether students felt their needs and expectations were met in terms of becoming better prepared to take the ACT. Further, students also submitted their journals after they received their ACT scores to answer additional questions.

Rationale

The ACT was widely known as the achievement test based on the curriculum commonly taught in American high schools. Since it was a college-entrance exam, there

was considerable interest in strategies that may lead to higher test scores. The leading strategies were believed to be coaching or test preparation, but there was very little research as to whether ACT scores could be impacted when taking an ACT preparation course.

According to The Principal's Partnership (2002), the Task Force on Standardized College Admissions Testing did not believe "coaching or retesting has much of an effect on raising test scores" (p. 1). However, decisions by students to prepare themselves for college by taking more challenging coursework does help. Based on this information, there was a need for further research on the benefits of taking a preparation course. This information was important for students whose parents may pay a substantial fee for student participation in such a course. If school leaders wished to offer these services at a reduced or no cost, then their effectiveness must be examined.

Finally, if such courses were tailored to a specific group of students, then the effectiveness for that group was important to evaluate. The benefits extended beyond just raising test scores to increasing student efficacy when faced with any type of standardized test. That is why this study utilized not only pre-test and post-test questionnaire data, but also student reflective journals and researcher observations of the preparation course.

The NCLB in its quest to mandate the same performance targets for all children seemed to have placed more attention on the achievement gap. These performance targets, as outlined in the NCLB, Title 1, Sec. 1001, (3) included "closing the achievement gap between high- and low-performing children, especially the achievement gaps between minority and nonminority students, and between disadvantaged children

and their more advantaged peers" (p. 1). The achievement gap also included students from economically disadvantaged families, students with disabilities, students with limited English proficiency, and students from all major ethnic and social groups. However, for the purposes of this study, the focus will be on the achievement gap between African American students and their White counterparts.

Definition of Terms

ACT: Originally an abbreviation of American College Testing, ACT is a college readiness assessment and standardized test, produced by ACT, Inc., for high school achievement and used for college admission decisions in the United States (ACT, Inc. 2012).

ACT Preparation includes coaching and instruction to review the ACT format and become familiar with the test content.

Age Discrimination Act of 1975 prohibits age discrimination.

A Nation at Risk: In April 1983, the National Commission on Excellence in Education, formed by then-U.S. Secretary of Education Bell, released the report *A Nation at Risk*. The most famous line of the widely-publicized report declared, "The educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people." This report prompted widespread efforts to improve American education (A Nation at Risk, 1983, para. 1).

Achievement Gap: The term achievement gap refers to any significant and persistent disparity in academic performance or educational attainment between different groups of students, such as White students and minorities, for example, or students from higher-income and lower-income households (Achievement Gap, 2013, para. 1).

Cultural Deficit Model: This model contends that minority cultural values, as transmitted through families, are dysfunctional, and therefore cause low educational and occupational attainment (Solórzano, 1997).

Critical Race Theory (CRT): Ingrained in the educational system of America is a theory that asserts the real issue with regard to race is not just between African American and White, but how every person regardless of their ethnicity or race is positioned in relation to Whites. The reality is that there is a belief that a racialized society is not just an ideological construct (Dixson & Rosseau, 1996).

Critical Reflection: Critical reflection occurs when knowledge, understanding and beliefs are analyzed and challenged (Mezirow, 1990).

National Assessment of Educational Progress: The National Assessment of Educational Progress (NAEP) provides the largest representation of national and continuing assessment on what America's students know, and can do, in various subject areas (NAEP, 2013).

National Center for Education Statistics: The National Center for Education Statistics (NCES) is the primary federal entity for collecting and analyzing data related to education (NCES, n.d.).

No Child Left Behind Act: Federal Act passed in 2001 that holds schools accountable for student achievement on standardized test scores (NCLB, 2001).

PLAN: PLAN is a pre-ACT test used as a predictor of success on the ACT. Typically, the PLAN is administered in the fall of the sophomore year.

Reading Proficiency: In this study, reading proficiency refers to performance on the National Assessment of Educational Progress (NAEP) Reading Assessments (NAEP, 2013).

Reflective Journaling: Reflective journaling is the regular practice of recording activities and/or situations on paper with the goal of reflecting on those experiences in order to learn from them and grow personally and professionally. Journaling is useful in providing insight into self-awareness--what you do (behaviors), why you do it (values, assumptions, aspirations), how you feel (emotions), and how you think. Journaling can expose contradictions, misconceptions, and conflict. In short, it helps turn every incident into a new potential learning experience (Webguru, n.d., para. 2).

SAT is a standardized test widely used for college admissions in the United States. It was first introduced in 1926, and its name and scoring have changed several times. It was originally called the Scholastic Aptitude Test, then the Scholastic Assessment Test, then the SAT Reasoning Test, and now simply the SAT (SAT, 2015, para. 1).

Section 504 of the Rehabilitation Act of 1973 prohibits disability discrimination.

SMART Goals: "Goals that are strategic, measurable, attainable, results-oriented and time-bound" (DuFour, DuFour, & Eaker, 2008, p. 159).

Socioeconomic status: Socioeconomic status is often measured as a combination of education, income, and occupation. It is commonly conceptualized as the social standing or class of an individual or group. Examinations of socioeconomic status often

reveal inequities in access to resources, plus issues related to privilege, power and control (American Psychological Association, n.d., para 1).

Stereotype threat: Stereotype threat is a social stigma of intellectual inferiority for some cultural minorities. It is a stigma of intellectual inferiority, which refers to being at risk of conforming to self-characteristics of a negative stereotype about one's group (Hargreaves, 2007).

Title II of the Americans and Disabilities Act of 1990 prohibits disability discrimination by public entities, whether or not they receive federal financial assistance.

Title IV of the Civil Rights Act of 1964 prohibits discrimination based on race, color, and national origin.

Title IX of the Education Amendments of 1972 prohibits sex discrimination in education programs.

Summary

The ACT preparation course conducted by the participating study high school was just one of the methods researched in an effort to achieve the goal of closing the achievement gap. African American students scored below the mean of 22.1 in the study high school, according to the Missouri Department of Elementary and Secondary Education (MODESE) websites. A program that helps students improve ACT scores among African American students, could provide a major step in closing the achievement gap.

African American students were one subgroup assessed as a result of NCLB that consistently scored below the mean at the study high school, as well as the state level and nationally. The purpose of this study was to investigate whether there is an improvement

in the attitudes and ACT scores of African American students who participate in an ACT preparation course prior to taking the ACT.

Chapter Two: Review of the Literature

At the time of this writing, there were several decades of research related to the disparities in test scores between African American and White students. Unfortunately, these disparities carried over when African American high school students took the ACT college entrance test. The literature was limited regarding a link between ACT coaching or test preparation and the ACT scores of African American students. However, there was literature discussing the inability of African American students to meet college readiness benchmarks on the ACT test. The college readiness benchmarks were "the minimum ACT test scores required for students to have a high probability of success in credit bearing college courses (ACT, Inc., 2010, p. 1).

Further, there was a volume of literature discussing factors contributing to the achievement gap, as well as societal factors that impacted the academic achievement of African American students. In order to provide a closer look into the African American-White dichotomy and its relationship to the achievement gap, the framing literature includes research topics related to this study. The research literature for these topics are in sequential order to create a scaffold of knowledge on the impacts to the African American student. The related topics begin with the statistics of the African American student, family, socio-economic status, and continue with gender differences, cultural differences, cultural diversity, cultural deficit model, stereotype threat, and the critical race theory.

African American Student Statistics

In an effort to gain an understanding of the adversity African American students' faced, it is essential to view statistics affecting them. In 2014, the Children's Defense

Fund investigated the state of children in America. A review of the 2014 document, *The State of Children in America*, identified what occurred daily, 365 days a year, in the lives of African American children, thus changing their lives (Table 8).

Table 8

Daily Lives of African American Children: 2014.

1 mother dies in childbirth.
1 child is killed by abuse or neglect.
1 child or teen commits suicide.
3 children or teens are killed by guns.
4 children or teens die from accidents.
19 babies die before their first birthdays.
95 children are arrested for violent crimes.
95 children are arrested for drug crimes.
104 babies are born without health insurance.
199 babies are born to teen mothers.
211 babies are born at low birth weight.
310 babies are born into extreme poverty.
336 public school students are corporally punished.*
384 children are confirmed as abused or neglected.
597 babies are born into poverty.
763 high school students drop out.*
1,153 babies are born to unmarried mothers.
1,274 children are arrested.
6,191 public school students are suspended.*

Note: *Based on 180 school days a year. (Children's Defense Fund, 2014, p. 14).

The study, *The State of Children in America* (Children's Defense Fund, 2014), further advanced understanding of the struggles and educational impacts plaguing African American students by asserting:

- American schools were re-segregating: 73% of African American students were in predominantly minority schools. (p. G-1)
- More than 60% of fourth grade public school students were reading or doing math below grade level. (p. G-1)
- Eight-five percent of African Americans were reading below grade level. In math, 85% of African Americans were achieving below grade level. (p. G-1)
- African American students were more than three times as likely as White or Asian/Pacific Islander, and twice as likely as Hispanic students to be suspended from school. (p. G-1)
- Forty-six percent of African American high schools students, 39% of Hispanic students, and 11% of White students attended the 2,000 dropout factories across our country, where less than 60% of the freshman class would graduate in four years with a regular diploma. (p. G-1)

Fifty-six years after Brown versus Board of Education (Brown v. Board of Education, 1954) declared that separate public schools for African American and White students were inherently unequal and unconstitutional, essentially outlawing segregation, American schools were re-segregating racially (Children's Defense Fund, 2014, p. G-4). In a sense, this was repeating the past and again making equality in education elusive for African American students.

Family. Research showed that parental involvement could determine a child's academic achievement. Research by Hubbard (2005) found the parental involvement of African American students was lacking, thus impacting the students' academic success. Hubbard (2005) also determined that African American parents were typically not

involved in their children's education and did not attend meetings related to their children's academic performance or extra-curricular activities.

The involvement of the parent was more important than family characteristics, such as marital status: indicated when Comer and Haynes (1991) determined that

> achievement gains have been the greatest when parents are involved at all levels of school life, through general support of schools' academic and social goals, active participation in daily activities, and in school planning and management, a pattern that is referenced as meaningful parental participation, family size, level of education, student grade level or even socio-economic level. (p. 271)

A strong parent strengthens and defines educational goals of the student (Rodriguez & Villarreal, 2002).

According to Barnard (2004), the association between early parental involvement in elementary school and student success in high school promoted positive long-term effects on academic achievement. Bronstein, Ginsburg, and Herrera (2005) confirmed that a lack parental involvement by parents of fifth grade students equated to poor academic achievement. Hubbard (2005) also found that the involvement of the parent was critical to the academic success of children in elementary school and high school, particularly, because this was when students became more social and were influenced by their peers, often receiving negative advice.

Essentially, the make-up of the family impacted parental involvement in terms of time spent on task, study habits, and belief systems. If parents were involved in the educational process in terms of suggesting and selecting classes, helping students study, and being aware of what was going on inside and outside the school setting, then students

tended to be more successful (Kritsonis & Nickerson, 2006). Rhodes (1992) found that economically deprived parents generally had fewer resources to provide an educational home environment that included books, reference materials, and study space. Research conducted by Somers, Owens, and Piliawsky (2008) established that African American parents were less motivated to become involved in the education of their children because of their educational background and did not feel their children would benefit academically from their involvement. However, Hubbard (2005), found that if parents were actively involved in their child's education by motivating and encouraging them, as well as helping with homework, students were more inclined to study and their grades and GPA improved.

The findings of this review of literature established that family-level factors impacted the academic outcomes of students. A major influence on the academic success of students was parental involvement. The majority of lower-income, African American students who tended to have little or no parental involvement equated to lower levels of academic achievement. Parents were generally more interested in 'just' caring for the family financially and tended to utilize family resources differently for a male child than for a female child (Hubbard, 2005).

Kritsonis and Nickerson (2006) investigated why Asian American students outperformed every ethnic group and what factors contributed to the high performance success rate. The researchers concluded that family constitution impacted student achievement. According to the study entitled *The State of America's Children*, sponsored by the Children's Defense Fund (2014), recent data on family structure found,

> Almost 70% of all children lived with two parents in 2013. However, more than half of all African American children and over 30% of Hispanic children lived with only one parent, usually the mother. African American children were twice as likely as White children to live with neither parent. Usually a grandparent or another relative-caretaker parented them. (p. 24)

There was an increasing number of families headed by single parent households, especially in urban settings (Lippman, Burn, & McArthur, 1996). Research by Trotman (2001) suggested there were several barriers, which impacted the lack of parental involvement in the lives of children. These barriers could include the work schedules of the parent, the effect of negative life events, lack of transportation, and not having enough time to devote to the needs of the children. Moreover, the educational attainment level of the parent could be another impediment, as well as the expectations of teachers who may believe the lack of involvement meant the parent did not care about the education of the child, often making parents feel inferior and embarrassed (p. 61).

The Children's Defense Fund (2014) conducted a study on the state of America's children. The study found that 77.4% of White children lived with both parents, compared to just 38.8% of African American children. In contrast, 50.5% of African American children lived with only their mother, and only 15.3% of White children lived with only their mother (p. 24).

> Family structure and economic stability impact the availability of emotional and financial resources for children and the extra support that can be directed to their special needs. Many children lack the active support of two parents. Thirty-eight percent of all children are being born to unmarried mothers: 71% are African

> American children: 50% of Hispanic children: and 27% of White children. About 70% of all children—but fewer than 40% of African American children—live with two parents. Twenty-three percent of all children and 50% of African American children live with only their mother. (Children's Defense Fund, 2014, p. 24)

African American parents cared as much about the academic achievement of their children as did parents of any ethnicity, but due to these circumstances were unable to be involved.

Socioeconomic status. Many of the disparities in academic achievement stemmed from socioeconomic factors, with African American's being over-represented as economically disadvantaged. The 2002 U.S. Census found that 28% of children in the United States lived with one parent and varied based on race (Proctor & Dalaker, 2002, p. 23). It determined that approximately 1 in 5 White, non-Hispanic children (21%): 1 in 3 Hispanic children (31%) and 1 in 2 African American children (55%) live with one parent (p. 23). The census also found that 37.4% of African American children under the age 18 lived in poverty. These figures were staggering, especially when compared with their White counterparts, of whom only 13% lived in poverty (Proctor & Dalaker, 2002). Data taken from the USDOE's (2011) Early Childhood Longitudinal Study compared average cognitive scores of pre-kindergarten children living in different socioeconomic brackets, and found that the higher the socioeconomic bracket, the higher the cognitive score.

Lee and Burkham (2002) conducted a study, wherein the data indicated:

> the composition of the socioeconomic brackets was closely tied to race: 34% of African American children and 29% of Hispanic children lived in the lowest socioeconomic bracket, compared with only 9% of White children living within the lower socioeconomic bracket. Further, family structure and educational expectations have important associations with SES, race/ethnicity, and with young children's test scores, though their impacts on cognitive skills are much smaller than either race or SES. Although 15% of white children live with only one parent, 54% of African American and 27% of Hispanic children live in single-parent homes. Similarly, 48% of families in the lowest SES quintile are headed by a single parent, compared to only 10% of families in the highest quintile. (Lee & Burkham, 2002, pp. 2-10)

In *The State of America's Children* report (Children's Defense Fund, 2014), "the average wealth of White households in 2011 ($110,500) was nearly 14 times that of Hispanic households ($7,683), and more than 17 times that of African American households ($6,314)" (p. 25). Additionally, "Asian and White families with children had median incomes more than twice that for African American and Hispanic families" (p. 25). In comparison, "The median income was $81,199 for Asian families, $75,448 for White families, $35,665 for African American families, and $36,949 for Hispanic families." (p. 25). Research on the state of America's children further discovered that African American and Hispanic children remained most vulnerable to many threats to child well-being.

> The portrait of continuing and worsening racial and income inequality is clear as we look at the state of America's children today. We are on dangerous ground and

> at risk of moving backwards. We must create a level playing field for all of our children. The steps we take will shape our children's and nation's futures. (Children's Defense Fund, 2014, p. xv)

According to the overview of *The State of America's Children* (Children's Defense fund, 2014),

> For the first time the majority of children in America under age 2 were children of color in 2010. Over one-third of children of color under 2 were poor in 2012 during years of rapid brain development. Children of color in America are disproportionately poor: African American children were the poorest (39.6%) followed by American Indian/Native Alaskan children (36.8%) and Hispanic children (33.7%). (p. 4)

It was apparent, based on this research that socio-economic factors played a significant role in the overall success of minority students. Rhodes (1992), found that children who lived in such "pedagogically poor surroundings" could appear to be less intelligent than they actually were (p. 109). Racial inequality fused with income inequality produced additional barriers as minority children sought social acceptance and strove towards academic success.

Gender differences. There was a disparity between studies that specifically looked at the gender of African American students as being a moderating variable (Cokley, 2001). Collectively, these studies offered little analytical insight into psychosocial development in the African American segment of the population. As a result, there was not much known in regard to gender differences in African American students in their psychosocial development.

The studies focused on gender differences were inconclusive. Fleming (1984) reported African American males exhibited higher academic concepts, while Allen (1992) stated that African American females were more confident in their academic standing. The institutional racial composition was a significant moderating variable in the psychosocial development and experiences of African American students.

Data existed that may shed some insight on why African American males were less motivated compared to African American females, as well as members of other ethnic and gender groups (Cokley, 2001). African American males often experienced alienation from the process of education, according to Lee (1991). This alienation was expressed in a higher incidence of suspension from school over longer periods of time, occurring with greater frequency, when compared to White males and others.

While much of the data investigated middle and high school experiences, enrollment and graduation from college plummeted. Lee (1991) suggested the environment of college failed to adequately respond to the needs of the African American male indicating significant inroads in this area had not been implemented by institutions of higher learning.

A probable explanation for this failure was that African American males became more disengaged and disenchanted with the educational environment than students who were members of other racial groups. Evidently, there was a detachment from academics, but an attachment to activities that were perceived as opportunities, and where there was a greater ability to succeed, such as in athletics (Cokley, 2001). There was a similar process researched by Steele (1997) who labeled ‘academic dis-identification,’ implying the self-esteem of these students became disassociated in their performance academically

and in their ability to be successful. According to Steele (1997), this gradual disassociation preserved the self-esteem of African American students when being confronted by performing poorly in academics.

Mickelson and Greene (2006) further explored gender variations and their sources by looking at the academic performance in African American students in middle school. It appeared the roots of this underachievement by African American males stemmed from educational attitudes, the structure of the school environment, climate, and the influence of peers. These findings suggested gender differences were virtually non-existent in elementary school, but tended to become more obvious in middle school. African American females tended to obtain higher grades and test scores than African American males. On the opposite end of the scale, however, tests scores of African American females were more likely to be impacted by the socioeconomic status of the family, as well as its cultural capital. Further, Mickleson and Greene (2006), suggested the academic link to cultural capital can be defined as forms of knowledge, both tangible and intangible, which is needed to succeed in the current educational system.

Despite several decades of school reform, on average African American students' school performance continued to lag behind White students' performance, and African American males were the most affected by this gap. Even middle-class African Americans males performed lower than expected, given their family's socioeconomic levels (Ogbu, 2003: Polite & Davis, 1999). On average, African American males earned lower grades and test scores, were disproportionately placed in special education classes, were suspended or expelled more often, were assigned to lower academic tracks, and graduated from high school and college at lower rates than their female counterparts

(Mickelson & Greene, 2006). They experienced lower rates of parental involvement and often attended urban schools that were poorly funded (Anton, 1997: Eitle, 2003: Gutman & Midgely, 2000). The disproportionate failure of African American males in the educational system was identified as a major cause for their over-representation in the criminal justice system and high unemployment rate (Garibaldi, 1992: Stewart, 1992). For example, African American males represented approximately 8.6% of the nation's K-12 public school enrollment, but made up about 60% of all incarcerated youth (Schott Foundation, 2005: Smith, 2005, p. 16).

In 2006, Wood, Kaplan, and McLloyd (2006) conducted a research study examining how gender was related to expectations concerning education. Findings suggested educational expectations were minimal with regard to students who lived in an urban, lower socioeconomic environment, and these expectations carried over to teachers. The researchers predicted that African American boys (ages 9–16) would have lower expectations for their educational future, but their female counterparts were more positive and hopeful about their future. However, “contrary to predictions the magnitude of the difference in expectations for males vs. females did not increase as a function of age, with parental expectations fully mediated the relation between gender and their expectations” (Wood et al, 2006, p. 26). Finally, the study ascertained some school-based factors such as a positive school environment, positive teacher expectations, and the perception of the students seemed to protect their expectations from the impact of low parental expectations.

Cultural differences. Studies indicated many African American students were underachieving, or low achieving (Ferguson, 1998: Thernstrom & Thernstrom, 2003).

There were many factors contributing to low achievement of African American students in education. As a cultural group, African American students were dissimilar from White students, often coming from poorer socioeconomic circumstances, single-parent homes, or from families in which neither parent attended or graduated from college.

Possibly, for many African American students the desire to obtain a college education was strong. In many instances, however, that desire was impeded not only by economic and educational deficiencies, but also by problems these students encountered within the college and university setting (Reed, 1997). Racial inequalities, peers, and familial structure were researched by Bankston and Caldas (1996), who examined what factors influenced the academic achievement of African American students compared to White students. According to this study, in addition to the gap between African Americans and White children in educational attainment, there were many other disturbing inequalities relating to the educational outcomes of African American and White students in the United States.

> According to a report by the United States Department of Education (1994) found African American high school students are still at a disadvantage in grade retention, parental involvement, dropout rates, academic achievement, education aspirations, course-taking patterns, adult literacy patterns and labor market outcomes. (Bankston & Caldas, 1996, p. 9)

It was further revealed that African American and White children did not just have unequal outcomes during their education, but were also raised in different family environments, as well as different educational arenas.

Influences on the African American Student

There were cultural, psychological, and social differences, which influenced African American students, even before crossing the threshold of a classroom. Research by Ascher (1994) described African Americans as being an "endangered species because they seem to be vanishing and performing poorly in classrooms across the nation" (p. 16). Wright (1987) contended there was "an academic demise among African American students that could be attributed to a deficit of basic educational skills" (p. 12). In addition, Wright (1987) suggested that this deficit could be improved by differentiating instruction for this particular population of students. As a final point, Wood (2003) concluded the reason African American students were failing academically was because, "African American students, as a whole, have many more barriers to overcome at home than other students in order to be successful" (p. 37). These influences consist of cultural diversity, cultural deficit model, stereotype threat, and the critical race theory.

In the contemporary United States, one of the most explosive issues was how to meet the needs of culturally diverse students. At least half of the students in 25 of the largest cities in the United States were from linguistically and culturally diverse groups, with the fastest growing ethnic population in the country as Hispanics (Smith & Luckasson, 1992).

Cultural diversity. It was a reality that racism still existed, and Utsey, Ponterotto, Reynolds, and Concelli (2000) noted racism was an everyday occurrence for African Americans, which affected their self-esteem and life satisfaction. Historically, many of the issues hampering African American students were more than likely symptomatic of bias. Boykin (1986) introduced the following concept: Deviations from the cultural

'ideal' are viewed as deficiencies and imperfections, and 'deprived' children are believed to come from a group 'with no cultural integrity of its own (p. 60). Boykin (1986) also suggested that the use of the terms "minority" and marginalized" implied these groups had the same socioeconomic situation. They were, in fact, disenfranchised from the larger society (p. 60).

Throughout history, the underprivileged believed that education was the best method to improve social and financial standing (Ribich, 1968). Unfortunately, many who were disadvantaged were of African American descent. Believing in the old adage 'knowledge is power' was still embraced. It was not surprising that generations of African Americans struggled to provide educational choice, as well as opportunities for their offspring, against difficult odds (Ford, 1993).

The 1980s and 1990s brought a revival of the cultural deficit model under the rubric of the 'cultural underclass' (Baca Zinn, 1989). Indeed, Kretovics and Nussel (1994) stated, "at the highest levels of educational policy, we have moved from deficiency theory to theories of difference, back to deficiency theory" (p. x). According to McWhorter (2000), the cultural deficit model remained as the 'hidden' theory of choice and belies related stereotypes in not just media, but also in corporate and professional environments.

Cultural Deficit Model. The most prevalent research model during the 1960s and 1970s was one that focused on cultural deficits in African American families. The research on African American families tended to follow the 'cultural deficit' model. This model was described as minority cultures failing to attain the levels of socioeconomic and academic status obtained by the majority because of cultural deficits. Too often, the

studies of African American families did not report the fact that many parents were academically astute and were gainfully employed, embracing the value of education in their families (Billingsley, 1968).

This paradigm was especially prevalent during this period when poor school achievement among African American students was explained by the 'culture of poverty' theories. These theories contended African American families and their communities were fraught with elements of cultural deprivation, inadequate socialization, antisocial cultural practices and behaviors, lack of male role models, exposure to crime, undisciplined home life, and so forth (Jencks & Phillips, 1998: Moynihan, 1965). Finally, Boykin (1986) suggested that "African American children were seen as growing up in a web of social pathology and inadequate life experiences" (p. 60).

Stereotype threat. The term stereotype threat refers to a set of negative variables directed towards a particular group through which an assessment can be rendered. When such negative connotations are in place, a person might become aware that his or her movements and actions are based on the stereotype rather than his or her ability. Thus, such action is a measure of the stereotype compatibility. The recognition of being viewed and/or treated stereotypically may produce stress and strain, and impede performance during a test or examination (Steele & Aronson, 1995).

According to Hargreaves (2007), psychologists suggested stereotype threat is the social stigma of intellectual inferiority borne by certain cultural minorities and can determine the standardized performance and school outcomes of members of these groups. To make standardized testing "equal and fair across the board for all students, a psychological change must take place to limit the impact of social stigma" (p. 1).

Consequently, a social stigma existed portraying African Americans as intellectually inferior.

In the past, this attitude became the norm, beginning with slavery and brought to the forefront with segregation in education. In plain words, the undermining of the intellectual capacity of African Americans had a negative impact on their ability to pursue higher education, as well as performance on standardized tests such as the ACT (Hargreaves, 2007). In 1995 Steele and Aronson, performed a research study to look at stereotypes and the impact these have on how students view themselves, thus altering them academically and intellectually, as well as creating a social-psychological predicament. This inferred that self-perception was a powerful influencer of performance. Such examples of 'positive' self-perception were athletes who 'psych' themselves up before the game. There was little doubt that individuals had the ability to visualize and actualize. Self-fulfilling prophecies appeared to spring from stereotypes that were closely and sometimes silently held within (Steele & Aronson, 1995).

Steele and Aronson (1995), in an effort to demonstrate the existence of the stereotype-threat condition, utilized a test sample and control group of 117 male and female African American and European-American students (p. 797). These students were told prior to taking the test it would diagnose intellectual ability, thus providing the setting of the stereotype-threat condition: namely, that African Americans were less intelligent than Whites. In order to eliminate this condition, students were told the test was simply a problem-solving lab task that implied nothing relating to ability. This presumably rendered stereotype threat irrelevant. On the other hand, African American students who were matched with Whites in their group by SAT scores did not do as well.

However, with the lack of a stereotype-threat condition, their performance matched the quality of their White counterparts.

Steele and Aronson (1995) found there was a predictable test score differential between African Americans and White Americans. The research was driven by the quest to determine the cause(s) of the score gap between Whites and Blacks on standardized tests (p. 797). The research determined that when:

> When the stereotype was primed, Blacks did less well than the Whites with similar SAT scores. When the stereotype was not primed, Black performance equaled that of the Whites with similar SAT scores. (p. 807)

These were sizeable differences, which could negatively impact opportunities when tests were used as criteria for college admission. Score differences could be devastating in relation to educational opportunities. There was ongoing research and investigation regarding factors contributing to score differences between certain groups (Steele & Aronson, 1995).

The significant outcomes of such under-performance described by Steele and Aronson (1995) can be seen in lower graduation rates, lower grades, and standardized-test scores, which continued to persist in the middle class of African Americans. This led many to concede, if reluctantly that beyond class, there was something racial that had a detrimental effect on African American students with regard to their academic performance (Steele & Aronson, 1995).

The question suggested by Steele and Aronson (1995) that has yet to be answered, at the time of this writing, was: if these stereotypes are powerful enough to influence performance on tests, is it possible there is training available to raise performance levels

to the point of countering the negative effect and influence of stereotypes? Given the data provided by Steele and Aronson (1995), an addition to existing core curriculum may be necessary for minorities experiencing stereotype threat. An addition of cultural diversity to the curriculum may be a possible intervention focusing on racism and human relations. In retrospect, there was an indication from much of the data that African American students were setup to fail. Intertwined amidst the adjustments that were well intentioned to enhance performance, the failure may lie on biased scales. A system that does not understand the culture of its clients could produce biased scales, microcosms of the very same institutions perpetuating the failure.

A prominent St. Louis professor of African/Afro-American studies at Washington University suggested that a great deal of fault in testing was based on the lack of fairness, due to how African American children were viewed (Williams, 1972). He developed the

> BITCH-100 Test (African American Intelligence Test of Cultural Homogeneity), a 'culture specific' test designed to determine the taker's ability to function symbolically or to think in terms of his own culture and environment. A combination of dialect specific and culture specific tests would certainly enhance the possibility of measuring what is inside the African American child's head. (p. 1)

This research addressed issues of cultural bias in testing the intelligence of African Americans. These same types of assumptions may apply to any culturally diverse group where testing and measuring intelligence is conducted using biased scales. The research findings of the BITCH-100 supported the use of intellectual indicators in testing: thereby, confirming the benefits of using dialect and culture specific testing. In both experiments,

African American students showed distinct superiority over White students when taking this test. The author also concluded that further research was needed.

The findings of several research studies related to stereotype threat indicated that regardless of school preparation or family income, African American students tended to receive lower grades, thus equating to grade point averages that were generally lower than their peers: the same was true of standardized testing (Bowen & Bok, 1998: Hacker, 1995: Jencks & Phillips 1998: Steele, 1997). In the United States, it was common knowledge that economic opportunity and success remained dependent upon one's education. Even without stereotype threat, the achievement gap continued to widen for African American males. Even on tests that were supposedly free of cultural bias, simply giving a standardized test may be enough to promote fear and anxiety, especially when testers are not familiar with the language of educational or psychological testing.

Critical Race Theory. Ladson-Billings and Tate (1995) asserted that one of the primary theories of the Critical Race Theory was the salience of race. They contended, that "race continues to be a significant factor in determining inequity in the United States" (p. 48). Concerning the Critical Race Theory as it applies in education, Ladson-Billings and Tate asserted that the significance of race was reflected in the performance and experience in the academic setting between students of color and White students. Wicomb (1998) explained:

> White is an empty signifier, both everything and nothing . . . being invisible to itself it cannot acknowledge its existence . . .it can only articulate itself in terms of the markedness of black, the contrast which supplies the meaning of white as the norm. (p. 378)

Frankenberg (1997) argued, “through the continual slippages between discourses on race, nation and culture that continue to unmark white people while consistently marking and racialising others” (p. 6). The reality was that living in a racialized society was not just an ideological construct. The Critical Race Theory (CRT) consisted of the following premises: (a) race continues to be significant issue within the United States: (b) American society is based on property rights rather than human rights: and (c) the analytical tool for understanding inequity is the intersection of race and property (Dixson & Rosseau, 1996, pp. 7-27).

Inequities in the academic area between students who were White middle class and African American and Hispanic students who were of poor or lower socioeconomic background, demonstrated support for CRT (Ladson-Billings & Tate, 1995, p. 51). The article by Ladson-Billings and Tate (1995) suggested that the CRT was a logical and predictable result of these inequalities in a society that still discussed racism and race. In order to confirm the inequities in academics, one just needed to look at any statistical and demographic data relating to standardized testing, dropout rates, suspensions rates, and graduation rates.

Needless to say, class and gender intersect race, but as ‘stand-alone variables’ they simply do not and cannot explain the achievement gap. Interestingly, even middle class African American students did not achieve at the same level as middle class White students (Ladson-Billings & Tate, 1995, p. 51).

Property rights were a main struggle in America since the 1600s, when the Pilgrims took land from the Indian tribes. This struggle remained in existence at the time of this writing. The belief was that even though the Indians had a natural right to the land,

they did not have a civil right – there was no legal standing for natural rights acknowledged (Ladson-Billings & Tate, 1995). To further complicate this, when Africans were brought to America as slaves the sole purpose was to protect property, wherein they became property – there was no such thing as "individual rights" or "human rights" for slaves or Indians (Ladson-Billings & Tate, 1995, p. 53). This thought process continues in the 21st century, although it is not as openly acknowledged (Ladson-Billings & Tate, 1995).

It was not just the state and federal government that provided funding for public schools. Additional funding came from city, municipality, or county property taxes. This being said, all schools and districts were not created equal. The disparities that existed in school districts were not new and inequitable education still existed.

Achievement Gap

The achievement gap was one of the key factors plaguing the educational system in America, at the time of this writing. The achievement gap was used to describe the disparity between Hispanic and African American students on the 'lower end' of the academic performance scale and their White peers. It was also used to describe the differences academically between those students who came from a low income family and those students who came from middle-class to higher-income families. It was the focus of NCLB (2001) and was becoming more crucial in the efforts towards educational reform.

When examining possible causes of the achievement gap, the level of a students' reading proficiency could be examined as a potential factor. Research conducted by The Child Trends Data Bank (2014) on reading proficiency stated, "The ability to read

proficiently is a fundamental skill that affects the learning experiences and school performance of children and adolescents" (p. 1). Further, the majority of students who were competent readers tended to perform well academically, while those students who were not competent readers, who struggled with reading comprehension tended to be academically challenged and less engaged in the classroom (p. 1). In addition, research found that reading achievement predicted whether students would graduate from high school and pursue post-secondary education (p. 1).

This research by NAEP (2013), as reported in the Child Trends Data Bank (2014) report on reading proficiency, maintained that reading achievement predicted the likelihood of students graduating from high school and attending college. In light of these results, it could be surmised that reading proficiency may be the principal factor in determining academic success. The data provided on reading comprehension confirmed the high percentage of African American students' who were not proficient readers. The NAEP (2013) found "national average reading scores from 2013 did not change from 2009" (Child Trends Data Bank, 2014, p. 2). The NAEP results reported by the Child Trends Data Bank, validated that African American students were lacking in reading and reading comprehension skills (p. 4). Further stated,

> Among fourth-grade students, Asian/Pacific Islanders scored significantly higher than Whites, who in turn had significantly higher scores that those for black, Hispanic, and American Indian students. Hispanics also scored significantly higher than black students. Among eighth-graders, scale scores were highest for Asian/Pacific Islanders, followed by whites and Hispanics. Black and American Indian were the lowest. (Child Trends Data Bank, 2014, p. 4)

Accordingly, the trend continued into the twelfth grade, with Black students having the lowest average scores amongst all ethnic groups. What is interesting to note, between 2003 and 2013, was the gap between Whites and Black diminished for fourth and eighth-grade students, but once again increased between Whites and Blacks for 12th grade (p. 4).

There were indications prior to 1980 that African American and Hispanic students had, over time, made some positive inroads in narrowing the gap separating them from their White counterparts. According to the National Assessment of Educational Progress (NAEP), it seems since the mid-1980s this progress came to a halt (Thernstrom & Thernstrom, 2003).

These disparities showed up in grades, standardized-test scores, course selection, school discipline, dropout rates, teacher equity, and college-completion rates. They were also apparent when comparing high school graduation rates and overall college completion statistics. When looking at the percentages of students enrolled as freshmen in high school who graduate on schedule, the numbers are astonishing: 72% of White students, and just barely over 50% of the same age group of both African Americans and Hispanics graduated on schedule (Greene & Forster, 2003, p. 1).

More shocking was 30 of every 100 White students who began kindergarten were expected to graduate from college, yet only 16 of every 100 African American kindergartners were expected to eventually earn a bachelor degree, according to the National African American Caucus of State Legislators (2001, p. 8). Based on this information, it was not surprising that data from the NCES showed African American and Hispanic kindergartners trailing their Asian American and White peers on early reading

and math skills, as well as testing general knowledge (Zill & West, 2001).

The Civil Rights Data Collection (CRCD) found five striking new facts from the data collected in the 2011-2012 school year. According to the CRDC, for the first time since 2000, data was collected from every school in the nation. This is the first time the data was collected on preschool suspensions and expulsions (USDOE Office of Civil Rights, 2014b). The new facts were that

- Access to preschool was not a reality for much of the country.
- Suspension of preschool children.
- Access to courses necessary for college was inequitably distributed.
- Access to college counselors was uneven.
- Disparities in high school retention. (USDOE Office of Civil Rights, 2014b, p. 1)

Collectively, the CRDC found that too many students were not receiving the education they deserved. The research on the race and gender-gap by Davis and Rosser (1996) suggested the ‘achievement gap’ begins affecting academic performance of African American students as early as middle school.

It is important to reflect upon and understand what shapes the gender differences of African American students and their performance in an academic environment. African American males tended to be more ‘at-risk’ than African American females for dropping-out, being suspended from school, and achieving less than adequate grades.

The majority of students who were less likely to complete their education were those students who did not fare well within the academic setting and experienced poor school outcomes. As a rule, they did not tend to take advantage of opportunities, which

diminished a more successful existence (Davis & Jordan, 1995). There were three factors that may influence academic achievement: school-level, family-level, and individual factors. School-level factors included school climate, qualifications of teachers, and racial composition. Mickelson and Greene (2006) argued that

> students who have less-qualified teachers, who attend segregated schools, and who learn in schools with a weaker academic climate will have lower academic outcomes. It appears that even though African American male and female students attend the same schools, it is very likely that due to gender that they are exposed to a variety of different learning opportunities and that these learning opportunities affect them differently. (p. 34)

There were individual factors that also influenced attitudes toward education, as well personal attitudes that often defined the perception of themselves. African American males whose attitudes towards education were negative did not thrive socially or academically, tended to take less-challenging classes, and had a greater chance of lower academic outcomes (Mickelson & Greene, 2006).

Jackson (2009) researched the achievement gap as it applied to the Tacoma School District in Tacoma, Washington in its quest to close the gap. The report to the school district quantified the achievement gap for African American students as primarily caused by:

- Inequitable distribution of skilled and experienced teachers
- Insufficient and inequitable school funding
- Inadequate, obsolete, and unbalanced distribution of facilities, technology, and instructional materials.

- Inequitable access to demanding, rigorous pre-college coursework
- Institutional racism
- Lack of cultural competence among teachers, school staff, administrators, curriculum and assessment developers, and the school system itself. (p. 13)

Further, there were secondary causes of the achievement gap:

- Inter-generational poverty
- Families/communities that are unable to support or adequately advocate for their children and often are not welcomed by the education system.
- A lack of supplemental services such as mentoring and tutoring to students whose backgrounds subject them to the inequities and acknowledged risk factors. (Jackson, 2009, p. 13)

Although this report was created for Tacoma Public Schools, the findings were crucial to closing the achievement gap and could be implemented into any urban school district within the United States. The summary of the primary and secondary causes of the achievement gap is conclusive and integrates with much of the literature in this research document.

Civil Rights Data

The data the Civil Rights Data Collection (CRDC) was in accordance with Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973. The Civil Rights Data Collection proved to be a vital resource in providing the general public with the opportunity to understand the nation's public schools in relation to schools and districts in each individual state (USDOE Office of Civil Rights, 2014a, 2014b, 2014c, 2014d). It further provided

information on schools that served all students by race/ethnicity, English learners, and students with disabilities. What the data confirmed was the disparities of equal access to all students (USDOE Office of Civil Rights, 2014c, p. 1). The CRDC report included information from 16,500 school districts, 97,000 schools and 49 million students (USDOE Office of Civil Rights, 2014a: 2014b: 2014c: 2014d).

The CRDC summarized the data into snapshots, which included Early Childhood Education, School Discipline, Restraint and Seclusion Highlights, College and Career Readiness, as well as Teacher and Counselor Equity (USDOE Office of Civil Rights: 2014c, p. 3). The highlights of each snapshot are listed in sequential order. This was the first time the CRDC included data on preschool suspensions, which found racial disparities among four-year olds.

According to CRDC data for Early Childhood Education:

- While one million children are served in public preschool programs nationwide, 40% of districts report that they do not operate public preschool programs for children within their district (USDOE Office of Civil Rights, 2014b, p. 2).
- Of the nearly 10,000 school districts offering preschool programs, 30% offer full-day only, 57% offer part-time day preschool only, and 13% offer both full-day and part-day programs (USDOE Office of Civil Rights, 2014b, p. 2).
- While boys represent 54% of the preschool population, they represent 79% of preschool children suspended once and 82% of preschool children suspended multiple times (USDOE Office of Civil Rights, 2014b, p. 3).

- Girls who are African American, Native Hawaiian, or other Pacific Islander represent a larger percentage (30% or more) of out-of school suspensions within their racial or ethnic group than girls within other racial or ethnic groups (USDOE Office of Civil Rights, 2014b, p. 3).
- Our nations' preschools are not disproportionately suspending preschoolers with disabilities or English learners. Students with disabilities (served by IDEA) represent 22% of preschool enrollment, 19% of the students were suspended once, and 17% of the students were suspended more than once (USDOE Office of Civil Rights, 2014b, p. 4).

According to the data, public preschool programs suspended almost 5,000 children in one year. The U.S. Secretary of Education, Duncan (2014) stated, "The fact the school-to-prison pipeline appears to start as early as four years old, before kindergarten, should horrify us. We must do better – now" (as cited in USDOE Office of Civil Rights, 2014b, p. 1). The fact was that early childhood education sets the foundation for the future success of students. The CRDC found inequities in early childhood education, beginning with public school access not yet being a reality for much of the nation – about 40% of school districts do not offer preschool programs. Further, part-day preschool is offered more often than part-day preschool: there is limited universal access to preschool offerings by school district and there are kindergarten retention disparities (USDOE Office of Civil Rights, 2014b).

School Discipline, Restraint and Seclusion. The rate of suspension of preschool children was staggering. African American children made up 18% of preschool enrollment, but 48% of the preschool children were suspended more than once, and boys

received more than three out of four school preschool suspensions (USDOE Office of Civil Rights, 2014a).

- Suspension of preschool children, by race/ethnicity and gender: African American children represent 18% of preschool enrollment, but 48% of preschool children receiving more than one out-of-school suspension: in comparison, white students represent 43% of preschool enrollment, but 26% of preschool children are receiving more than one out of school suspension. Boys represent 7% of preschool children suspended once and 82% of preschool children suspended multiple times, although boys represent 54% of preschool enrollment. (USDOE Office of Civil Rights, 2014a, p. 1)
- Disproportionately high suspension/expulsion rates for students of color: African American students are suspended and expelled at a rate of three times greater than white students. On average, 5% of white students are suspended compared to 16% of African American students. American Indian and Native-Alaskan students are also disproportionately suspended or expelled, representing less than 1% of the student population but 2% of out-of-school suspensions and 3% of expulsions. (USDOE Office of Civil Rights, 2014a, p. 1)
- Disproportionate suspensions of girls of color: While boys receive more than two out of three suspensions, African American girls are suspended at higher rates (12%) than girls of any other race or ethnicity and most boys. American Indian and Native-Alaskan (7%) are suspended at higher rates than white boys (6%) or girls (2%). (USDOE Office of Civil Rights, 2014a, p. 1)

- Suspension of students with disabilities and English learners: Students with disabilities are more than twice as likely to receive out of school suspension (13%) than students without disabilities (6%). In contrast, English learners do not receive out-of-school suspensions at disproportionately high rates (7% suspension rate, compared to 10% of student enrollment. (USDOE Office of Civil Rights, 2014a, p. 1)
- Suspension rate, by race, sex, and disability status combined: With the exception of Latino and Asian-American students, more than one out of four boys of color with disabilities (served by IDEA) – and nearly one of five girls of color with disabilities – receives and out-of-school suspension. (USDOE Office of Civil Rights, 2014a, p. 1)
- Arrests and referrals to law enforcement, by race and disability status: While African American students represent 16% of student enrollment, they represent 27% of students referred to law enforcement and 31% of students subject to school-related arrest. In comparison, white students represent 51% of enrollment, 41% of students referred to law enforcement, and 39% of those arrested. Students with disabilities (served by IDEA) represent a quarter of students arrested and referred to law enforcement, even though they are only 12% of the student enrollment. (USDOE Office of Civil Rights, 2014a, p. 1)
- Restraint and seclusion, by disability status and race: Students with disabilities (served by IDEA) represent 12% of the student population, but 58% of those placed in seclusion of involuntary confinement, and 75% of those physically restrained at school to immobilize then or reduce their ability to move freely.

> African American students represent 19% of students with disabilities served by IDEA, but 36% of these students are restrained at school through the use of a mechanical device or equipment designed to restrict their freedom of movement (USDOE Office of Civil Rights, 2014a, p. 1)

The CRDC (USDOE Office of Civil Rights, 2014a) revealed that students of certain racial or ethnic groups and students with disabilities are disciplined at far higher rates than their peers, beginning in preschool. The data also found that an increasing number of students are losing important instructional time due to exclusionary discipline (p. 1).

College and Career Readiness. According to CRDC (USDOE Office of Civil Rights, 2014c) in order for students to graduate from high school and be prepared for college it is critical that students master algebra early in school.

- Limited access to high-level math and science courses: Nationwide, only 50% of high schools offer calculus. (USDOE Office of Civil Rights, 2014c, p. 1)
- Significant lack of access to other core courses: Nationwide, between 10-25% of high schools do not offer more than one of the core courses in the typical sequence of high school math and science education. (USDOE Office of Civil Rights, 2014c, p. 1)
- Even less access for African American, Latino, American Indian, and Alaska Native students: A quarter of high schools with the highest percentage of African American and Latino students do not offer Algebra II: a third of these schools do not offer chemistry. USDOE Office of Civil Rights, (2014c, p. 1)
- Growing opportunity gap on gifted and talented education: African American and Latino students represent 25% of the students enrolled in gifted and

talented education programs, compared to African American and Latino students' 40% enrollment in schools offering gifted and talented programs. (USDOE Office of Civil Rights, 2014c, p. 1)

- Advanced Placement (AP) course enrollment and testing: African American and Latino students make up 37% of students in high schools, 27% of students enrolled in at least one Advanced Placement (AP) course, and 18% of students receiving a qualifying score of 3 or more above the AP exam. (USDOE Office of Civil Rights, 2014c, p. 1)
- Less access to English language instruction programs for American Indian and Native-Alaskan English learners: Eighty-one percent (81%) of American Indian and Native-Alaskan English learners are enrolled in English language instruction programs, compared to 92% of their Latino and African American peers. (USDOE Office of Civil Rights, 2014c, p. 1)
- Higher rates of retention for students of color, English learners, and students with disabilities: Students with disabilities served by IDEA and English learners make up 12% and 5% of high school enrollment, respectively, but 19% and 11% of students are held back or retained a year, respectively. Twelve percent (12%) of African American students are retained in grade 9 – about double the rate that all students are retained. (6%). (USDOE Office of Civil Rights, 2014c, p. 1)

What the CRDC discovered is there are disparities as to when students take algebra and if they are succeeding when they take it. With the emphasis on the importance of taking algebra, more than one-in-ten high schools does not even offer Algebra 1 and one in two

schools offers calculus. The data also showed that about 6% of all freshmen in high school are held back or retained, but 12% of African American students and 9% of American Indian and Native-Alaskan students have to repeat the ninth grade (USDOE Office of Civil Rights, 2014c, p. 1).

Teacher and Counselor Equity. Every student has a right to quality education - a quality education begins and ends with dedicated and knowledgeable teachers (USDOE Office of Civil Rights, 2014d, p. 1).

- Access to experienced teachers: African American, Latino, American Indian and Native-Alaskan students attend schools with higher concentrations of first-year teachers at a higher rate (3 to 4%) than White students (1%). (USDOE Office of Civil Rights, 2014d, p. 1).
- Teacher salary disparities: Nearly one in four districts with two or more high schools reports a teacher salary gap of more than $5,000 between high schools with the highest and lowest African American and Latino school enrollments. (USDOE Office of Civil Rights, 2014d, p. 1).
- Access to certified teachers: While most teachers are certified, nearly half a million students nationwide attend schools where 60% or fewer teachers meet all state certification and licensure requirements. (USDOE Office of Civil Rights, 2014d, p. 1).
- Racial disparities are particularly acute in schools where uncertified ad unlicensed teachers are concentrated. Nearly 7% of the nation's African American students—totaling over half a million students—attend schools where 80% or fewer of teachers meet these requirements: African American

> students are more than four times as likely, and Latino students twice as likely, as white students to attend these schools. (USDOE Office of Civil Rights, 2014d, p. 1).

- Access to school counselors: Nationwide, one in five high schools lacks a school counselor. (USDOE Office of Civil Rights, 2014d, p. 1).

In an urban school district, teachers need more than just dedication and knowledge, but experience as a teacher and understanding of the urban culture. The CRDC found across the nation, 5% of three million teachers are in their first year of teaching. The schools that are serving the highest percentage of (top 20%) of African American and Latinos students tend to hire teachers newest to their profession (USDOE Office of Civil Rights, 2014d, p. 1). (p. 1). The data also showed that there was a higher concentration (3 to 4 %) of first-year teachers in schools where African American, Latino, American Indian and Native-Alaskan attend. However there is a lower concentration (1%) of schools serving white students (USDOE Office of Civil Rights, 2014d, p. 3).

These snapshots highlight the significant gaps in areas, which are contributing to the achievement gap. In order to begin narrowing the gap between African American and white students, these areas need to be addressed to being improving urban schools.

Closing the Achievement Gap

Given that the achievement gap plagued the educational system in the United States, the first step in closing the achievement gap was to not restructure schools, but to re-culture education (Williams, 1996). According to Williams (1996),

> Closing the gaps involves not only improving achievement for all students, but taking the steps needed to significantly raise the achievement of traditionally

> underachieving groups of students, so that their achievement is on the same level as that of mainstream groups of students. (p. 3)

The common theme in much of the literature suggested that while many factors that contributed to the achievement gap, a defining factor was the quality of teachers and resources found in the schools. In 2009 the National Education Association (NEA) launched the Priority Schools Campaign (PSC) and developed a strategy guide to improve the learning experiences of students who attend these schools.

> PSC works hand-in-hand with communities and policymakers to pursue innovative ways to measure student success and promote teacher quality. Priority school is a less pejorative term NEA has adopted for a low-performing school. In most cases, these schools educate large numbers of racial and ethnic minority students, students living in poverty, and students who are English Language Learners (National Education Association [NEA], 2009, p. 1).

The strategy guide entitled *Culture, Abilities, Resilience, Effort: Strategies for Closing the Achievement Gap* (CARE) was designed to assist educators in closing the achievement gap and comprised collaborative efforts of teachers, education support professionals, researchers, community advocates, parents, and practitioners (NEA, 2009, p. 1). Ladson-Billings (2006) concluded that money and resources follow White middle-class students.

The education systems in 49 states were researched, as reported by Boykin (1986), and it was found that the highest poverty schools in 27 states received fewer resources that affluent schools. The highest minority districts in 30 states received less money per child than the low minority districts (Boykin, 1986). Boykin and Allen (2003)

argued that the reason was that schools failed to take advantage of the cultural and personal assets of African American students, and also demonstrated that culturally consistent instruction can be beneficial to African American students. Slavin and Madden (2006) concurred,

> another approach to reducing the achievement gap is simply to improve the quality of instruction provided to African American students. In this regard, there are several lines of research that suggest that the achievement of African American students is particularly susceptible to improvements in educational quality. (p. 390)

What is interesting to note is teachers tended to have lower expectations for their African American students when compared to White students (D'Amico, 2001). When teachers had low expectations of African American students, the students tended to have lower expectations of themselves, which equated to lower achievement. D'Amico (2001) also found that poorly aligned instruction appeared disproportionately in schools enrolling minority students. D'Amico further suggested that teachers utilizing drill, lecture, and memorization were utilizing ineffective instruction techniques for teaching low achieving students.

The words of Grant (1989) defined what a highly qualified teacher looked like, "Teachers who perform high-quality work in urban schools know that, despite reform efforts and endless debates, it is meaningful curricula and dedicated and knowledgeable teachers that make the difference in the education of urban students" (p. 770).

Johnston and Viadero (2000), surmised the disparity in teacher quality explained why an A student in a high poverty school scored about the same as a C or D student in a

more affluent school district. The lack of teacher quality helped to perpetuate the achievement gap. To improve teacher quality it was necessary to take a closer look at teacher preparation. Willis (1993) affirmed, “In preparing teachers to meet the needs of an increasingly diverse population, teacher-trainer programs and local systems in services should include information on different cultures, learning styles, and how to teach using methods that recognize multicultural interests” (p. 5). Moreover, Ladson-Billings (1994) ascertained, “The pedagogical instruction that many teachers of minority students receive from their teacher education programs, from their administrators and from ‘conventional wisdom’ have led to the intellectual death of these students” (p. 15).

The researcher’s personal experience. The teacher education program this researcher participated in did not discuss the differences in teaching students in a suburban school district and teaching students in an urban school district. The program taught theory, writing lesson plans, and passing your certification requirements. The researcher completed her student teaching practicum in an affluent school district and was subsequently hired.

Several years later, the researcher walked into a live classroom of urban students and was ‘culture shocked’ in comparison to the students previously taught. There was nothing remotely familiar, as a teacher working at in this urban high school, compared to the time spent at the previous district. While the suburban district provided an abundance of student resources for improving and enhancing student achievement, after school clubs, sports as well as instructional resources, students were expected to go to college and were prepared for that path, with a college and career office, ACT preparation course, and college visits. Students were respectful and understood the consequences of

not adhering to the school policies and procedures, because they were enforced. Parents were not just involved in the lives of their children, but participated in fundraising activities to provide scholarships for the seniors and improve the school facilities.

In comparison, the resources for students and teachers was nonexistent at this urban high school where the researcher became employed. It was alarming to the researcher to see the differences in the high schools and the impact on the students. There was a lack of discipline enforcement, allowing students to feel it was okay to act in any manner they chose without risk of being reprimanded. Parental involvement was virtually non-existent during the 2013-2014 school year, with only one parent teacher conference scheduled. There was no pathway that prepared or assisted all students to pursue post-secondary, a technical education, or to prepare students for life outside of the classroom. Students were ill-equipped to take the ACT, and the majority did not achieve the score needed to be accepted into a college of their choice, or community college. The average ACT score was 15.6 for the seniors who took the ACT test. This was a snapshot of just one of many urban high schools in the nation, which were failing minority students.

Washington State. In an effort to begin the process to close the achievement gap, Washington State passed House Bill 2722 in 2008 and appointed an Advisory Committee to create a plan to close the education gap for African American students in their state. The research was conducted by Jackson (2009) for the advisory committee. There were five key areas the committee identified that contribute to the challenges and solutions of the achievement gap for African American students (Jackson, 2009, p. 13).

> Teacher Quality – knowledgeable professionals who effectively meet the academic, cultural, and social needs of students. (Jackson, 2009, p. 13)

Teaching and Learning – structured, rigorous and culturally responsive curriculum and instruction. (Jackson, 2009, p. 13)

School and District Leadership – a commitment to high achievement for all students that intentionally guides policies and practices. (Jackson, 2009, p. 13)

Student Support – academic, social, psychological, and cultural resources students need to succeed. (Jackson, 2009, p. 13)

Family and Community Engagement – partnerships that inform and support academic achievement. (Jackson, 2009, p. 13)

In order to narrow or close the achievement gap it was imperative to understand what causes the achievement gap. These solutions at least provided the foundation to begin the process of closing the achievement gap. But, it would require the committed efforts of educators, legislators, administrators, community leaders, as well as funding. Unfortunately for school districts that were financially strapped, resolving these challenges may be impossible to incorporate.

Culturally Relevant Pedagogy

There were two solutions the Washington State Advisory Committee found that specifically focused on teachers. The first was Teacher Quality, which recommended the hiring of knowledgeable professionals who effectively met the academic, cultural, and social needs of students (Jackson, 2009, p. 13). In turn, for teachers to effectively meet the academic, cultural and social needs of students, it was imperative for teachers to embrace culturally relevant pedagogy.

Research by Ladson-Billings (1992) described a pedagogy that was identified as culturally relevant and argued for making it the central foundation to ensure the academic success of African American students, as well as others who were not well served by the nation's public schools (p. 1). The research by Pewewardy (1993) on American Indian children asserted much of the difficulty experienced in schools stemmed from teachers who traditionally tried to incorporate culture into the education, when in fact teachers should be incorporating education into the culture of the students.

Ladson-Billings (1992) also believed there was a level of truth in this premise for many students who were not in the White majority. Similarly, Bartolome (1994), in his research to find the right teaching strategies, argued for a "humanizing pedagogy that respects and uses the reality, history, and perspectives of students as an integral part of educational practice" (p. 173). Additionally, Ladson-Billings (1992) outlined three criteria crucial to culturally relevant pedagogy. "Students must experience academic success: students much develop and/or maintain cultural competence: and students much develop a critical consciousness through which they challenge the status quo of the current social order" (Ladson-Billings, 1992, p. 160).

Gay (2000) explained that culturally relevant pedagogy was "using the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning more relevant to and effective for them: it teaches to and through the strengths of these students" (pp. 28-29). Gay also clarified, that it was "culturally validating, comprehensive, multi-dimensional, empowering, transformative and emancipatory" (p. 29).

In the quest to educate and relate to minority students Ladson-Billings and Tate (1995) described culturally relevant pedagogy as "pedagogy that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills, and attitudes" (p. 160). The literature revealed evidence that integrating culturally relevant pedagogy into instruction provides the intervention needed for the academic success of minority students. The second solution was Teaching and Learning from the Washington State Advisory Committee. The advisory committee recommended that students were to be taught "a structured, rigorous and culturally responsible curriculum." (Jackson, 2009, p. 13).

Culturally Responsive Teaching

To effectively teach students a culturally relevant curriculum, McIntyre, Rosebery, and Gonzalez (2001) maintained educators must be open to learning about the cultural particularities of the ethnic groups within their classrooms and transform that sensitivity into practice. Banks and Banks (2004) suggested that the key to learning was to understand the culture. In the research conducted by Green (1964), culturally responsive teaching was described as utilizing a set of strategies to help facilitate quality education to a culturally diverse population of students. Gay (2000) pointed out that when academic knowledge and skills were situated within students' lived experiences and frames of references, students learned more easily and thoroughly because they were more personally meaningful and had a higher interest (p. 48). Additionally, Gay (2000) described the characteristics associated with cultural responsive teaching:

> It acknowledges the legitimacy of the cultural heritages of different ethnic groups, both as legacies that affect students' dispositions, attitudes, and approaches to

> learning and as worthy content to be taught in the formal curriculum. It builds bridges of meaningfulness between home and school experiences as well as between academic abstractions and lived sociocultural realities. It uses a wide variety of instructional strategies that are connected to different learning styles. It teaches students to know and praise their own and each other's cultural heritages. It incorporates multicultural information, resources, and materials in all the subjects and skills routinely taught in schools. (p. 29)

Last of all, Ogbu (1995) proposed the use of a holistic approach if teachers were to continually engage diverse students. The holistic approach was the where the how, what, and why of teaching became unified and were meaningful. If we were to improve the academic outcomes of an ethnically diverse student population, it was essential to incorporate the strategies associated with culturally relevant teaching into the classroom.

ACT Test Preparation Literature

The literature describing the current state of research on ACT coaching or test preparation and improving the ACT scores of African American began with a study conducted by Lauderdale (1989), who examined the effects of using microcomputers and Krell software (designed to give students practice on simulated ACT items) as tools for ACT preparation. The participants in this study were college preparatory and honors high school students (n=57). Fifty percent of the students utilized the software at least seven hours, and the remaining 50% of students did not use any preparation software or materials (Lauderdale, 1989, p. 24). Lauderdale (1989) found no significant gains between the groups as a result of using this method. It should be noted the author only reported results for ACT subtest scores and not actual ACT composite scores. Since this

time, the ACT has undergone numerous changes, including the addition of an optional writing assessment.

Seaton (1992) investigated the effects of coaching on ACT scores on high school students. Subjects were 30 juniors from an urban high school for girls. It revealed that those students who received a 10-hour preparation course increased ACT composite scores by an average of four points. Student scores increased from a mean score of 19 to 23 (Seaton, 1992, p. 1). Seaton utilized a pre-test and post-test method. The pre-test was a 'retired' ACT and the post-test was the actual ACT. Also, this author did not use a 'control' group, making it impossible to determine whether the gain of four points from the pre-test to the post-test was related to the students taking the ACT preparation course or from simply taking the pre-test. Material that students saw on a pre-test would more than likely increase the probability of greater familiarity with the material on the post-test.

Similarly, another study conducted by Rainey (1996) investigated whether there was an increase in ACT scores after being exposed to an ACT preparation course. There were 30 students who received coaching prior to taking the ACT. These students achieved a mean composite score of 17.5 yet the mean score of the 30 students who received no coaching was 18.2 (Rainey, 1996, p. 8). Rainey (1996) surmised if high school students did what was expected of them academically, there would be no need for students to be coached before taking either one of the college placement tests. In view of these results, it is important to keep in mind the participants of this study were from one high school in Chicago.

The study conducted by Moss (1995) analyzed whether or not direct instruction and coaching had any effect on students' ACT scores. Moss sought to investigate whether or not the professional coaching for the ACT could be improved by providing direct instruction. If coaching can significantly raise the scores of African American students, their access to institutions of higher education, especially the more selective universities, can be improved: thus, the implicit benefit of improving on the college entrance test.

The participants involved in Moss' (1995) study consisted of 19 African American high school students who were working as law interns, and who enrolled in a special summer program conducted by the St. Louis Public Schools. This program was part of a larger project, The High School Post-Secondary Transition Initiative. The main goal of this initiative was to assist more students from St. Louis Public Schools to gain admission to college. To help achieve this goal, preparation for the ACT was provided to any student on a voluntary basis. Although there were over 100 interns in the program, only 37 chose to participate. Out of those 37, 21 took both the pre-test and post-test. Two of these students were not African American, thus leaving only 19 African American students in the sample (Moss, 1995, p. 10).

In Moss' (1995) study, freshmen that had taken the ACT more than once were surveyed regarding their preparation for the second ACT. This study found a significant difference between the gain for students who said they received coaching, 1.09 points (n=52) and those who did not, .94 (n=441) (Moss, 1995, p. 10). "However, it is important to note the study did not investigate whether coaching can be effective, but whether or not the coaching these students received was effective" (Moss, 1995, p. 10).

More importantly, this research study demonstrated that with the proper use of a preparation course as an intervention, ACT scores could in fact increase. According to Moss (1995), "providing African American students with the appropriate intervention during the school year can increase their scores and increase their access to institutions of higher learning" (p. 15). Moss also suggested, "all African American students who plan to go to college should have access to appropriate preparation for the ACT" and "Moreover, since students who currently receive professional preparation are disproportionately White, providing coaching to all African American students may help bridge the gap between the ACT scores of these two races" (pp. 15-16).

Moss, Chippendale, Mershon, and Carney (2011) investigated the effects of test coaching on the ACT scores of students from a large suburban high school in the Midwest. This study did not focus on African American students, but the student population in general. To measure the effectiveness of this preparation, he utilized a repeated measures design. This design took the best ACT score for each participating student and compared the scores achieved by the same students on the October 2011 ACT.

As a way to isolate the effects of coaching, the same test data was also collected from all students in this school who took the October 2011 ACT but did not participate in the coaching class. This simulated control group should allow the research to control for other factors not related to the preparation provided (Moss et al., 2011, p. 4). "This procedure assumes that the students who did not participate in the class did not participate in other forms of coaching or test preparation, an assumption that was not investigated and that represents a limitation to this study" (Moss et al., 2011, p. 1).

Moss et al. (2011) also found students who received coaching gained an overall score of 1.5 points (0.85 points higher than the un-coached group) and achieved higher gains on every test, as well as the composite score (p. 15). Moss et al. further stated,

> A gain of 0.85 points may not appear large to parents or individual students, but raising the scores of a group by this amount using a short-term preparation class represents a significant gain. These results indicate that preparation can increase ACT scores. (p. 23)

Clearly, for many African American students the desire to obtain a college education is quite strong. In many instances, however, that desire is impeded not only by economic and educational deficiencies, but also by problems these students encounter within the college and university setting (Reed, 1997). Racial inequalities, peers, and familial structure were researched by Bankston and Caldas (1996) who examined what factors influence the academic achievement of African American students compared to White students. According to this study, in addition to the gap between African Americans and White children in educational attainment there are many other disturbing inequalities relating to the educational outcomes of African American and White students in the United States.

College Readiness

The number of students reflecting the diversity of the U.S. population increased since 2003, resulting in data on two of the disaggregate ethic groups. In 2008, ACT, Inc., released historical data, citing there was a greater diversity in those taking the test. Hispanics and African Americans accounted for 21% of students who took the test in 2008. This percentage showed an unremarkable increase from 18% in 2004. In 2008,

17% of African American students took the ACT and 23% of Hispanics took the assessment, in comparison to 63% of White students who took the test in 2008 (ACT, Inc., 2008, para. 20).

In light of the decline of affirmative action, public and private colleges and universities across the country are instituting programs aimed at increasing the enrollment of minority students. Some colleges provide preparation courses for the standardized admissions test, and many high schools are following suit by offering preparation courses to increase ACT and SAT scores among students. For high school students preparing for college admission or planning to enter college in the state of Missouri, the test of choice is the ACT.

Gewertz (2009) lamented the fact that more students took the ACT in 2008 (approximately 100,000 more than those who took the assessment in 2007). Still the scores were not higher in disaggregate ethnic groups. In fact, there was a change in the scores that reflected an unimpressive increase of one-tenth of a point over the previous years. Yet, such a change is of limited value for members of ethnic groups who tend to score poorly.

The recommendation for assisting students of color, according to a research study published in the *College Student Journal* by Negga, Applewhite, and Livingston (2007), was to address the need for social support. Many of the problems African American students encountered as they entered the college environment were related to a level of sensitivity, lack of opportunities, and general support to assist them in succeeding, and less than adequate efforts to recruit students of color (Reed, 1997). Interestingly, even

though this article was written in 1997, many of the same stressors currently exist for African American students at the time of this writing.

Changes in the ACT

There were modifications recent to the time of this writing, as well as upcoming changes that ACT implemented by the year 2015. ACT amended the College Readiness Benchmarks to match expectations for performance of a national sample of colleges in (ACT, Inc., 2013). Beginning in 2015, ACT, Inc. will offer adaptive, computer-based testing alongside its traditional test (ACT, Inc., 2014, p. 2).

The first ACT College Readiness Benchmarks were established in 2005. The college readiness benchmarks applied to students in their junior and senior years that take the ACT. The College Readiness Benchmarks were modified in 2013, there was no change in the English or Mathematics Benchmarks, but the Reading Benchmark increased from 21 to 22: and the Benchmark for Science decreased from 24 to 23 (ACT, Inc., 2014). The adjustments in the benchmarks were made to match expectations of student performance at a national sample of colleges (Adams, 2013, p. 1).

ACT, Inc. (2014) announced that beginning in the spring of 2015 they would offer a computer-based option for taking the ACT test. This option would only be offered to those schools that administered the test on a school day. The paper and pencil version would remain in place for schools not equipped technologically. ACT would also offer participating schools a separate constructed-response battery of questions. The constructed-response questions would be a supplement to the traditional multiple-choice questions (p. 1). These questions will allow students to enter their own answers instead of choosing the best answer from the choices.

Summary

The literature review revealed several historical factors of importance, identifying components that worked in concert to create a research-identified disparity for African American students when academic achievement was compared with that of their White and Asian counterparts. The literature also presented in this study discussed mechanisms and historical factors contributing to the achievement gap. Moreover, it established what may be essential to limiting some of the disparities and inequities in standardized testing impacting the achievement gap.

Further, the literature suggested that it was the combination of factors which have a causal effect on the achievement of African American students. While the socio-economic status was an underlying factor, adding any of the other influences, such as lack of parental involvement, under-resourced schools, unqualified teachers, or other societal impacts, the African American student suffered socially and academically. In research conducted by Lee and Burkham (2002), it was determined that socio-economic status was tied to race and the likelihood of children living in a single parent head of household was recorded at 48%.

Comer and Haynes (1991), determined when parents were involved in the school life of their children, the children experienced greater achievement gains. Rodriguez and Villarreal (2002) also found that parental involvement was more important than family characteristics, or even socio-economic level, to academic outcomes. Of additional significance were the defining causes of the achievement gap and viable options to begin closing the gap, as reported in literature, current at the time of this writing.

Chapter Three: Methodology

This chapter describes the methodology and research procedures utilized in this study. The research conducted was a mixed-methods, exploratory design that included analysis of both quantitative and qualitative data. The first section describes the ACT preparation course design, followed by a second section that describes the research setting, participants, and study sample. The third section discusses the methodology, and the fourth section describes the data analysis.

Research Questions

The research questions were as follows:

1) How will the attitudes of African American students change toward the ACT after taking the ACT preparation course?
2) How does taking an ACT preparation course affect the test scores of African American students?
3) What impact does the ACT preparation course have in preparing African American students for what was on the actual ACT?

Null Hypotheses

1) Following implementation of an ACT preparation course for African American students, there will be no difference in subsequent achievement scores measured by the ACT test, when compared to prior achievement scores measured by the PLAN exam prior to the preparation course.
2) There will be no relationship between pre-test scores on the PLAN exam and post-test scores on the ACT for African American students participating in the ACT preparation course.

History of the Study High School ACT Preparation Course

The original ACT preparation course designed for the study site included enrollment of only African American students. However, it was decided by the administration and the College and Career Office of the study district to change that choice for the 2010 spring preparation course. The change was based on the premise that the course should be open to all students at the study high school. By opening the ACT preparation course to all, the initial purpose of the preparation course, which was to improve test scores of African American students and close the achievement gap for these students, was impacted. The initial purpose and focus on improving the ACT scores of African American students was negated, thus changing the dynamics of the ACT preparation course. Table 9 outlines the demographics of the study high school for school years 2008-2009 and 2009-2010.

The variance in the make-up of the second session after the decision was made to open the class to all students. As outlined in Table 9, the difference equated to six times the number of White students in the second session, compared to the number of Whites in the first session, and this difference reduced the available placement for African American students. There was no waiting list due to the limited seating in the conference room where the class was held. Students were not replaced if they dropped the course, as it was designed for students to complete the entire course.

Table 9

Demographics of the Study High School: 2008 to 2010

Demographics	**2008-2009**	**2009-2010**
High School Population	1,216	1,185
Asian	7.6%	7.9%
	(92 students)	(94 students)
African American	19.1%	18.0%
	(232 students)	(213 students)
Hispanic	1.3%	2.0%
	(16 students)	(24 students)
Indian	0.2%	0.3%
	(3 students)	(4 students)
White	71.8%	71.7%
	(859 students)	(873 students)

Note. From College and Career Office of the study high school.

Table 10 compares the study high school ACT composite scores to the composite scores of African American students, and the resulting score gap between both groups for school years 2001-2010. The table indicates the Achievement Gap on the ACT between the African American student and the average study high school student was largest in 2008 at 7.1 points and smallest in 2003 at 4.2 points. The beginning and the end of the timeline noted shows little change in the early and later sizes of the gap, with score differences of 4.9 and 4.8 points.

Table 10

Comparison of ACT Composite Scores and Achievement Gap: 2001 to 2011

Class of	Study High School Composite	African American Student Composite	Gap
2001	23.9	19.0	4.9
2002	23.7	18.7	5.0
2003	24.8	20.63	4.2
2004	25.2	18.5	6.0
2005	25.3	20.9	4.4
2006	25.0	19.5	5.5
2007	25.4	19.1	6.3
2008	25.9	18.8	7.1
2009	26.4	21.1	5.3
2010	26.4	21.3	4.8
2011	26.5	22.2	4.3

Note. Provided by the College and Career Office. Does not include African American students.

It is important to keep in mind that at the time of the study, African American students represented 16% of the population at the study high school. Initially, African American students enrolled in the preparation course once the student and parent(s) signed the participation contract and registered for the upcoming ACT test. However, once the change to open the ACT preparation course to all students was implemented, students were essentially enrolled on a first-come, first-served basis. This change was made just prior to the beginning of the fourth session. The African American Student Alliance sponsors were notified by email of the current list of enrolled students, which did not include African American students. However, allowances were made for the inclusion of African American students, once sponsors submitted a list of eligible students. Table 11 provides a display of the demographic data of the respondents. These

data include the number of students in the ACT preparation course by ethnicity and gender.

Table 11

Demographics: ACT Preparation Course Participants Summary: 2009 - 2010

Year	Participants	Gender		Ethnicity	
		M	F	Afr. Amer.	White
2009	n=30	19	11	27	3
2010	n=36	19	17	19	17

Note. Data provided by the College and Career Office of the study high school.

The data illustrates the increase in the number of White students taking the ACT preparation course and the reduction of the number of African American students, once this class was opened up to other students. The change in policy affected the ethnic makeup of the class, as well as the final outcomes for African American students in course attendance, with regard to the number taking the ACT test, and ACT test scores.

In 2009, there was an increase in the average gain of ACT scores for juniors of 3.0 points, and an average increase of 4.3 points for seniors who took the ACT preparation course, as illustrated in Tables 12 and Table 13. This preparation class was comprised of only African American students, and the potential influence of stereotype threat was eliminated.

Table 12 illustrates the scores achieved by 11th grade participants, while Table 13 illustrates the scores achieved by 12th grade participants. Eleventh-grade student number six exhibited a one point drop in score, while 12th-grade student number 26 exhibited the largest gain in score, with a change in score of eight points.

Table 12

African American Junior Participants in 2009 Fall ACT Preparation Course

Student	Grade	PLAN Score	ACT Score	Gain
1	11	15	No score	
2	11	14	16	2
3	11	18	22	4
4	11	No score	14	
5	11	13	15	2
6	11	18	17	-1
7	11	13	14	1
8	11	13	No score	
9	11	17	17	0
10	11	16	23	7
11	11	17	24	7
12	11	14	15	1
13	11	19	21	2
14	11	12	16	4
15	11	24	26	2
16	11	17	20	3
17	11	14	16	2
			Average Gain	**3.0**

Note. Data provided by the College and Career Office of the study high school.

Table 13

African American Senior Participants in 2009 Fall ACT Preparation Course

Student	Grade	PLAN Score	ACT Score	Gain
18	12	12	15	3
19	12	15	18	3
20	12	19	21	2
21	12	16	No score	
22	12	18	25	7
23	12	17	22	5
24	12	15	19	4
25	12	16	19	3
26	12	14	22	8
27	12	14	16	2
28	12	14	No score	
29	12	13	19	6
			Average Gain	**4.3**

Note. Data provided by the College and Career Office of the study high school.

Table 14 illustrates the number of African American participants, grade level, PLAN score, ACT score, and gain for the 2010 ACT preparation course at the study high school. Six African American participants did not produce an ACT score, and seven did not have a pre-score on the PLAN.

Table 14

Spring 2010 ACT Preparation Course Spring: African American Participants

Student	Grade	PLAN Score	ACT Score	Gain
1	11	15	17	2
2	11	17	15	-2
3	11	13	14	1
4	11	18	22	4
5	11	No score	14	
6	11	No score	No score	
7	11	12	No score	
8	11	12	No score	
9	11	16	No score	
10	11	No score	No score	
11	11	18	26	8
12	11	20	No score	
13	11	No score	18	
14	11	No score	20	
15	12	17	15	-2
16	11	20	18	-2
17	11	No score	21	
18	12	13	17	4
19	11	No score	17	
20	11	17	19	2
			Total	**1.7**

Note. Data provided by the College and Career Office of the study high school.

Table 15 illustrates that there were more African American students who failed to attend the ACT preparation course consistently and did not take the ACT test resulting in an increase of only 1.7% in 2010. One participant did not have a pre-score on the PLAN, and one participant did not produce an ACT score.

Table 15

Spring 2010 ACT Preparation Course: White Participants

Student	Grade	PLAN Score	ACT Score	Gain
1	11	20	No score	
2	11	18	23	5
3	11	19	24	5
4	11	12	18	6
5	11	16	23	7
6	11	19	23	4
7	11	20	27	7
8	11	21	26	5
9	11	18	20	2
10	11	13	19	6
11	11	No score	25	
12	11	18	No score	
13	11	17	20	3
14	11	14	19	5
15	11	15	16	1
16	11	19	20	1
			Total	**4.4**

Note. Data provided by the College and Career Office of the study high school.

On a comparative level, the African American's White peers increased scores by 4.4%. It was the belief of the researcher that stereotype threat was an influence in the change of the African American students.

The ACT scores and the achievement gap were reviewed from 2001-2010 for the study high school. The gap decreased in the last two years, and the African American mean ACT composite score was 21.3, which was the highest in the decade of data collection for the study high school. Table 16 shows the trends and the achievement gap percentage of the ACT scores for African American students for the decade prior to the study at the study-site high school. There was a high percentage within the gap in 2008, just prior to the start of the ACT preparation course, which narrowed since its inception in 2009-2010.

Table 16

Study High School ACT Composite Score Trends of African American Students: 2001 to 2010

Class of	Study High School Composite	African American Composite	Gap
2001	23.9	19.0	4.9
2002	23.7	18.7	5.0
2003	24.8	20.6	4.2
2004	25.2	18.5	6.7
2005	25.3	20.9	4.4
2006	25.0	19.5	5.5
2007	25.4	19.1	6.3
2008	25.9	18.8	7.1
2009	26.4	21.1	5.3
2010	26.4	21.3	5.1

Note. Data provided by the College and Career Office of the study high school.

The ACT preparation course, as of May 2010 was offered on four occasions, beginning in the fall of 2008. There were strong results from a mixture of juniors and seniors, which was an excellent beginning for the course. However, in the spring of 2009 enrollment and attendance was poor. Conversely, in the fall of 2009 results were stronger from the seniors, as opposed to the juniors. In retrospect, it was felt that some of the junior students may have been better served by the upcoming spring course. In spring of 2010, there was excellent enrollment with attendance by 36 students and ACT score results from 23 students. Of concern was the 13 students who did not take the April 2010 ACT test, because 10 of the students could not afford to pay for the test and three students chose not to take the test.

The participants in this study consisted of African American students of both genders and were in the middle-to-lower socioeconomic level. According to the instructor of the ACT preparation course,

> The fundamental goal of all good test preparation is to make students better test takers. The reason people underperform on standardized tests is NOT that they don't know the math, English, etc. It is that they don't know how to take a test. They get stuck on hard questions that they should be skipping, then try to work all the questions, when the test is designed to prevent you from finishing: they make mistakes on easy questions because they are designed to be tricky. To get better at testing, then, you don't review the math, English, etc. You break the test down and understand how it is designed. By doing this, you can get insight into what you should do to avoid their tricks and traps. Then, after you understand the test and have developed good strategies, you can review any content weaknesses you have. (Brett, personal communication, February, 2009)

The African American Student Alliance (AASA) operating at the study high school initiated the concept of an affordable, effective ACT preparation program to address the issue of improving the test scores of African American students. This concept came to fruition with the support of the College and Career Office, the principal of the study high school, and the financial support of the district. ACT preparation courses were expensive, and could cost $400 or more per student. Based on the fact that the policies of the ACT preparation course were changed in midstream, the main goal of the African American Student Alliance became lost in the shuffle. The purpose of the AASA located at the study high school was to serve as an organization that assisted African American students academically and socially. The AASA felt that direct contact with the interested African American students allowed the sponsors to meet with the students, make eye contact, and personally secure their commitment to the preparation course. More

importantly, the sponsors were able to help the students understand how fortunate they were to have this type of program available to them and the tremendous benefit it would provide, which made students excited about the class. Once the class was opened up to all students, the direct contact with sponsors was lost. There was a higher incidence of students arriving later, greater absenteeism, and a low incidence of some students dropping the class. That lack of contact was missing from the spring session, and there was no opportunity to secure the parent or student commitment in support of the class through use of that strategy.

Prior to the start of the ACT preparation course, it was decided to divide all students by grade level. Two lists were prepared: the first list was comprised of seniors who might benefit from ACT preparation in the fall of 2009, and the second list included juniors who might benefit from ACT preparation in the fall of 2009 or the spring of 2010. The focus was on who would benefit the most. Not included in those two groups were students who had already earned a 26 or higher on the ACT, those who had not yet reached math beyond geometry, and those with GPAs below 2.0. In the spring of 2010, the preparation course consisted of all juniors. While some juniors were motivated to take the fall ACT preparation course, others were not, and there were a few students who stopped attending the course. This resulted in only a few juniors enrolling in the April, 2010 ACT.

The data outlined in Figures 1 and 2, reveal the increase in student ACT scores following participation in the ACT preparation course.

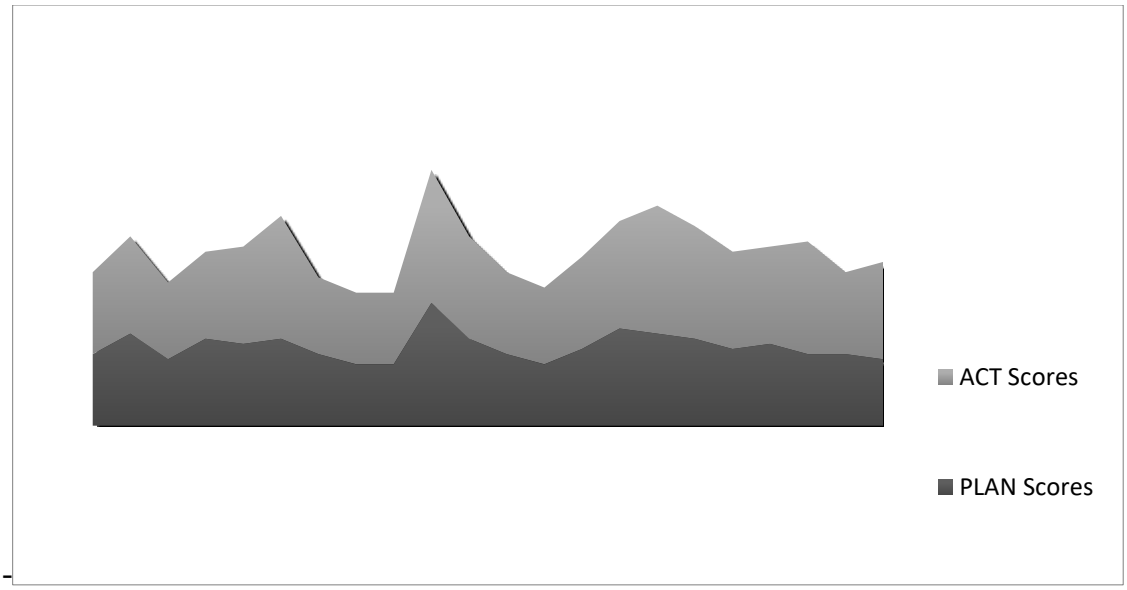

Figure 1. 2009 comparison of the PLAN/ACT scores of African American students.

Both figures illustrate the expected gain in scores in students who took the PLAN as a pre-test and the ACT as a post-test. Maturity and additional coursework in between the two tests should show in the scores, as illustrated. However, the gains of the seniors were higher than the gains of the juniors at the study high school.

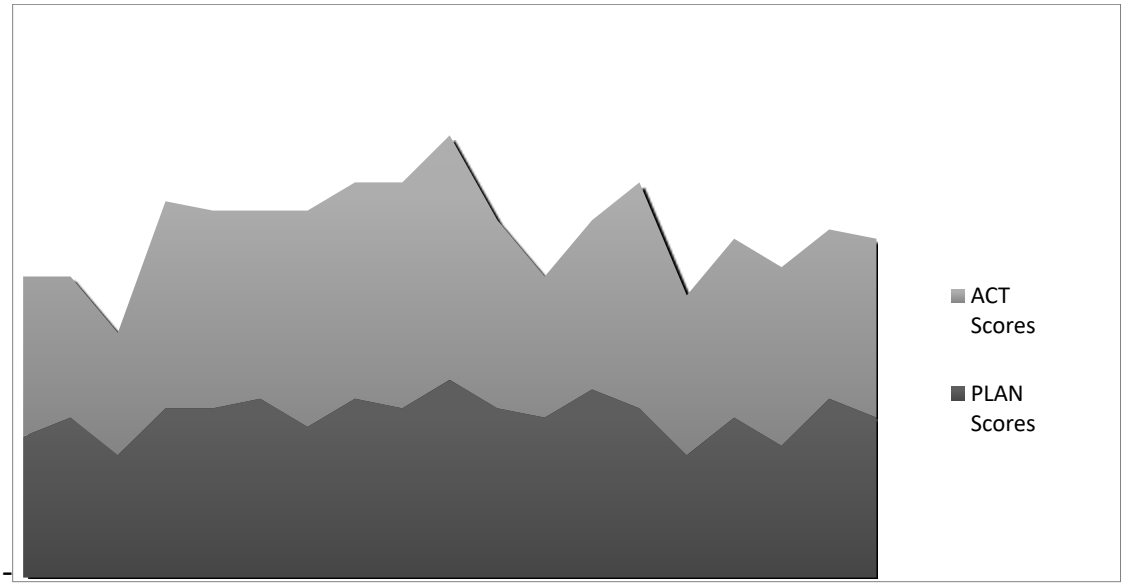

Figure 2. 2010 comparison of the PLAN/ACT scores of African American students.

The instructor recognized an observable difference in the commitment of the two groups, the seniors were more committed to attending the class. However, there was less of a commitment by the juniors, as many of them did not complete the class assignments, were often absent, and some students stopped attending the class altogether. This limited the interpretation of data because many of the juniors who took the course, did not follow through and take the ACT test.

Participants were asked to keep a journal throughout the preparation course. An additional barrier to gathering data for the study was there was no way to determine whether the students making comments in their journals were juniors or seniors. The inability to make this determination was due to the need for students to remain anonymous. The journals were labeled numerically as they were submitted. The comments from the student journals were identified by labeling the comments with (S) for student and the students' journal number.

ACT Preparation Course Design

The ACT preparation course was a work in progress at the study high school, since 2003. Several of the past course designs were not successful and did not include a focus on minority students. In 2008, the sponsors of the AASA at the study high school, including the researcher, met with the principal and College and Career Office counselors to structure an ACT preparation course specifically designed for African American students, with the intent of improving ACT scores. The structure of this class was designed to be different from the previous ACT preparation course offerings. An instructor from a test preparation company was employed by the study high school for the sole purpose of teaching ACT preparation during Academic Lab on designated days. The

structure of the new course included an introduction class, a wrap-up session, and the opportunity to work on the four core-subject areas of the test: English, math, reading, and science. The course lasted six weeks and devoted 40 minutes to instruction and provided 20 minutes of practice per session. Classes met two-to-three times a week, based on the block schedule of the study high school.

Each student enrolled in the ACT preparation course had previously taken the PLAN test given to students in their second year of high school. The researcher chose to utilize this as the pre-test for this study, because the PLAN test is a pre-ACT. The scores of the PLAN test (pre-test) were available through the College and Career Office of the study high school and were used when comparing and analyzing the post-test scores, which came from the ACT taken by participating students following completion of the ACT preparation course.

This ACT preparation course was intended to help students score at or above the study high school average of 25.1. There was no cost to students, but attendance was critical. Those with attendance difficulties were dropped from the course. The class met during academic lab or study hall, with one group from 9:15 a.m. to 9:55 a.m. and the other from 10:00 a.m. until 10:40 a.m., and consisted of 20 total sessions of 40 minutes each.

Prior to student acceptance into the class, a contract was signed by both the student participant and the parent. The study high school AASA sponsors reviewed the terms with the participating students, in order to address any issues or concerns. Once the student agreed to the terms and conditions, a letter and the contract was mailed to each

parent for review and signature. The contractual agreement outlined terms and conditions were:

1) Students must attend all sessions of the ACT preparation and arrive on time.
2) Students must abide by rules of discipline which included: no socializing, no visitors: and no coursework that was not ACT-related material.
3) Any behavior deemed disruptive or a deterrent to meeting the goals of class will not be tolerated.
4) Students are granted only one absence.
5) A visit to see a student's classroom teacher is to be done before or after the session, unless no other time can be established. A pass to visit a teacher must be presented prior to the ACT session and the teacher's signature on the pass is required, with the time of visit noted.
6) Students must sign a daily attendance sheet and list arrival time. No student can sign for another.
7) Students must be registered and take the upcoming ACT.
8) Any student found to be in violation of any of these rules will be immediately dismissed from the program, at the directive of AASA sponsors.
9) Parents or guardians must take an active role in making sure that their children are in attendance and meet the expectations. (Appendix C)

It is important to note the course was initially designed to include only African American students, because their ACT scores were lower than the study high school average of 25.1. However, in late January, 2010, it was decided the ACT preparation course should be open to all students for the 2010 spring preparation course. This

decision was made collaboratively by the study-site administration and the College and Career Office of the study district, without input from the AASA sponsors.

The instructor for the ACT preparation course at the study high school was hired at the beginning of the 2008-2009 school years and also taught the course during 2009-2010 school years. This individual taught ACT preparation instruction formally for 22 years. He taught test preparation professionally for about 10 years. In addition to ACT tests, he tutored students in preparation for SAT, SAT subject tests, GRE, GMAT, LSAT, and MCAT. Ten years prior to this study he worked for one of the major test preparation companies. While there, he went through a formal training program, where he learned best practices for teaching preparation for the ACT test.

In summary, the instructor stated,

> Why does test preparation work? It works because the tests are standardized. They have to use the same types of problems and 'tricks' every time, so the tests will be comparable. If they keep using the same 'tricks', we can prepare for them. (ACT preparation instructor, personal communication, 2008)

Background of District Demographics

The study site was a suburban school district located in the Midwest. The study district consisted of one early childhood center, four elementary schools, one middle school, and one high school. The total enrollment of the district was just under 4,000 students and was comprised of 10 self-governed communities that encompassed approximately 19 square miles with a population of more than 27,000 residents (MODESE, 2009, p. 1). The student body was a socio-economically diverse group, and parent and community residents were active. The district revenue of 94% came from

local sources. The average per pupil expenditure of this school district based on the 2009-2010 average daily attendance (not including debt service) was $13,740.92, and 8.8% of students were eligible for free and reduced lunches (MODESE, 2009, p. 1). Table 17 displays the ethnic composition of the study district.

Table 17

Ethnic Composition of Study School District.

Ethnicity	Enrollment	Percentage
Asian	409	10.8
African American	598	15.2
Hispanic	166	4.2
White	2649	66

Note: MODESE (2009, p. 205). *District Demographics*

This district was recognized as one of the premier public schools district in the nation. A major component of consideration in this ranking was the number of students who took Advanced Placement (AP) courses and passed the AP exam. Students who were motivated to achieve in high school enrolled in AP courses. In 2009, there were 777 African American and White students who took AP courses and were tested (Study-Site College & Career Office, 2010). The number of students who scored 3, 4, or 5 (indicating students passed the exam) was 629 (Study-Site College & Career Office, 2010). However, the African American enrollment in these classes was only 63. The assessment results for those students showed that 43 students of the 63 enrolled took the exam. Out of those 43 students, 22 of the African American students scored high enough to pass the exam (Study-Site College & Career Office, 2010). In retrospect, these results corroborated the existence of the achievement gap between the two ethnicities at the study high school.

The researcher, after examining the ethnic representation, found the data revealed there was limited diversity within the study district. The students eligible for free and reduced lunch was comprised 7.04% of the student body within the district (MODESE, 2009, p. 48). The study high school did not participate in the desegregation program, which allowed African American students from the nearby urban school district to be bused into the suburban study district to attend school. The majority of African American students desirous of attending the study high school lived in apartments or single-family homes in one of the ten self-governed communities in the school district. This allowed the majority of African American students to attend schools within the district. In this study, participants were deliberately selected from those enrolled in the ACT preparation course to include only African American students at the study high school, although students of other ethnicities may have participated in the ACT preparation course. It is important to note the initial purpose of the ACT preparation course was to focus on improving the scores of African American students by eliminating outlying factors such as stereotype threat.

Research Setting

There were over 3,799 students enrolled in the study high school district as of 2009 (MODESE, 2011, p. 205). The students who participated in this study were high school juniors and seniors during the school years of 2008-2009, 2009-2010 and 2010-2011. Permission for this study was granted in writing by the study school district: the school district or name of the school is not used in this report, nor are the names of individual students. Specific PLAN and ACT scores were used, however student names were not attached to any of the scores. As outlined in the participant consent letter, the

scores and the reflective journals were shared with the researcher indirectly through the study high school's College and Career Office. Despite the reflective journals not being mandated as part of the course, it was the opinion of the researcher that the data provided was still relevant to the study outcome.

Participants in the Study

The study sample consisted of 50 African American high school juniors and seniors who either had not taken the ACT, or who had taken the ACT and wanted to improve their scores. The list of students contacted with an invitation to participate in the ACT preparation course was provided by the College and Career Office and forwarded to the AASA. The list consisted of African American students from the class of 2009 and class of 2010, along with results of their ACT scores. The second list consisted of African American students from the class of 2011, with a listing of their current math class. From this second list students were targeted by the math class they were taking, or had previously taken, to determine if they were ready to participate in the ACT preparation course. For students with GPAs below a 2.0 and/or no math class beyond geometry, the College and Career Office felt the ACT preparation course was not the answer to academic success. It was felt these students would need the academic lab time to complete their current coursework and did not need additional stressors and homework.

Initially, it was senior students who were the target group for the fall class and given preferential seating, due to time constraints to take the ACT test prior to high school graduation. Secondarily, juniors were offered remaining seating to participate in the ACT preparation course if they had taken Algebra II. The goal was a participant pool of 20 to 25 students per section, and the College and Career Office served as the

registration center in order to monitor the class size, divide the sections, and order materials.

Methodology Framework

This study utilized the mixed methods exploratory design, as discussed in Onwuegbuzie and Leech (2004). The authors outlined the 13 steps for a mixed methods study (Table 18).

Table 18

Thirteen Steps for Mixed-Methods Study

1. determining the goal of the study
2. formulating the research objectives
3. determining the research/mixing rationale
4. determining the research/mixing purpose
5. determining the research questions
6. selecting the sampling design
7. selecting the mixed methods research design
8. collecting data
9. analyzing data
10. validating/legitimating the data
11. interpreting the data
12. writing the mixed methods research report, and
13. reformulating the research question. (p. 55)

Note: Onwuegbuzie & Leech, 2004

In an effort to validate these goals, the researcher:

1) Examined how student achievement was evidenced by the ACT after participating in an ACT preparation course.
2) Compared PLAN scores versus ACT scores of students after taking the ACT preparation course.

3) Analyzed questionnaire data and reflective journal data to examine how student attitudes towards the ACT were affected as a result of taking the ACT preparation course.

The researcher chose to utilize a mixed-methods exploratory design. According to Johnson, Onwuegbuzie and Turner (2003), mixed-methods research was defined as "the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods and approaches, concepts or language into a single study" (p. 17). The benefits of using a paradigm that incorporated these characteristics was that it enabled this researcher to look at the research issue and process it from all sides, and also aided in confirming the accuracy and validity of the data. A mixed-methods study can also add knowledge and understanding to the study that may otherwise have been overlooked, if only one method had been employed (Johnson et al., 2004).

Using mixed methods showed that integration of these traditions within the same study can be seen as complementary to each other (Greene & Caracelli, 1997). Mixed methods provided a more comprehensive approach to examining the potential benefit of using an ACT preparation course as an intervention for African American students.

Research Design

There were several mixed-method design strategies utilized for this study. The first was a mixed-method triangulation, which collected data while using both quantitative and qualitative methods (Fraenkel & Wallen, 2006). The initial stage of the research consisted of a focus group to introduce participants to the study, explaining what was expected and probing students by asking open-ended questions. Participants then took a pre-test questionnaire, which provided information regarding each student's

gender, grade level, and GPA. A quasi-experiment quantitative approach, the Non-Equivalent Groups Design (Trochim, 2006, p. 1), was utilized because students previously completed a pre-test (PLAN Test) and then would be taking the ACT test, which represented the post-test for the treatment group. The sample participant groups who took tests were compromised of (a) African American students who took the ACT without taking an ACT preparation course (baseline group), and (b) African American students who took an ACT preparation course prior to taking the ACT (treatment group).

Qualitative data were collected from the reflective journals of the participants, who imparted their thoughts and feelings about the ACT preparation course. The purpose of the reflective journals was explained to participants on the first day of the ACT preparation course. Participants answered open-ended questions in their journal and revealed their ACT score after taking the test. Descriptive data provided a socially valid and consumer-focused method for tracking outcomes (Simmons-Mackie & Damico, 2001).

Finally, data was collected utilizing a post-questionnaire, which was handed out to participants on the last day of the ACT preparation course. The purpose of this post-questionnaire was to determine whether students felt their needs and expectations had been met in terms of becoming better-prepared to take the ACT test. Students submitted their journals after they received their ACT score, to allow answering of additional questions.

Instrument Alignment and Development

The reflective journals utilized in this research study were designed to determine if the ACT preparation course changed student attitudes and motivation towards testing,

thereby potentially increasing academic achievement and decreasing low academic expectations. The researcher, during the process of analyzing the literature, discovered several reasons, discussed in the previous chapter, as to why African American students may be the lowest scoring sub-group when taking the ACT. The reflective journal questions provided as prompts were intended to inspire students to write about their thoughts, feelings, and expectations of the ACT preparation course. The complete versions of the reflective journal and questionnaire instruments may be found in Appendices D, E, F, and G.

Student Reflective Journal Questions

An additional intended purpose of the reflective journal questions was to inspire students to critically reflect what they learned, not just during the course, but what they may have learned about themselves, their level of understanding, and to recognize positive or negatives outcomes from taking the course. According to Mezirow (1990), critical reflection occurs when we analyze and challenge the validity of our presuppositions and assess appropriateness of our knowledge, understanding and beliefs given our present contexts. (p. 3)

The reflective journal questions were given to the students each week during the six-week preparation course. Short, Harste, and Burke (1996) suggested that the process of reflection caused deeper and longer lasting learning, as well as provided authentic data to track outcomes (pp. 58-59).

During the process, students were questioned as to what they learned throughout the preparation course. Students reflected on their experiences, frustrations, growth, and outcomes from the course. The open-ended questions were designed to encourage

students to consider any personal and/or educational impacts. Students did not submit the reflective journals to the College and Career Office until they received their ACT results. Reflective journal questions can be found in Appendices F and G.

The pre- and post-questionnaires were developed by the researcher, as were the questions used for the reflective journals. Questionnaires were designed to arrive at the subjective feelings about the topic or area being surveyed (Fowler, 2002). "A survey is a system for collecting information to describe, compare, or explain knowledge, attitudes, and practices or behaviors" (Fink, 1995, p. 1). The rationale of a survey was to explain the characteristics of the research group (Fraenkel & Wallen, 2006). In the development of the survey it was necessary to review the goals of this research project, determine the sample, and then create the questionnaire. Based on the sample, the questions needed to be simple and easy to answer. Since the target group was high school juniors and seniors, it was important for the students to be able to answer the questions quickly. The majority of the questions were structured, fixed-response questions, offering the respondents a closed set of choices relevant to the research (Iarossi, 2006).

Students were given a set of four-to-six statements and/or questions to begin the journaling process each week during the course. Zelman, Daniels, and Hyde (1993) believed

> that the most powerful learning happens when students self-monitor, or reflect. As learners continue to distinguish what they know from what they need to reevaluate or relearn, they begin to translate discoveries they have made about their own learning into plans for improvement. (p. 36)

After students completed the preparation course, they were given a set of

instructions on what to do with the journals after the end of the course. They were asked to ensure that all weeks of journaling had been completed and were given the option to continue to journal, if they chose to do so. Journals were to remain in their possession until after they received their ACT score and included instructions to follow prior to taking them to the College and Career Office of the study high school.

The instructions included the following: 'When you receive your ACT score, write the score in your journal and answer the following questions: (a) Was your ACT score what you expected? Explain. (b) Were you nervous before you opened the envelope to see your score or did you feel confident? (c) Will you be taking the ACT again? If so, when and why? (d) What three colleges are you thinking about applying to? (e) What ACT score do you need to get into the college of your choice?' The final instruction was to be sure they did not put their name or other identifying information on the journal.

The questionnaire and reflective journal instruments used in this study were designed to allow the researcher to determine if the ACT preparation course changed student attitudes towards standardized testing and increased test scores, thus improving opportunities to attend their college of choice. The transcript of the responses in the reflective journals and questionnaire responses can be found in Appendices H and I.

Pre-Research Procedures

Prior to the commencement of this study, letters were sent to the following individuals introducing the study and requesting permission to conduct the research:

1) Letter to the Assistant Superintendent of Curriculum and Instruction of the study school district.
2) Letter to parents/guardians of the students under the age of 18.

3) Letters to the students, timed to be received after consent was granted by the parents/guardians.

   Copies of the letters may be viewed in Appendices A, B, and C.

Procedures

In this study, the researcher analyzed primary and secondary data. The primary data were collected from participants enrolled in an ACT preparation course prior to taking the ACT test in December 2009, April 2010, December 2010, and April 2011. The secondary data were (baseline) comprised of previous ACT scores from school years 2004-2005, 2005-2006, 2006-2007, and 2007-2008 of African American students at the study high school prior to African American students taking the ACT preparation course in the 2008-2009 and 2009-2010 school years. Additional secondary data were used from the same school years to compare national ACT score averages for African American students. The purpose of gathering the secondary data was for statistical analysis to determine potential score improvement. The researcher also gathered qualitative data through voluntary student reflective journals, as well as observations during the ACT preparation course. Pre- and post-questionnaires offered a comparison of students' attitudes prior to and after the course.

Data Analysis Procedure

These subsequent steps were used in the data analysis procedure:

1) Researcher distributed pre-questionnaires to students participating in the ACT preparation course on the first day of the course.
2) Researcher collected pre-questionnaire responses.
3) Researcher distributed reflective journals.

4) Researcher distributed post-questionnaires.
5) Researcher collected post-questionnaires on the final day of class.
6) College and Career Office personnel collected reflective journals and gave them to the researcher.
7) Researcher compared results of the questionnaires.
8) Researcher analyzed results of MODESE ACT data and study high school data on ACT scores.
9) Researcher analyzed, compared, and contrasted PLAN scores compared to the ACT scores of the study high school
10) Researcher coded reflective journals and observation notes

These steps were repeated for every ACT preparation course offered for the semesters of spring 2009, fall 2009, spring 2010, fall 2010, and spring 2011.

Limitations

The limitations of this study were (a) the researcher was employed as a teacher in the building of the study high school, (b) students attended the study high school in which the researcher worked in the building while this study was conducted, (c) many of the students who participated in this study were, or had previously been, students in one of the researcher's classes and/or were familiar with the researcher due to interaction with her through her role as sponsor of the school store. Additionally, not all participants turned in their reflective journals to the College and Career Office of the study high school. The College and Career Office personnel informed the students who participated in the ACT preparation course that the reflective journals were not a part of the course requirements. It is the researcher's belief that because the reflective journals were not a

required part of the ACT preparation course, a limited number of students chose to complete them.

Summary

The findings from this research study may provide information relating to the benefits of African American high school students taking an ACT preparation course. The effectiveness of such a program may be a useful tool in closing the achievement gap, improving ACT scores, and student attitudes towards testing in general. It is important to keep in mind the researcher utilized a baseline group, as well as a treatment group, making it possible to determine whether any potential gain from the pre-test to the post-test was evident among students who took the ACT preparation course.

Chapter Four: Results

The purpose of this study was to investigate whether there was an improvement in the attitudes and ACT scores of African American students who participated in an ACT preparation course prior to taking the ACT. This chapter details the data collected from the pre- and post-tests, questionnaires, and reflective journals, and also focuses on the possible benefit to African American students who take an ACT preparation course, such as score improvement and qualitative self-awareness.

Research Questions

The research questions were:

1) How will the attitudes of African American students change toward the ACT after taking the ACT preparation course?
2) How does taking an ACT preparation course affect the test scores of African American students?
3) What impact does the ACT preparation course have in preparing African American students for what was on the actual ACT?

Null Hypotheses

1) Following implementation of an ACT preparation course for African American students, there will be no difference in subsequent achievement scores measured by the ACT test, when compared to prior achievement scores measured by the PLAN exam prior to the preparation course.
2) There will be no relationship between pre-test scores on the PLAN exam and post-test scores on the ACT for African American students participating in the ACT preparation course.

The researcher designed the hypotheses, pre- and post-questionnaire, and the reflective journal questions to gather data to examine possible underlying reasons why African American students remained the lowest performing sub-group on the ACT. Both quantitative and qualitative data were collected. This chapter will present the results.

Quantitative Data

The average gain for African American students who took the 2009 ACT preparation course was 2.3 points for 11th graders (juniors) and 4.3 points for 12th graders (seniors). Tables 19 and Table 20 include students by grade level, PLAN score, ACT score, and gain, for juniors and seniors, respectively. In 2009, on a comparative level between the PLAN test and the ACT test, the scores of African American junior students increased by an average of 2.5 points, thus decreasing the achievement gap, for this sample of junior students for the year 2009, by 2.3 points. The scores of African American seniors increased by an average of 2.5 points, thus decreasing the achievement gap, for this sample of senior students for the year 2009, by 2.3 points.

Table 19

African American Junior Participants in the 2009 ACT Preparation Course

Grade	PLAN	ACT	Gain
11	14	16	2
11	18	22	4
11	13	15	2
11	12	16	4
11	16	23	7
11	17	24	7
11	14	15	1
11	19	21	2
11	24	26	2
11	17	20	3
11	14	16	2
			Average Gain: 3.0

Note. Data provided by the College and Career Office of the study high school.

The 2009 sample of participants in the ACT preparation course included 11 juniors and nine seniors. There were no drops in scores between the administration of the pre-test, PLAN, and the post-test, ACT.

Table 20

African American Senior Participants in the 2009 ACT Preparation Course

Grade	PLAN	ACT	Gain
12	12	15	3
12	15	18	3
12	19	21	2
12	18	25	7
12	17	22	5
12	15	19	4
12	14	22	8
12	14	16	2
12	13	19	6
			Average Gain: 4.3

Note. Data provided by the College and Career Office of the study high school.

The average gain in scores for African American students who enrolled in the 2010 ACT preparation course was 2.4 points for the combined sample of both 11th graders (juniors) and 12th graders (seniors). In 2010, there were 17 junior participants and two seniors included in the sample. Four students dropped in score between the administration of the pre-test, PLAN, and the post-test, ACT. One senior student dropped by one point, and three junior students dropped 1 to 2 points. Results are recorded in Table 21, which combines the junior and senior students together to represent all students in the 2010 samples in the study. The two separate samples were combined because there were only two seniors who participated in the 2010 preparation class.

Table 21

African American Junior and Senior Participants in the 2010 ACT Preparation Course

Grade	PLAN	ACT	Gain
11	15	17	2
11	17	15	-2
11	13	13	0
11	18	22	4
11	18	21	3
11	19	20	1
11	16	23	7
11	19	23	4
11	18	24	6
11	21	26	5
11	18	20	2
11	20	18	-2
11	18	24	6
11	17	19	2
11	14	19	5
11	19	18	-1
11	17	19	2
12	17	15	-2
12	13	17	4
			Average Gain: 2.4

Note. Data provided by the College and Career Office of the study high school.

The secondary data gathered during the course of this study included scores from the PLAN test, which was a standardized pre-ACT test used as a predictor of success on the ACT, typically administered in the fall of the sophomore year (ACT, Inc., 2007b, para 4). Additional secondary data were gathered from the MODESE (2010) website, the ACT website, and study high school records provided by the College and Career Office. The data in Table 22 was generally used by schools to analyze educational performance and was used to determine goal-setting in relation to subgroups, as determined by MODESE.

Table 22

ACT Score Results 2007-2011: Mean Composite Score for African American Students

Year	Study High School	State of Missouri	National
Class of 2007	19.1	17.3	17.0
Class of 2008	18.8	17.2	16.9
Class of 2009	21.1*	17.2	16.9
Class of 2010	19.8*	16.9	17.0
Class of 2011	21.6*	17.2	17.0

Note. Data provided by the College and Career Office of the study high school. *Denotes Students who took the ACT Preparation Course. Scores recorded prior to preparation coursework.

Prior to taking the ACT preparation course, African American high school students at the study high school scored above the State of Missouri and National mean averages, for the years 2009, 2010, and 2011. However, there was a noticeable increase in the ACT scores of African American students after taking the ACT preparation course, as outlined in Table 23.

Table 23

Increase in African American ACT Scores after ACT Preparation Course: 2009 to 2011

Year	Study High School	State of Missouri	ACT Score Increase/Missouri	National	ACT Score Increase/National
2009	21.1	17.2	3.9	16.9	4.2
2010	19.8	16.9	2.9	17.0	2.8
2011	21.6	17.2	4.4	17.0	4.6

Note. Data provided by the College and Career Office of the study high school.

T-test for difference in sample means. The *t*-test for difference in means was performed to compare whether the average difference between the pre-test and post-test was significant instead, rather than likely to be by random chance. Thus, this tests

allowed an answer to the question of whether the average score increase statistically was higher after the implementation of an ACT preparation course.

The test performed was a two-sample *t*-test for the difference in means at a 99% significance level. The *t*-test was applied to mean scale scores from the PLAN test given in the fall of the sophomore year of high school and the mean scale scores of the ACT scores of the African American students who participated in the ACT preparation course.

The null hypothesis for this *t*-test was, following implementation of an ACT preparation course for African American students, there will be no difference in subsequent achievement scores measured by the ACT, when compared to prior achievement scores, as measured by the PLAN exam prior to the preparation course. The two samples were gathered from the African American students who took the PLAN test. The ACT means were indicative of test scores of students who took the ACT preparation course prior to taking the ACT (2009-2010). This comparison of PLAN and ACT scores demonstrated when the preparation course was implemented there was an increase in mean test scores.

The data collected from the PLAN and ACT scores were only for African American students participating in the preparation course. There were 40 students who participated in the course. The descriptive statistics shown in Tables 19, 20, and 21 indicated the specific data utilized for the *t*-test. As Tables 22 and 23 support, the researcher rejected the null hypothesis for the comparison of pre-test and post-test measurements of achievement.

Tables 24 and 25 display *t*-test for difference in means results when comparing pre-test scores to post-test scores for African American students who participated in an ACT preparation class, for the years 2009 and 2010.

Table 24

T-Test for Difference in Means: 2009 Pre-to-Post Tests

2009	ACT	PLAN
Mean	19.55	15.75
Variance	12.682	8.618
Observations	20	20
df	38	
t Stat	3.682	
P(T<=t) one-tail	0.000	
P(T<=t) two-tail	0.001	

Note: Alpha = .01

Table 25

T-Test for Difference in Means: 2010 Pre-to-Post Tests

2010	ACT	PLAN
Mean	19.632	17.211
Variance	12.023	4.842
Observations	19	19
df	36	
t Stat	2.570	
P(T<=t) one-tail	0.007	
P(T<=t) two-tail	0.014	

Note: Alpha = .01

When comparing pre-to-post test scores for 2009 participants and 2010 participants, *t* -test analysis found that the one-tailed p-values were 0.000 and 0.007, respectively. The researcher compared those values to the alpha value of .01 and, since the *p*-values were less than the alpha value, the researcher rejected the null hypothesis. This indicated there was enough evidence to support that the pre-test average on the

PLAN exam was not equal to the post-test average on the ACT. Since the post-test average on the ACT was larger than the pre-test average on the PLAN, there was evidence to support that African American students who participated in an ACT preparation course in 2009 and in 2010 achieved a statistically higher mean score on the ACT, when compared to the pre-test score on the PLAN.

Tables 26 and 27 display *t* -test for difference in means results when comparing pre-test scores to post-test scores for junior and senior level African American students who participated in an ACT preparation class, for the years 2009 and 2010.

Table 26

T-Test for Difference in Means: Junior Pre-to-Post Tests

Juniors	ACT	PLAN
Mean	19.82	16.96
Variance	12.892	7.220
Observations	28	28
df	54	
t Stat	3.371	
P(T<=t) one-tail	0.000	
P(T<=t) two-tail	0.001	

Note: Alpha = .01

Table 27

T-Test for Difference in Means: Senior Pre-to-Post Tests

Seniors	ACT	PLAN
Mean	19.000	15.181
Variance	10.400	5.163
Observations	11	11
df	20	
t Stat	3.209	
P(T<=t) one-tail	0.002	
P(T<=t) two-tail	0.004	

Note: Alpha = .01

When comparing pre-to-post test scores for junior participants and senior participants, *t* -test analysis found that the one-tailed *p*-values were 0.000 and 0.002, respectively. The researcher compared those values to the alpha value of .01 and, since the *p*-values were less than the alpha value, the researcher rejected the null hypothesis. This indicated there was enough evidence to support that the pre-test average on the PLAN exam was not equal to the post-test average on the ACT. Since the post-test average on the ACT was larger than the pre-test average on the PLAN, there was evidence to support that African American students, both junior and senior level, achieved a statistically higher mean score on the ACT, when compared to the pre-test score on the PLAN.

Table 28 displays *t* -test for difference in means results when comparing pre-test scores to post-test scores for the combined samples of junior and senior level African American students who participated in an ACT preparation class, for the years 2009 and 2010.

Table 28

T-Test for Difference in Means: Combined Years Pre-to Post Tests

Juniors	ACT	PLAN
Mean	19.58	16.46
Variance	12.037	7.149
Observations	39	39
df	76	
t Stat	4.459	
P(T<=t) one-tail	0.000	
P(T<=t) two-tail	0.000	

Note: Alpha = .01

Results for comparison of pre-to-post test scores for the combined sample of students was consistent with results found for the disaggregated samples discussed for

Tables 24 through 27. When comparing pre-to-post test scores for a combination of 2009 participants and 2010 participants, *t* -test analysis found that the one-tailed *p*-value was 0.000. The researcher compared that value to the alpha value of .01 and, since the *p*-value was less than the alpha value, the researcher rejected the null hypothesis. This indicated there was enough evidence to support that the pre-test average on the PLAN exam was not equal to the post-test average on the ACT. Since the post-test average on the ACT was larger than the pre-test average on the PLAN, there was evidence to support that African American students achieved a statistically higher mean score on the ACT over the course of the two years of the study, when compared to the pre-test score on the PLAN.

Pearson Product Moment Correlation Coefficient

The researcher calculated a Pearson Product Moment Correlation Coefficient to see if there was a relationship between the pre-test score on the PLAN and the post-test score on the ACT. The null hypothesis for the Pearson Correlation was, there will be no relationship between pre-test scores on the PLAN exam and post-test scores on the ACT for African American students participating in the ACT preparation course.

Table 29 provides a list of results from calculation of the Pearson Product Moment Correlation Coefficient for the samples of 2009 and 2010 participants, the junior and senior level participants, and the combined groups together.

Table 29

Correlation of Pre-to-Post Test Scores

	PLAN to ACT
2009	0.799
2010	0.571
Juniors	0.676
Seniors	0.571
Combined	0.676

For the 2009 participants and the 2010 participants, the calculated values were, r = 0.799 and 0.571, respectively. This implied a moderate association between the explanatory variable (PLAN scores used as a pre-test), and the response variable (the ACT scores after the ACT preparation course used as a post-test) for the 2010 group and a moderately strong association for the 2009 sample.

For the junior level participants and the senior level participants the calculated values were, r = 0.676 and 0.571, respectively. This implied a mildly strong association between scores used as a pre-test and those used as a post-test for the senior level sample and a moderately strong association for the junior level sample.

For the combined sample, representing both junior level participants and senior level participants for both years of the study, the calculated value was, r = 0.676, which provides a mildly strong relationship between scores used as a pre-test and those used as a post-test.

Each of the Pearson Product Moment Correlation Coefficient values calculated using data for this study was larger than the critical values of 0.37 and 0.393. Therefore, the positive relationships established are statistically significant. There is a significant relationship between the pre-test PLAN and post-test ACT scores, when measured before and after the treatment of participation in an ACT preparation course.

Qualitative Data

The most common sources of data collection in qualitative research are interviews, observations, and review of documents (Creswell et al., 2003: Locke, Silverman, & Spirduso, 2010: Marshall & Rossman, 1989). Creswell et al. (2003) placed the data-collecting procedures into four categories: observations, interviews, documents, and audiovisual materials. The qualitative data sources utilized in this study were interviews, observations, pre- and post-questionnaires, as well as responses to reflective journals gathered throughout the study timeline. The focus group interviews were conducted at the beginning of the ACT preparation course and at the end of the preparation course.

Questionnaire results. The questionnaires were provided to all participants of the study. They consisted of questions focused on thoughts and expectations regarding the preparation course, participant attitudes, and subject area weaknesses, as well as demographic data representing gender, grade level, and GPA. A comment box was available for participants to make additional comments relating to the questions. The average GPA for African American students taking the ACT preparation course was 2.0.

Some of the questions asked on the survey were: (a) Do you feel this ACT Preparation Course will prepare you to take the ACT Test?: (b) What are your expectations for this ACT Preparation Course?: (c) What test areas of the ACT do you need help with?: (d) What score do you expect to get on the ACT Test?: (e) Are you nervous about taking the ACT Test?: and (f) When you think about the ACT Test - what comes to mind?

The majority of the students felt the ACT preparation course would prepare them for taking the ACT test and stated that it would teach them the tricks to help them get a good score on the ACT and to learn the material on the test. More than 50% of the students felt they needed help in all subject areas.

Most of the students, after taking the ACT preparation course felt it prepared them for the ACT test. The majority of the students felt the course met their expectations, but felt they needed more help in Reading and Math. Overall, students were content with their scores, but 25% of the students wanted to take the ACT test again to see if their scores would improve. Students who took the ACT test said they were nervous before taking the test, but once they began taking the test they felt more comfortable, stating the material was familiar to them. Students attributed this to participation in the ACT preparation course and felt they were more prepared than they would have been without the course.

Focus group results. The researcher utilized an open-ended, conversational format with ACT preparation course participants during the focus group. The focus group was conducted during the introductory session of the ACT preparation course, allowing the researcher to take advantage of the opportunity to discuss with participants the purpose of the research and what was expected of them. The researcher presented the participants with three open-ended questions that were subsequently analyzed and open-coded for emerging themes. These conversations were not audio recorded, and the only data set were the notes taken during the meeting. The conversations with participants of the ACT preparation course lasted 20 to 30 minutes. Students were asked, and then responded:

1) Why are you taking the ACT preparation course?

   Several students stated they were taking the course because their parents were forcing them to take it. Others mentioned they were being pressured to take it from the sponsors of the African American Student Alliance. One student stated he was taking it not to impress others, but was taking it to help himself. There were only a few who said they were taking the course because they wanted to get a good score to get into the college of their choice.

2) What do you expect from the course?

   The majority of students hoped to learn the tricks for taking the ACT so they could get a good score and to learn what to expect when taking the ACT test. Most wanted to learn the material so they could 'get' what the questions were asking.

3) What do you think is a good score to get on the ACT?

   The responses from students on what they believed was a good score ranged from getting a score of 19 on the ACT to others who were adamant on getting a score of at least 25 to get into the college of their choice. The students who were undecided on what college they might attend just wanted a good score and did not place a numerical value on that score, even after they were encouraged to be more specific.

Final Focus Group

The researcher had the opportunity to briefly meet with participants as a group to inquire what they felt they had learned from taking the ACT preparation course. This was an impromptu 15-minute interaction with participants. The researcher only took notes and

did not track direct quotes from the students. Students talked about the tricks they had learned to help them do well on the ACT and seemed to be more excited about the upcoming test. Other students said they were really worried about taking the test because the material was really difficult to understand. Students mentioned needing to improve their reading skills to understand the test information. Several students mentioned meeting with their math and English teachers for additional tutoring.

Many of the students seemed more upbeat and believed they were going to get a good score on the ACT because of taking the preparation course. Several students stated they felt more comfortable with the material on the ACT and were anxious to take it and get the results. Students also mentioned the material and the test-taking strategies taught in the ACT preparation course had improved their performance and grades in some academic classes. All of the students were excited the course was over, even though they felt the course itself was worthwhile and had helped them. Several students mentioned they had already been talking to their friends, suggesting they should sign up for the next class.

Reflective journal results. The study high school was on a Block Schedule (90 minute classes). The ACT preparation course at the study high school was conducted during Academic Lab (AC Lab) every other day. In order for students to participate, they agreed to give up AC Lab to take the preparation course. Academic Lab rules were outlined in the student planner given to each student during the first AC Lab at the beginning of the school year. Academic Lab was designed to be used for academic purposes and was not intended to be unstructured free time. Students were held accountable for the appropriate, constructive use of AC Lab time. Appropriate use of AC

Lab time included: (a) individual study in the AC Lab assigned classroom, (b) completion of tests, labs, and other make-up work, and (c) small group study and discussion. Students should determine among themselves and with the teacher where they will meet: (a) meeting counselors, teachers, or administrators, or (b) attending scheduled meetings and activities.

Students taking the preparation course gave up every AC Lab for six weeks, which meant students gave up the privilege of using this time for other activities, as well as stopping by the school store to make purchases and briefly socialize with other students. Many of these students were taking Chemistry, Algebra II, Algebra II Concepts, U.S. Studies, U.S. Politics, Physics Systems, Statistics, and at least one English course.

The participants were expected to write in their reflective journals at the end of each week during the preparation course, and also after they received their ACT scores. The purpose of the reflective journaling was to gather findings as to the perspectives of the participants during and after the preparation course. Additionally, participants provided feedback on the effectiveness of the course. Open coding was used to analyze the responses from the reflective journals for emerging themes. There were six themes that emerged from the student reflective journals: (1) studying, (2) getting serious, (3) attitudes, (4) confidence, (5) pressure to succeed, and (6) reflection of academic ability. Verbatim transcripts of reflective journals can be found in Appendices H and I.

Theme l: Studying. One student noted, “I think I might fall behind on the homework part.” Yet another noted, “On average my weaknesses are study skills. We studied science this week, and I need to work on reading and analyzing charts and graphs.” Three students complained about homework for this course because they already

had too much homework from their 'real' classes. Many of the students stated the homework helped them to 'get it.' Students were showing some self-knowledge related to their own need for increased study time.

Theme 2: Getting serious. As one student observed,

> I have learned from this class that the ACT is hard and I need to practice every day to get a better score. I have also learned that I normally don't study for tests, but I am willing to work very hard to get a good score that will allow me to me to attend the college that I want with a scholarship.

Another student stated,

> ACT preparation class has helped me realize that it's time to start getting serious and that I cannot just wing it and that I really have to take this seriously if I want to get into a decent college. I've learned that I wish that I would have taken the ACT more seriously and that I should have gotten better grades in freshman year and paid more attention grasping the information. It's helping me to get more serious about my grades and my college career.

Several students felt that because some of their peers were not taking the preparation course seriously it impacted their ability to learn the material. "I feel like we have covered what I expected, but I wish that my peers would have kept up with the work." There was another student who agreed stating, "Some people chose not to attend or complete the homework because they thought it was stupid. I never missed a class because I wanted to get as much out of it as I could."

In the same vein as studying more, students commented on their need to get serious about taking the ACT and school in general.

Theme 3: Attitudes. One of the research questions of this study was: How will student attitudes toward the ACT change after taking the ACT preparation course? This researcher read and reread the comments in the reflective journals of the students who submitted them. The comments the students wrote indicated there was a remarkable change in their attitudes on a positive level.

One student specified, "[B]y taking this class, I feel like I am creating a good foundation for my future, because the ACT has a huge impact on colleges and scholarships." Yet another student indicated feeling pressure at the beginning,

> but now I've realized that I'm not taking the class to impress others. I'm taking it for myself, I thought the instructor would think little of me if I did not finish the English drill, but I realized I do it at my own speed and do it more efficiently then my score will improve.

Finally, students felt like they were laying down a foundation for their future. Responses included: "I'm proving to myself that if I put my mind to it then I will succeed," "I've learned about myself and my values," and "Totally feeling like this is the starting point of my life." Students unanimously reported that the class helped them feel better prepared to take the ACT. Students also learned new things about themselves as learners.

Theme 4: Confidence. Confidence was another emerging theme for many of the students. They often repeated words or phrases similar to what other students expressed in their reflective journals. One student shared,

> It was funny, during the test I was mostly nervous that my score would decrease or stay the same. But, at the same time I was confident because I came across some of the tricks that we talked about in class and I did not fall for them.

student reinforced this theme,

> In my eyes, I feel like the ACT course is helping me to feel more confident about not just taking the test, but test taking strategies as well. The information is helping me understand some of my class's better – the test taking strategies work in other classes too! I kinda feel like I am laying down a good foundation by taking this course.

It was noted by a student who felt

> the ACT preparation course, is helping me to be more confident about testing. Taking this class has really helped me learn more about the stuff that's going to be on the ACT. It's also made me more aware of what some of the tricks on the test are.

Yet another student wrote, "This course has made me more confident already. I am not nervous about taking the test like I was before. I feel more confident about my test taking skills and I think I will be able to do well."

A different student added, "The ACT preparation course is definitely making me more confident about testing. I don't think I will be very nervous by the time the test data comes."

An additional student noted,

> I have applied what I've learned so far to a few tests I've taken recently in my classes. I was surprised to find that the strategies I learned in the ACT preparation course are working in my other classes. The strategies really work!

One student also commented, "When I was taking the test I felt confident that I have done my best and I felt good that I've used the strategies the instructor gave me."

Also, remarked by a student was,

> I'm definitely feeling more comfortable about the ACT test. Doing the questions makes me less scared because I know I can do them and I know the correct answers. I feel like I should know the stuff and I feel good when I remember the things I have learned when answering the questions.

This student described the changes in his attitude as dramatic, "After reading the assigned sections in the ACT preparation book for homework, then after reviewing my answers – I couldn't believe how many I got right! My confidence has improved dramatically."

A final point elaborated by a student was,

> These last six weeks have really made a difference. My ACT score went up by two points and I feel much more confident about my academics. I will be telling my friends about this course so they can get a good score, too!

This emerging theme appeared to have impacted the students in a positive manner. Student confident levels improved, which equated to increased comfort levels when taking the ACT test. The interesting aspect of this theme was the improved level of confidence students felt in relation to using the strategies they learned during the ACT preparation course as a tool in other coursework.

Theme 5: Pressure to succeed. In week four students were asked, Do you feel any pressure because you are taking this course? Why? There were only a few students who commented on this question. One student expressed, "I felt some pressure because I'm an African American student who is expected to get a good score because of taking this course." Another student mentioned, "There is tons of pressure because the ACT is no laughing matter, it's no joke. This is basically where my life starts."

One student felt, "There's a lot of pressure from the sponsors of the African American Student Alliance to take this course. Believe it or not, there was more pressure from them than there was from my mom." This student lamented, "It's just one more thing to feel stressed about – I have enough stress just trying to keep up with everything that's expected of me, to pass my classes, do well in track and do good at work." Another athlete expressed,

> The need to succeed is all I think about. The ACT test is just one more thing in my life I have to succeed in. If I don't ace the ACT or get the score I need to go to the college that's already offered me an athletic scholarship – I'm doomed!

Additionally, another student bemoaned,

> The fact is – my parents expect me to go to the college they graduated from. That's all I've been hearing since I was a freshman! In order to do that, I need a good score to get in. If I don't get the score the first time around, my mom said I'll be taking the ACT test until I do. This course is helping me a lot – I'll know how much when I take the test and hopefully the score I need.

Similar to confidence, the pressure to succeed was also a strong theme found in student reflective journals. It was evident after reviewing the comments on pressure to succeed that students were feeling more pressure to succeed from outside sources.

Theme 6: Reflection on academic ability. The final set of questions for students to address in their reflective journals included a question on whether they thought the ACT accurately reflected their academic abilities. It was one out of four questions asked that students commented on. A student remarked,

> What I've noticed is that I am not as self-driven and motivated as I thought, especially after taking this course and seeing what is on the ACT test. I really thought I was ready for it before taking this class.

Another stated, "I'm definitely not used to practicing reading and writing skills, not like the stuff you have to do on the ACT test." One student also confirmed,

> That over the past five weeks, I learned that I am not a quitter in everything I do. I was always looking for the easy way out – but there is no easy way to get a decent score on the ACT and after sticking with this course and doing what I was supposed to do – I feel like I just might get the score I need!

One student learned,

> That education means a lot to me and I would do anything to maximize my chances of getting accepted and scholarships to the college of my choice. I know that I am capable of doing a lot better than I actually do.

One student interjected,

> I was shocked about how much I didn't know. I can only blame myself because I just took it for granted that if I just passed all of my classes, even with a D – I'd still be alright and could breeze through the ACT test. I was dead wrong!

Finally a student stated,

> I know I'm pretty smart, but what I didn't know is how many academic areas I was not so smart in. I really have to kick it up a few notches to strengthen those areas.

What was consistent among students was the feeling that they knew enough to get a good score on the ACT test, but did not know as much as they thought. The majority of students agreed with the idea that the ACT measured their academic ability. But, they were surprised when they found out they were not as familiar with the material on the ACT test as they thought. As a final point, several students thought they would score high enough on the ACT to get into college, despite having a history of less than stellar efforts towards their education.

Summary

The researcher found, based on student comments in the reflective journals, that even though it was somewhat important to get a good score on the ACT, there existed a lack of motivation to put in additional time studying or completing the homework for the ACT preparation course. Several students later commented in their journals that they wished they had taken the course, and school in general, more seriously. Nevertheless, student attitudes did, in fact, change towards taking the ACT test, as well as positively impacting general study habits overall. Not only did student attitudes change, but test scores improved as well.

Chapter Five: Discussion

The achievement gap was one of the most complex problems plaguing the United States. There was minimal research available as to why African American students tended to be the lowest performing sub-group in ACT scores, or if coaching or test preparation could contribute to an increase in scores. Research by ACT showed African American students ranked the lowest in ACT scores of all racial groups. The results of this study may prove to be beneficial to high school educators across the nation interested in closing the achievement gap in schools. Chapter Five discusses the potential significance of and implications for post-secondary assessments on student performance, provided by ACT preparation coursework.

Research questions and hypotheses for this study were:

Research Questions

The research questions were as follows:

1) How will the attitudes of African American students change toward the ACT after taking the ACT preparation course?
2) How does taking an ACT preparation course affect the test scores of African American students?
3) What impact does the ACT preparation course have in preparing African American students for what was on the actual ACT?

Hypotheses

1) Following implementation of an ACT preparation course for African American students, there will be a difference in subsequent achievement

scores measured by the ACT test, when compared to prior achievement scores measured by the PLAN exam prior to the preparation course.

2) There will be relationship between pre-test scores on the PLAN exam and post-test scores on the ACT for African American students participating in the ACT preparation course.

Educational Importance

As a result of this study, the margin of increase in ACT scores of the student participants could possibly be attributed to coaching and test preparation provided by the ACT preparation course. Even though the average increase was only 2.34 points, this could make the difference for some students in being accepted into the college of choice. The study high school did not include students who had not yet completed Algebra II or students who had a GPA of 1.8 or lower. Therefore, results of this study cannot be widely generalized. However, the results of this study illustrated that with proper interventions in better preparing African American students for the ACT, their ACT scores could be increased. Moreover, it was feasible that with more student-to-coaching contact time, the overall effect of preparation for taking the ACT may be improved.

Implication of Findings

The findings of this study provided implications for bridging the achievement gap between African American and White students. Further, the findings in this study proposed strategies that may be useful to educators in narrowing the achievement gap in their schools and districts. There were some schools that offered ACT preparation courses and others that did not. Schools were left to make their own decisions regarding this. Since ACT was an important factor allowing students to attend college, it would

seem that districts across the country would be universally committed to preparing their students for post-secondary education, and a strategy such as a preparation course would be seriously considered.

If nothing changes to narrow the achievement the gap, the gap will potentially continue to widen, especially given that suspension rates were increasing, beginning at the pre-school level, as a result of social emotional concerns. Students who started school cognitively behind their peers lose more instruction when they are also socially maladjusted and demonstrate behaviors which result in suspension. “The overall rate of PK expulsion in state-funded programs was found to be more than three times greater than the national rate of expulsion for students in Kindergarten through Twelfth Grade” (Gilliam, 2005, p. 1). Preparation programs can become a means to help capture information lost in early years and effectively preparing students with strategies to become successful on exams.

The ACT and SAT assessments were gatekeepers, closing the gates by way of test scores to keep student students out of college, or to open the gates to allow students to pursue higher education. In a perfect world, there would be no need for the ACT or SAT. Research showed that these assessments are not a good measure of what students know or that they can predict college success (Hiss & Franks, 2014: National Association for College Admissions Counseling, 2008). The National Center for Education Statistics (2009) stated in a report, “The SAT is not designed as an indicator of student achievement, but rather as an aid for predicting how well students will do in college” (p. 1).

Hiss and Franks (2014), determined, “Despite lots of discussions about variation

in high school grading, we find high school GPA to be a broadly reliable predictor of college performance, and standardized testing to be very far from ‘standardized’ in its predictive value” (p. 5). In addition, Hiss and Franks (2014) said,

> It’s probably not so surprising that a pattern of hard work, discipline and curiosity in high school shows up as highly predictive, in contrast to what they do in three or four hours on a particular Saturday morning in a testing room. (p. 5)

The National Association for College Admissions Counseling’s (2008) Commission on the Use of Standardized Admission Tests in Undergraduate Admission (2008) found,

> Colleges most often determine the utility of admission test scores by assessing how predictive they are of first-year grades. The Commission wishes to underscore that as such, standardized admission tests should not be considered as sole predictors of true college success. For this broad definition of success, standardized admission tests—as well as other individual factors—are insufficient predictors of a student’s likelihood of overall success (p. 1).

Several states, Connecticut, Massachusetts, Washington, and Wisconsin, took it upon themselves to introduce house bills and appoint committees to address strategies to closing the achievement gap (Wixom, 2015). Some mandates focused on closing the achievement gap addressed embedded credits in Career and Technical Education programs, universal pre-K, and the No Child Left Behind Act. Federal programs, such as The Race to the Top challenged states to develop strategies for closing the achievement gap (Race to the Top Coalition, 2015, para. 1).

In a perfect world, every student would have equal access to college. In a perfect

world, there would not be an achievement gap. Unfortunately, the achievement gap exists and minority students are not on the same level playing field as White students. Closing the achievement gap may be a daunting task. It is notably worth the effort of every teacher, administrator, school district, and its respective state to focus on closing the achievement gap.

Answering the Research Questions

This section answers the questions that guided the research of this study. To address research question number one, How will the attitudes of African American students change toward the ACT after taking the ACT preparation course?, was to determine if there was a notable change in student attitudes toward the ACT after taking the ACT preparation course. Student attitudes changed remarkably, believing this was a good foundation for the future. They did not take the class to impress others, but for themselves: overall students felt more positive towards taking the ACT.

To address research question number two, How does taking an ACT preparation course affect the test scores of African American students?, was to determine if after taking an ACT Preparation Course the ACT test scores of African American students were affected. Yes, the ACT scores of African American students increased after taking the ACT Preparation Course in 2009 and 2010. In 2009, there was a 3.0 point score increase in the ACT scores for the African American juniors and a gain of 4.3% for African American seniors. The gain in 2010 was not as notable as the gains in 2009. However, there was an increase of 1.7 points on the ACT test for African American participants who took the Spring ACT preparation course at the study high school. Also statistically significant was the narrowing of the score gap after taking the ACT

preparation course, as answered in addressing the hypothesis: Following implementation of an ACT preparation course for African American students, there will be a difference in subsequent achievement scores measured by the ACT test, when compared to prior achievement scores measured by the PLAN exam prior to the preparation course.

In the study school during 2008, there was an ACT score gap for African American students of 7.1. This gap was prior to the implementation of the ACT preparation course. After the implementation of the ACT preparation course the score gap narrowed to 5.3 in 2009, and to 4.8 in 2010, respectively. An encouraging result was the ACT composite score for African American students at the study high school was 21.3 in 2010, which was the highest since 2000.

To answer research question number three, What impact does the ACT preparation course have in preparing African American students for what was on the actual ACT?, was to determine if African American students were more knowledgeable concerning what was on the actual ACT, after taking the ACT Preparation Course. Yes, 75% of the participants stated in the student reflective journals that they felt they had learned a lot about taking the ACT and understood the majority of the material on the test.

Alignment of Themes with the Literature

Many themes emerged in the reflective journals of the students, with six emerging themes that aligned with the research literature. The themes were studying, getting serious, attitudes, confidence, pressure to succeed, and reflection on academic ability. The first theme that emerged was studying, which was reported by the students as important to their success on the ACT test. These findings aligned with research by

Kritsonis and Nickerson (2006), who found the involvement of parents in the educational process in terms of suggesting and selecting classes, helping students study, and being aware of what was going on inside and outside the school setting, led to students who tended to be more successful.

Further, research conducted by Somers, Owens, and Piliawsky (2008) established that African American parents were less motivated to become involved in the education of their children because of their educational backgrounds and did not feel that their children would benefit academically from their involvement. However, Hubbard (2005), found that if a parent was actively involved in their children's education, motivating and encouraging them as well as helping with homework, students were more inclined to study and their grades and GPA improved.

The second emerging theme from the qualitative data was student attitudes. There were individual factors that also influenced attitudes toward education, as well personal attitudes that often defined the perception of the students, themselves. African American males whose attitudes towards education were negative did not thrive socially or academically, tended to take less-challenging classes, and had a greater chance of lower academic outcomes (Mickelson & Greene, 2006). Research by Mickelson and Greene (2006) further explored the gender variations and the academic performance of African American students in middle school. It appeared the root of underachievement by African American males stemmed from educational attitudes, the structure of the school environment, climate, and the influence of peers. These findings suggested gender differences were virtually non-existent in elementary school, but tended to become more obvious in middle school. African American females tended to obtain higher grades and

test scores than African American males. On the opposite end of the scale, however, test scores of African American females were more likely to be impacted by the socioeconomic status of the family, as well as its cultural capital, than males. Bourdieu (1977) described the academic link to cultural capital as forms of knowledge, both tangible and intangible, which is needed to succeed in the current educational system (p. 487).

Research suggested that attitudes and expectations may be related to gender and showed African American males had lower expectations than African American females. Wood et al. (2006) conducted research examining how gender was related to expectations concerning education. Findings suggested educational expectations were minimal with regard to students who lived in an urban, lower socioeconomic environment, and these expectations carry over to teachers. The researchers predicted that African American boys (ages 9–16) would have lower expectations for their educational future, but their female counterparts were more positive and hopeful about their future. However, "contrary to predictions, the magnitude of the difference in expectations for males vs. females did not increase as a function of age. In keeping with the hypotheses, parental expectations fully mediated the relation between gender and their expectations" (Wood et al., 2006, p. 26). The study also ascertained that some school-based factors, such as a positive school environment, positive teacher expectations, and the perception of the students seemed to protect their expectations from the deleterious impact of low parental expectations.

The final emergent theme was the students' reflections on academic ability and achievement. The literature suggested that a strong parent strengthened and defined

educational goals of the student (Rodriguez & Villarreal, 2002). Parental involvement and support can positively impact the academic ability of their child. The research by Comer and Haynes (1991) determined that

> achievement gains have been the greatest when parents are involved at all levels of school life, through general support of schools' academic and social goals, active participation in daily activities, and in school planning and management, a pattern that is referenced as meaningful parental participation. (p. 271)

According to Barnard (2004), the association between early parental involvement in elementary school and student success in high school promoted positive long-term effects on academic achievement. Bronstein et al. (2005) confirmed that a lack of involvement by parents of fifth grade students equated to poor academic achievement.

Finally, Hubbard (2005) found that the involvement of the parent was critical to the academic success of children in elementary school and high school. Particularly because this was when students became more social and were influenced by their peers, often receiving negative advice.

The findings of this literature established that family-level factors impacted the academic outcomes of students. A major influence on the academic success of students was parental involvement (Hubbard, 2005). The majority of lower-income, African American students who tended to have little or no parental involvement equated to lower levels of academic achievement.

Future Research Recommendations

Although colleges and universities placed importance on ACT scores for college admission there was very little research as to whether coaching or test preparation could

improve the scores of African American students. There is a need for further research on the benefits of African American students taking an ACT preparation course. The ACT (2007) organization believed test preparation to be effective (p. 6). According to the ACT Condition of College Readiness Report (2013), only 69% of African American students completed ACT's recommended core curriculum compared to 74% of all students across the nation (p. 15). In essence, if students were not taking rigorous core curriculum, students would not be prepared to take the ACT test. The United Negro College Fund lamented after reviewing this report that,

> ACT's report unequivocally documents the failure of our schools to prepare all African American students for college and career," said Dr. Michael Lomax, president and CEO of the United Negro College Fund. This report should serve to focus our collective attention on the work we must do as a nation to ensure that all Americans are prepared to meet the basic requirements for postsecondary education: it's a call to action we dare not ignore. (ACT, Inc., 2014, para 5)

The initial recommendation of this researcher is to ensure that African American students are taking rigorous coursework, or at least the core curriculum recommended by ACT in high school. The second recommendation of this researcher is to begin incorporating ACT questions and teaching strategies into the everyday classroom. Beginning with students in middle school, in each of the core courses, English, math, reading, and science, districts mandate that at least one day a week teachers are required to incorporate ACT test questions. Teachers will also instruct students on the strategies and coursework that will enable students to successfully answer questions that may be on an ACT test.

Further, an ACT preparation course should be offered during each semester, during the school day, at the high school level, as a course all students are required to take. For those students that will be taking the ACT test, the test should be offered on a standard school day, where it becomes a routine test that has to be taken during the junior or senior year of high school. The purpose of incorporating these procedures into a school district is to make taking the test easily accessible and to ensure that all students are academically prepared to take the ACT test. This will also reduce or eliminate the anxiety, fear or apprehension students experience prior to taking the ACT test. Students will feel confident that they have mastered the material needed to score well and they will be provided with a level playing field to be accepted into their college of choice.

Additionally, the social promotion of all students must be eradicated. This is a societal issue that plagued not just African American students, but students of every ethnicity. According to Aldridge and Goldman (2007), the definition of social promotion is, “the practice of promoting students to the next grade even though they have not acquired minimum competencies expected of that grade, this practice appears to be widespread” (para. 1). In addition, “The number of students socially promoted each year is unknown because few school districts report these data and other districts have only limited data” (para. 1). Aldridge and Goldman also stated, “according to a 1997 survey conducted by the American Federation of Teachers (AFT) is a strategy educators use to allow students to be promoted based on other aspects of education, rather than their academic performance and mastery of coursework” (para. 1).

Further, Aldridge and Goldman (2007) suggested that students may be promoted to the next grade level in order to remain with their peers and students of the same age

group and to protect the self-esteem of the students by allowing them to advance with their peers. Proponents of social promotion argue that the promotions are done to protect the self-esteem of the student by allowing them to advance with their peers (Aldridge & Goldman, 2007). Socially promoting students who have not learned the material is setting them up for educational failure. If students are expected to be prepared to take rigorous courses in high school, students must first master the coursework in prior grades. (”Social Promotion”, n.d., para 1). In February 1998, President Clinton recommended that the U.S. Department of Education (1999) put an end to social promotion. In the past 15 years, 15 states have established specific standards for grade promotion, and others are planning such policies (Northwest Regional Educational Laboratory [NWREL], 2001).

The final recommendations of this researcher are: 1) this study was conducted at a suburban high school and should be conducted in a different setting, such as an urban or rural school to truly understand the impact of this study across regions and 2) to conduct a longitudinal study to follow the students over time who participated in the preparation course at the study high school, as compared students who did not participate in the ACT preparation course (e.g., college experience, work experience and personal life experiences). While a longitudinal study is time and resource intensive, it can offer the ability to examine the direction and magnitude of causal relationships that could not be accomplished through this mixed research study (Bauer, 2004).

Conclusion

As stated by President Obama (2009), “It’s time to make education America’s national mission” (as cited in Race to the Top Coalition, 2015, p. 1). Effectively preparing students for post-secondary assessments, such as ACT will help more African

American students increase college access. Early interventions, beginning with pre-school will address academic deficiencies that contribute to the achievement gap among minority students. Additionally, policy practices that hold school districts accountable to ensure they have remediation and ACT preparation programs focused on improving scores is important. A part of ACT preparation would include activities embedded in core content areas.

The results of this study suggested that African American students who plan to attend post-secondary schools should receive, or have access to, an appropriate intervention to prepare them to take the ACT. Further research is needed to investigate the effects of instruction or coaching on the ACT scores of African American students on a broader level, with a larger sample. The majority of students who can afford to take ACT or SAT preparation courses are disproportionately White. However, if an ACT preparation course is accessible to each and every student at no cost, school districts could begin to bridge the ACT score gap that existed for decades: thereby, ensuring that students no longer fall through the cracks.

Collectively this research provides educators with another perspective into the educational impacts that may affect the academic performance of African American students. In understanding the factors that cause these disparities, educators can begin to understand what contributes to the achievement gap and begin the process of bridging the gap between African American and White students.

References

A Nation at Risk. (1983, April). Archived Information. U.S. Department of Education. Retrieved from http://www2.ed.gov/pubs/NatAtRisk/risk.html

Achievement Gap. (2013). *Glossary of Education Reform*. Retrieved from http://edglossary.org/achievement-gap/

ACT, Inc. (2007a). *ACT's college readiness system: Meeting the challenge of a changing world*. Retrieved from http://www.act.org/research/policymakers/pdf/crs.pdf

ACT, Inc. (2007b). *Rigor at risk: Reaffirming quality in the high school curriculum. ERIC Digest*. Retrieved from http://www.act.org/research/policymakers/pdf/rigor_report.pdf

ACT, Inc. (2008). 2008 College Readiness Report News Release. Retrieved from http://www.act.org/newsroom/college-readiness-report/?year=archive&lang=english

ACT, Inc. (2010). The Condition of College and Career Readiness. Retrieved from http://www.act.org/research/policymakers/cccr10/pdf/ConditionofCollegeandCareerReadiness2010.pdf

ACT, Inc. (2012). ACT history: Timeline. Retrieved from http://www.act.org/about-us/our-story/

ACT, Inc. (2014). *New ACT report shows many African American students inadequately prepared for postsecondary education*. Retrieved from http://www.act.org/newsroom/new-act-report-shows-many-African american-students-inadequately-prepared-for-postsecondary-education/

ACT, Inc. (2015). ACT PLAN. Retrieved from http://www.act.org/products/k-12-act-plan/

Adams, C. (2013, August). Most students aren't ready for collect, ACT data show. The Hechinger Report. Retrieved from http://hechingerreport.org/most-students-arent-ready-for-college-act-data-show/

Adelman, C. (2006). *The toolbox revised: Paths to degree completion from high school through college.* Washington, DC: U.S. Department of Education.

Aldridge, J. & Goldman, R. (2007). Prevalence of social promotion. In J. Aldridge & R. Goldman, *Current issues and trends in education* (2nd ed), p. 135- 137. New York, NY: Pearson Higher Education.

Allen, W. R. (1992). The color of success: African American college student outcomes at predominantly White and historically African American public colleges and universities. *Harvard Educational Review*, *62*(l), 26-44.

American Psychological Association. (n.d.). Socioeconomic status. Retrieved from http://apa.org/topics/socioeconomic-status/index.aspx

Anton, J. (1997). *Ghetto schooling: A political economy of urban education reform*. New York, NY: Teachers College Press.

Arensen, K. C. (2007). Study finds college-prep courses in high school leave many students lagging. *New York Times.* Retrieved from http://www.nytimes.com/2007/05/16/education/16report.html?

Ascher, C. (1994). School programs for African American students. *Equity and Choice, 8*(1), 25-29.

Baca Zinn, M. (1989). Family, race, and poverty in the eighties. *Signs: Journal of Women in Culture and Society, 14*(4), 856-874.

Banks, J. A., & Banks, C. A. M. (Eds.). (2004). Handbook of research on multicultural education (2nd ed.). San Francisco, CA: Jossey-Bass.

Bankston III, C. L., & Caldas, S. J. (1996). Family structure, schoolmates, and racial inequalities in school achievement. *Journal of Marriage and Family, 60*(3), 715-723.

Barnard, W.M. (2004). Parent involvement in elementary school and educational attainment. *Children and Youth Services Review, 26*(1), 39-62.

Bartolome, L. (1994). Beyond the methods fetish: Toward a humanizing pedagogy. *Harvard Educational Review, 64*(2), 173-194.

Bauer, K. W. (2004). Conducting longitudinal studies. *New Directions for Institutional Research, 2004*(121), 75–90.

Becker, B. J. (1990). Coaching for the scholastic aptitude test: Further synthesis and appraisal. *Review of Educational Research, 60*(3), 373-417.

Billingsley, A. (1968). *Black families in White America.* Englewood Cliffs, NJ; Prentice Hall.

Bourdieu, P. (1977) Cultural reproduction and social reproduction. In J. Karabel and A. H. Halsey (eds), *Power and ideology in education*, pp. 487-511. New York, NY: Oxford University Press.

Bowen, W. G., & Bok, D. (1998). *The shape of the river: Long-term consequences of considering race in college and university admissions*. Princeton, NJ: Princeton University Press.

Boykin, A. W. (1986). The triple quandary and the schooling of Afro-American children. In U. Neisser (Ed.), *The school achievement of minority children: New perspectives*, pp. 57-92. Hillsdale, NJ: Erlbaum.

Boykin, A. W., & Allen, B. A. (2003). Cultural integrity and schooling outcomes of African American school children from low-income backgrounds. In P. Pufall & R. Undsworth (Eds.), *Childhood revisited*, 104-120. New Brunswick, NJ: Rutgers University Press.

Bronstein, P., Ginsburg, G.S., & Herrera, I.S. (2005). Parental predictors of motivational orientation in early adolescence: A longitudinal study. *Journal of Youth and Adolescence*, *34*(6), 559-575.

Brown v. Board of Education, 347 U.S. 483 (1954). Retrieved from http://caselaw. findlaw.com/us-supreme- court/347/483.html

Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Chicago, IL: Rand McNally.

Child Trends Data Bank. (2014). *Reading proficiency: Indicators of children and youth.* Retrieved from http://www.childtrends.org/wp-content/uploads/2013/01/29_ Reading_Proficiency.pdf

Children's Defense Fund. (2014). *The state of America's children*. Retrieved from http://www.childrensdefense.org/library/state-of-americas-children/2014-soac.pdf

Cokley, K. O. (2001). Gender differences among African American students in the impact of racial identity on academic psychosocial development. *Journal of College Student Development*, *42*(5), 480-487.

Comer, J. P., & Haynes, S. M. (1991). Parental involvement in schools: An ecological approach. *Elementary School Journal, 91*(3), 271-277.

The Condition of College Readiness. (2009). Retrieved from http://www.act.org/research/policymakers/pdf/TheConditionofCollegeReadiness.pdf

The Condition of College and Career Readiness. (2010). Retrieved from www.act.org/research/.../pdf/ACTScoresOverTimebyRaceEthnicity.pdf

The Condition of College Readiness. (2011). Retrieved from http://www.act.org/research/policymakers/cccr10/pdf/ConditionofCollegeandCareeerReadiness2010.pdf

The Condition of College Readiness. (2012). Retrieved from www.act.org/research-policy/college-career-readiness-report-2012/

The Condition of College Readiness. (2013). Retrieved from www.act.org/research/policymakers/cccr13/

Creswell, J. W. (2004). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Columbus, OH: Merrill Prentice Hall.

Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 209 –240). Thousand Oaks, CA: Sage.

D'Amico, J. S. (2011). Teaching in linguistically diverse classrooms. In C. Bennett, *Comprehensive multicultural education: Theory and practice* (7th ed.). Boston: Allyn Bacon.

Davis, C., & Rosser, S. V. (1996). Program and curricular interventions. In *The Equity Equation* (pp. 232-264). San Francisco, CA: Jossey-Bass

Davis, J. E., & Jordan, W. J. (1995). The effects of school context, structure, and experiences on African American males in middle and high school. *Journal of Negro Education, 63*(3), 570-587.

Dillon, S. (2009). 'No child' law is not closing a racial gap. *New York Times.* Retrieved from http://www.nytimes.com/2009/04/29/education/29scores.html

Dixson, A. D., & Rosseau, C. K. (1996). *Critical race theory in education: All God's children got a song.* New York, NY: Taylor and Francis Group.

Donnelly, M. (1987). At risk students. *ERIC Digest* (Series No. 21). Retrieved from http://files.eric.ed.gov/fulltext/ED292172.pdf

DuFour, R., DuFour, R. B., & Eaker, R. (2008). *Revisiting professional learning communities at work: New insights for improving schools*. Bloomington, IN: Solution Tree.

Eitle, D. (2003). Public school segregation and juvenile violent crime arrest in metropolitan cities. *Sociological Quarterly, 51*(3), 436-459.

Ferguson, R. (1998). Can schools narrow the African American-White test score gap? In C. Jencks & M. Phillips. *The Black-White Test Score Gap* (pp. 318-374). Washington, DC: The Brookings Institute.

Fink, A. (1995). *How to conduct surveys: A step-by-step guide* (4th ed.). Thousand Oaks, CA: Sage Publications.

Fleming, J. (1984). *African Americans in college.* San Francisco, CA: Jossey-Bass.

Ford, D. Y. (1993). African American students' achievement orientation as a function of perceived family achievement orientation and demographic variables. *The Journal of Negro Education*, *62*(1), 7-66.

Fowler, F. J., Jr. (2002). Survey research methods (3rd ed.). *Applied Social Research Methods Series* (Vol. 1). Thousand Oaks, CA: Sage Publications.

Fraenkel, J. R., & Wallen, N. E. (2006). How to design and evaluate research in education with PowerWeb (6th ed.). New York, NY: McGraw-Hill.

Frankenberg, R. (1997). Introduction. In: R. Frankenberg (Ed.), *Displacing Whiteness: Essays in Social and Cultural Criticism*, Durham: Duke University Press.

Gandara, P., & Maxwell-Jolly, J. (1999). *Priming the pump: Strategies for increasing the achievement of underrepresented minority undergraduates*. New York, NY: National Task Force on Minority High Achievement/College Board.

Garibaldi, A. M. (1992). Educating and motivating African American males to succeed. *Journal of Negro Education*, *61*(1), 4-11.

Gay, G. (2000). *Culturally responsive teaching.* New York, NY: Teachers College Press.

Gewertz, C. (2009). ACT Scores show most students aren't ready for college. Retrieved from http://www.edweek.org/ew/articles/2009/08/19/01act.h29.html?tkn=TUNFgVKzSlfb2D8TAY7mGrVfWiWTAPf9F61E

Gilliam, W. S. (2005). *Pre-kindergarteners left behind: Expulsion rates in state pre-kindergarten programs*. Retrieved from http://www.fcd-us.org/usrdoc/Expulsion Complete Report.pdf

Grabianowski, E. (2010) How the ACT Works. Retrieved from http://money.howstuffworks.com/personal-finance/college-planning/act1.htm

Grant, C. A. (1989, June). Urban teachers: Their new colleagues and curriculum. Phi Delta Kappan, 70(10), pp.764–770.

Green, T. F. (1964). Teaching, acting, and behaving. *Harvard Educational Review, 34*(4), 507-509.

Greene, J. C., & Caracelli, V. J. (1997). Defining and describing the paradigm issue in mixed-method evaluation. In J. C. Greene & V. J. Caracelli (Eds.), *Advances in mixed-method evaluation: The challenges and benefits of integrating diverse paradigms* (pp. 5-17). San Francisco, CA: Jossey-Bass.

Greene, J. P., & Forster, G. (2003, September). Public high school graduation and college readiness rates in the United States. *Education Working Paper 3.* New York, NY: Manhattan Institute: Center for Civic Innovation

Gutman, L. M., & Midgley, C. (2000). The role of protective factors in supporting the academic achievement of poor African American students during the middle school transition. *Journal of Youth and Adolescence, 29*(2), 223-249.

Hacker, A. (1995). *Two nations: African American and white, separate, hostile, unequal*. New York, NY: Ballantine.

Hargreaves, D. (2007). The curse of stereotype threat on African American students. Retrieved from http://www/macalester.edu/educationreform/publicintellectual essay/newpies/Stereotype_Threat.pdf

Hiss, W. C., & Franks, V. W. (2014). *Defining promise: Optional standardized testing policies in American college and university admissions*. Retrieved from http:// www.nacacnet.org/research/research-data/nacac-research/Documents/Defining Promise.pdf

Horn, L. J., & Carroll, C.D. (1997). *Confronting the odds: Students at risk and the pipeline to higher education*. Retrieved from http://nces.ed.gov/pubs98/98094.pdf

Hubbard, L. (2005). The role of gender in academic achievement. *Journal of Qualitative Studies in Education, 18*(5), 605-623.

Iarossi, G. (2006). *The power of survey design: A user's guide for managing surveys, interpreting results, and influencing respondents*. Washington, DC: The World Bank.

Jackson, T. (2009). *Addressing the achievement gap for African American students in Tacoma Public Schools*. Retrieved from http://www.tacoma.k12.wa.us/information/departments/assessment/AchievementGapDocuments/AddressingtheAchievementGapReport.pdf

Jencks, C., & Phillips, M. (1998). *The Black-White Test Score Gap*. Washington, DC: The Brooking Institution.

Johnson, R.B., Onwuegbuzie, A.J, & Turner, L.A. (2003). Toward a definition of mixed methods tesearch. *Journal of Mixed Methods Research, 1*(2), 112-133. doi: 10.1177/1558689806298224

Johnston R., & Viadero D. (2000) Unmet promise: Raising minority achievement. *Education Week*. Retrieved from http://www.edweek.org/ew/articles/2000/03/15/27gapintro.h19.html

Kretovics, J., & Nussel, E. ((1994). *Transforming urban education*. Boston, MA: Allyn & Bacon.

Kritsonis, W.A., & Nickerson, G.T. (2006). An analysis of the factors that impact academic achievement among Asian American, African American, and Hispanic

students. *National Journal for Publishing and Mentoring Doctoral Student Research, 3*(1), 1-4.

Ladson-Billings, G. (1992). Reading between the lines and beyond the pages: A culturally relevant approach to literacy teaching. *Theory Into Practice, 31*(4), 312-320.

Ladson-Billings, G. (1994). *The dreamkeepers: Successful teaching for African American students*. San Francisco, CA: Jossey-Bass.

Ladson-Billings, G. (2006). From the achievement gap to the education debt: understanding achievement in U.S. schools. *Educational Researcher, 35*(7) 3-12. doi: 10.3102/0013189X035007003

Ladson-Billings, G., & Tate, W. F. (1995). Toward a critical race theory of education. *Teachers College Record, 97*(1), 47-68.

Lauderdale, V. B. (1989). *The effects of using microcomputers and Krell software as a means of preparation for the American College Test.* (Doctoral dissertation, Auburn University 1989). *Dissertation Abstracts International*, *50*(08), Section A, 24-47.

Lee, C. (1991). Empowering young African American males. *ERIC Digest*. Retrieved from http://www.ericdigests.org/1992-4/black.htm

Lee, V. E., & Burkham, D.T. (2002). *Inequality at the starting gate: Social background differences in achievement as children begin school*. Washington, DC: Economic Policy Institute.

Lippman, L., Burn, S., & McArthur, E. (1996). Urban Schools: The challenge of location and poverty. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Locke, L. F., Spirduso, W. W., & Silverman, S. J. (2007). Proposals that work: A guide for planning dissertations and grant proposals (5th ed.). Thousand Oaks, CA: Sage.

Marshall, E., & Rossman, G. B. (1989). *Designing qualitative research*. Newbury Park, CA: Sage Publications, Inc.

McIntyre, E., Roseberry, A., & Gonzalez, N. (Eds.). (2001). *Classroom diversity: Connecting curriculum to students' lives*. Portsmouth, NH: Heinemann.

McWhorter, J. (2000). *Losing the race: Self-sabotage in African American America*. New York, NY, Free Press.

Mezirow, J. (1990). How critical reflection triggers transformative learning. In J. Mezirow & Associates (Eds.), *Critical reflection in adulthood: A guide to transformative and emancipatory learning* (pp. 1-20). San Francisco, CA: Jossey-Bass Publishers.

Mickelson, R. A., & Greene, A. D. (2006). Connecting pieces of the puzzle: Gender differences in African American middle school students' achievement. *Journal of Negro Education, 75*(1), 34-48.

Miller, D. C., & Salkind, N. J. (2002). *Handbook of research design and solid measurement* (6th ed.). Thousand Oaks, CA: Sage Publications.

Missouri Department of Elementary and Secondary Education. (2009). *Missouri Comprehensive Data System.* Retrieved from http://mcds.dese.mo.gov/quickfacts/

School Finance Data and Reports/ Free and Reduced LunchPercentage by Building/frl-2009.xls

Missouri Department of Elementary and Secondary Education. (2010). *Missouri Comprehensive Data System.* Study High School ACT Report by School District. Retrieved from http://mcds.dese.mo.gov/quickfacts/ SitePages/DistrictInfo.aspx?ID=__bk810003009300630013000300630 0

Missouri Department of Elementary and Secondary Education (2011). *Missouri Comprehensive Data System.* District demographic data. Years: 1991-2015. Includes enrollment information by race. Retrieved from http://mcds.dese.mo.gov/quickfacts/Pages/District-and-School-Information.aspx

Moynihan, D. P. (1965). *The Negro family: The case of national action*. Washington, DC: U.S. Department of Labor, Office of Planning and Research.

Moss, G. (1995). *The effects of coaching on the ACT scores of African American students*. *ERIC Digest*. Retrieved from http://files.eric.ed.gov/fulltext/ED399265.pdf

Moss, G., Chippendale, E. K., Mershon, C.W., Carney, T. (2011). Effects of a coaching class on the ACT scores of students at a large Midwestern high school. *ERIC Digest*. Retrieved from http://files.eric.ed.gov/fulltext/EJ992994.pdf.

National African American Caucus of State Legislators. (2001). Closing the achievement gap and beyond 2011: Follow-up report - one decade later. Retrieved from https://www.google.com/search?q=National+African+American+Caucus+of+State+Legislators+(2001&oq=National+African+American+Caucus+of+State+Legisl

ators+(2001&aqs=chrome..69i57.866j0j4&sourceid=chrome&es_sm=122&ie=UTF-8#q=National+African+American+Caucus+of+State+Legislators+2001

National Assessment of Education Progress. (2013). *Mathematics and reading assessments*. U.S. Department of Education. Retrieved from http://www.nationsreportcard.gov/reading_math_g12_2013/#/

National Association for College Admissions Counseling. (2008). *Use of standardized admission tests in undergraduate admission.* Retrieved from http://www.nacacnet.org/research/PublicationsResources/Marketplace/Documents/TestingComission_FinalReport.pdf

National Association for College Admissions Counseling. (2014). *Report finds virtually no difference in graduation rates for students who submit or do not submit standardized test scores to colleges and universities.* Retrieved from http://www.nacacnet.org/media-center/PressRoom/2014/Pages/BillHiss.aspx

National Center for Education Research. (2009). *Effects of preschool curriculum programs on school readiness*. Report from the Preschool Curriculum Evaluation Research Initiative. (Report No. NCER 20082009REV). Retrieved from http://ies.ed.gov/pubsearch/pubsinfo.asp?pub id=NCER20082009rev

National Center for Education Statistics. (n.d.). *Welcome to NCES*. U.S. Department of Education. Retrieved from http://nces.ed.gov/

National Education Association. (2009). Priority Schools Campaign. Retrieved from http://www.nea.org/home/PrioritySchools.htm

Negga, F., Applewhite, S., &Livingston, I. (2007). African American college students and stress: School racial composition, self-esteem and social support. *College Student Journal*, *41*(4), 823-883.

No Child Left Behind Act (2001). *Title 1, Sec. 1001, (3)*. Retrieved from http://www2.ed.gov/nclb/landing.jhtm

Northwest Regional Educational Laboratory. (2001). *When students don't succeed: Shedding light on grade retention*. Portland, OR: Northwest Regional Educational Laboratory.

Ogbu, J. U. (1995). Understanding cultural diversity and learning. In J. A. Banks & C. A. M. Banks (Eds.), *Handbook of research on multicultural education* (pp. 801-820). New York, NY: Macmillan.

Ogbu, J. U. (2003). African-American students in an affluent suburb: A study of academic disengagement. *Journal of African American Studies*, *36*(3), 459-465

Onwuegbuzie, A. J., & Leech, N. L. (2004, February). Enhancing the interpretation of significant findings: The role of mixed methods research. Paper presented at the annual meeting. Clearwater, FL: Eastern Educational Research Association.

Pewewardy, C. (1993). Culturally responsive pedagogy in action: An American Indian magnet school. In E. Hollins, J. King & W. Hayman (Eds.). *Teaching diverse populations: Formulating a knowledge base* (pp. 77-92). Albany, NY: State University of New York Press.

Polite, V. C., & Davis, J. E. (1999). *African American males in school and society: Practices and policies for effective education*. New York, NY: Teachers College Press.

Princeton Review. (2010). What's a good SAT or ACT score? Retrieved from http://www.princetonreview.com/college/good-sat-score-act-score.aspx

The Principal's Partnership. (2002). *Research brief.* Retrieved from http://oemanagement.com/data/_files/ACTprep.pdf

Proctor, B. D., & Dalaker, J. (2002). *Poverty in the United States: 2001*. U.S. Census Bureau (#P60-219). Retrieved from http://www.census.gov/prod/2002pubs/p60-219.pdf

Putka, G. A. (1992, June 29). Cheating epidemic at a top high school teaches sad lessons. *Wall Street Journal,* pp. Al, A4-A5.

Race to the Top Coalition. (2015). About the Federal Race to the Top Program. Retrieved from http://www.tbf.org/tbf/54/rttt/race-to-the-top

Rainey, A. (1996). Effect of American College Testing (ACT) Coaching Courses on American College Testing Score. *ERIC Digest*. Retrieved from http://files.eric.ed.gov/fulltext/ED397069.pdf

Reed, J. (1997). What do I do here? In D. Taylor (Ed.), *Many families, many literacies: An international declaration of principles* (pp. 185–186). Portsmouth, NH: Heinemann Trade.

Rhodes, L. (1992). Focusing attention on the individual in identification of gifted African American students. *Rower Review*, *14*(3), 108-110.

Ribich, T. (1968). *Education and poverty.* Washington, DC*:* The Brookings Institution.

Rodriguez, R.G., & Villarreal, A. (2002). Improving educational impact through community and family engagement. Retrieved from http://www.idra.org/IDRA_Newsletter/November__December_2002_Self_Renewing_Schools_Youth_Leade

rship/Improving_Educational_Impact_through_Community_and_Family_Engagement/

Seaton, T. (1992). The effectiveness of test preparation on performance of standardized achievement tests. *ERIC Digest*. Retrieved from http://files.eric.ed.gov/fulltext/ED356233.pdf

Scholastic Assessment Test. *Wikipedia.* Retrieved from http://en.wikipedia.org/wiki/SAT

Schott Foundation for Public Education. (2005). Public education and Black male students: A state report card. Retrieved from http://files.eric.ed.gov/fulltext/ED356233.pdf

Short, K., Harste, J., & Burke, C. (1996). *Creating classrooms for authors and inquirers* (2nd ed.). Portsmouth, NH, Heinemann.

Simmons-Mackie, N., & Damico, J. S. (2001). Intervention outcomes: A clinical application of qualitative methods. *Topics in Language Disorders, 22*(1), 21–36.

Slavin, R.E., & Madden, N.A. (2006). Reducing the gap: Success for all and the achievement of African American students. *The Journal of Negro Education, 73*(3), 389-400.

Smith, D. D., & Luckasson, R. (1992). *Introduction to special education.* Needham Heights, MA: Allyn and Bacon.

Smith, R. A. (2005). Saving African American boys. *The School Administrator, 2005*(January), 16-21.

Social promotion (n.d.). *Wikipedia*. Retrieved from http://en.wikipedia.org/wiki/Social_promotion

Solorzano, D. G. (1997). Images and words the wound: Critical race theory, racial stereotyping, and teacher education. *Teacher Education Quarterly, 24*, 5-19.

Somers, C. L., Owens, D., & Piliawsky, M. (2008). Individual and social factors related to urban African American adolescents' school performance. *The High School Journal, 91*(3), 1-11. doi:10.1353/hsj.2008.0004

Steele, C. M. (1997). A threat in the air: How stereotypes shape the intellectual identities and performance of women and African Americans. *American Psychologist*, *52*(6), 613-620.

Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology, 69*(5), 797-811.

Stewart, M.A. (1992). The educational status of black males in America: The agony and the ecstasy. *Negro Educational Review 43*(1-2), 28-30.

Thernstrom, A., & Thernstrom, S. (2003). *No excuses: Closing the achievement gap in learning*. New York, NY: Simon & Schuster.

Trochim, W. M. K. (2006). *Social research methods knowledge base*. Retrieved from http://www.socialresearchmethods.net/kb/quasnegd.php

Trotman, M.F. (2001). Involving the African American parent: Recommendations to increase the level of parent involvement within African American families. *Journal of Negro Education, 70(4).*

U.S. Department of Education. (1994). *The condition of education.* Washington, DC: U.S. Government Printing Office

U.S. Department of Education. (2008). New race and ethnicity guidelines for the collection of federal education data. Retrieved from http://www2.ed.gov/policy/rschstat/guid/raceethnicity/index.html?exp=6

U.S. Department of Education. (2009). *The condition of education 2009* (NCES 2009-081). Washington, DC: U.S. Government Printing Office.

U.S. Department of Education. (2011). Early childhood longitudinal program. Retrieved from http://nces.ed.gov/ecls/kindergarten2011.asp

U.S. Department of Education Office of Civil Rights. (2014a). *Issue Brief No. 1 (March 2014).* Civil Rights Data Collection: Data Snapshot School Discipline, pp. 1-23. Retrieved from http:// www2.ed.gov/about/offices/list/ocr/docs/crdc-discipline-snapshot.pdf.

U.S. Department of Education Office of Civil Rights. (2014b). *Issue Brief No. 2 (March 2014).* Civil Rights Data Collection: Data Snapshot Early Childhood, pp. 1-16. Retrieved from http://ocrdata.ed.gov/Downloads/CRDC-Early-Childhood-Education-Snapshot.pdf.

U.S. Department of Education Office of Civil Rights. (2014c). *Issue Brief No. 3 (March 2014).* Civil Rights Data Collection. Data Snapshot: College and Career Readiness, pp. 1-24. Retrieved from http://www2.ed.gov/about/offices/list/ocr/docs/crdc-college-and-career-readiness-snapshot.pdf.

U.S. Department of Education Office of Civil Rights. (2014d). *Issue Brief No. 4 (March 2014).* Civil Rights Data Collection: Data Snapshot Teacher Equity, pp. 1-16. Retrieved from http://www2.ed.gov/about/offices/list/ocr/docs/crdc-teacher-equity-snapshot.pdf.

Utsey, S. O., Ponterotto, J. G., Reynolds, A. L., & Cancelli, A. A. (2000). Racial discrimination, coping, life satisfaction, and self-esteem Among African Americans. *Journal of Counseling Development 78*(1), 72-80

Uzzell, L., Lewis, S., Simon, C.P., Guzman, A., & Casserly, M. (2012). *Condition of College Readiness Report.* Retrieved from http://www.cgcs.org/cms/lib/DC 00001581/Centricity/Domain/4/ACT%20FINAL.pdf

Webguru. (n.d.). Reflective journaling. Retrieved from http://www.webguru.neu.edu/ undergraduate-research/structuring-ur-experience/reflective-journaling

Wicomb, Z. (1998). Five Afrikaner texts and the rehabilitation of whiteness. *Social identities*, *4*(3), 363-383.

Williams, B. (Ed). (1996). *Closing the achievement gap: A vision for changing beliefs and practices*. Alexandria, VA: Association for Supervision and Curriculum Development

Williams, R. L. (1972, September). The BITCH-100: A culture-specific test. Paper presented at the annual conference. Honolulu, HI: American Psychological Association Annual Convention. Retrieved from http://files.eric.ed.gov/fulltext/ ED070799.pdf

Willis, J. G. (1989). Learning styles of African American children: Review of the literature and interventions. *The Journal of Black Psychology, 16*(1), 47-65.

Wixom, M. A. (2015). Closing the achievement gap: Four states' efforts. Retrieved from http://www.ecs.org/clearinghouse/01/17/10/11710.pdf

Wood, D., Kaplan, R., & McLoyd, V. C. (2006). Gender differences in the educational expectations of urban, low-income African American youth: The role of parents and the school. *Journal of Youth and Adolescence, 36*(4), 417-427.

Wood, P. (2003). *Diversity*. Jackson, TN: Encounter Books.

Wright, D. J. (1987). *Responding to the needs of today's minority students*. San Francisco, CA: Jossey-Bass Inc.

Zelman, S., Daniels, H., & Hyde, A. A. (1993). *Best practices: New standards for teaching and learning in America's schools.* Portsmouth, NH: Heineman.

Zill, N., & West, J. (2001). *Entering kindergarten: A portrait of American children when they begin school.* National Center for Education Statistics, The Condition of Education. Washington, DC: U.S. Government Printing Office.

Zwick, R. (2007). College admissions in twenty-first century America: The role of grades, tests and games of chance. *Harvard Educational Review, 77*(4), 419-219.

Appendix A

Participant Invitation Letter

Dear Parent:

I am doing research on the impact of taking an ACT Preparation Course. The purpose of my research is to investigate whether there is a possible impact on students who take an ACT Preparation Course. I am respectfully asking your permission to let your child participate in this research.

As you know, your child has been selected to participate in a high quality ACT Preparation Course that will be held during Academic Lab beginning this month. The course consists of fourteen forty-five minute sessions that are taught by an experienced ACT instructor. This program is sponsored by the African American Student Association and the College and Career Office and is targeted to juniors or seniors who have not taken the school-sponsored prep course and who scored below the Ladue ACT average of 25 on the Pre-Act or the ACT test.

There will be about 14 sessions your child will participate in. Next week at the beginning of the session I would like to meet with all the students and explain the purpose of this research and also ask for their permission to participate, as well what will be required.

Your child will be asked to complete a survey and will be given a journal. The journals will be anonymous – they will not have to include any identifying information (such as name, grade, etc.) However, at the conclusion of their reflective journaling I would ask they include the score they received on the ACT Test.

As a business and marketing teacher here at Ladue, I have had the pleasure of teaching many of the students who will be taking the ACT Preparation Course. Any personal information about you or your child will be **strictly confidential**. However, the results from this research may be presented at a professional meeting and/or published in my dissertation, but your child's name and other identifying information will not be revealed.

You are under no obligation for your child to participate in this project. If you are willing to allow your child to participate, and your child wants to participate, please sign the attached form and return this form with your child. If you have any questions, please contact me.

Thank you for your consideration.

Appendix B

Assent for Participation Form

Lindenwood University
School of Education
209 S. Kingshighway
St. Charles, Missouri 63301

Assent for Participation in Research Activities

"The Impact of Taking an ACT Preparation Course as an Intervention for African American Students"

Principal Investigator: Theresa L. Badgett, Ed.S.
Telephone: 314-993-6447 E-mail: tlb998@lionmail.lindenwood.edu

Participant _____ Contact info _____

1. You are invited to participate in a research study conducted by Theresa L. Badgett, Ed.S. and A.G. Streb, Ed.D. The purpose of this research is to determine the impact and/or score improvement on students who take the ACT Preparation Course at Ladue Horton Watkins High School.

2. Your participation will involve:

    1) Taking an ACT Prep Participation Survey

    2) Reflective Journaling: Each week, beginning with the first ACT Prep Class you will be given a list of questions/statements for you to think about and write your thoughts in a journal until after you receive your ACT Test Score.

    3) The purpose of reflective journaling can help you with self-discovery, personal and academic growth. Journaling involves the regular practice of recording activities and/or situations on paper or electronically with the goal of reflecting on your thoughts experiences about the ACT Preparation Course, the ACT Test and anything in general you would like to include.

    4) Journaling is useful in providing insight into self-awareness - what you do (behaviors), why you do it (values, assumptions, aspirations) how you feel (emotions), and how you think. Journaling can help you turn every incident into a new potential learning experience.

The amount of time involved in your participation will be weekly, beginning with your first ACT Prep Class and the week after you receive your ACT Test Scores.

Approximately 75 students will be involved in this research. Each student taking the ACT Preparation Course is asked to participate.

3. There are no anticipated risks associated with this research

4. There are no direct benefits for you participating in this study. However, your participation will contribute to the knowledge about the success of taking an ACT Preparation Course and may help society by showing the benefits of taking an ACT Preparation Course.

5. Your participation is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

6. We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication or presentation that may result from this study and the information collected will remain in the possession of the investigator in a safe location.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Theresa L. Badgett, Ed.S. (314-853-6988) or their Faculty Advisor, A.G. Streb. 636-949-2000. You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Jann Weitzel, Vice President for Academic Affairs at 636-949-4846.

I have read this consent form and have been given the opportunity to ask questions. I will also be given a copy of this consent form for my records. I consent to my participation in the research described above.

Participant's Signature	Date	Participant's Printed Name
		Theresa L. Badgett
Signature of Principal Investigator	Date	Investigator Printed Name

Appendix C

Parent Contract Letter

Dear Parent:

Your child has been selected to participate in a high quality ACT Preparation Course that will be held during Academic Lab beginning _____. The course consists of fourteen forty-five minute sessions that are taught by an experienced ACT instructor. This program is sponsored by the Ladue African American Student Association and the College and Career Office and is targeted to juniors or seniors who have not taken the school-sponsored prep course and who scored below the Ladue ACT average of 25 on the Pre-Act or the ACT test. There is NO cost to you, however, there are limited spaces available and priority will be given to seniors and to the first 25 returned contracts.

There are some requirements that you and your child must meet in order to participate.

They are the following:

1. Your child must register for and take the December ACT PREPARATION COURSEACT test.
   The cost is $32.00 with no writing exam and $47 with a writing component.
2. Students with an IEP must register for the ACT through the College Office. DO NOT REGISTER ON YOUR OWN!
3. The signed contract must be returned to the school.
4. You must provide proof of registration.
5. You must sign and return the enclosed contract. It requires the signatures of the student and a parent or guardian.
6. Your child must commit to attending ALL 14 sessions (exceptions made only for receiving academic help during Academic Lab with a teacher's verification).

The contract and must be returned to the school by - date:_____ by 2:30 p.m. to Room 130. These requirements will be strictly adhered to. If your information is not returned, another student will be invited in your place. If you have any questions, please call or e-mail me.

Appendix D

Pre-Test Questionnaire

What is your gender?

- Male
- Female

Grade Level

- 11th Grade
- 12th Grade

Overall High School Grade Average

- A- to A (3.50-4.00)
- B to A- (3.00-3.49)
- B-to B (2.50-2.99)
- C to B- (2.00-2.49)
- C-to C (1.50-1.99)
- D to C- (1.00-1.49)
- Below D (0.00-0.99)

1. Do you feel this ACT Preparation Course will prepare you to take the ACT Test?
    a. Yes
    b. No

2. Why?

    _____
    _____
    _____

3. Is this your first ACT Preparation Course?
    a. Yes
    b. No

4. If your answer is No:
    a. When did you take the course?_____
    b. Where did you take the course?_____

5. What are your expectations for this ACT Preparation Course?

    _____
    _____
    _____

6. What test areas of the ACT do you need help with?
    a. Math
    b. English
    c. Science
    d. Reading
    e. All subject areas

7. What score do you expect to get on the ACT Test?_____

8. If you have taken the ACT Test – what was your score?_____

9. Where you happy with your score?
    a. Yes
    b. No
    c. N/A

10. How many times have you taken the ACT Test?
    a. Have not taken it yet.
    b. 1-2
    c. 3-4
    d. 5 or more

11. Are you nervous about taking the ACT Test?
    a. Yes
    b. No

12. When you think about the ACT Test - what comes to mind?
    a. I need to study for it.
    b. I feel prepared because of the classes I've taken.
    c. I need to take a preparation course to help me achieve the score I want.
    d. I am confident I will get a good score.

Appendix E
Post-Test Survey

What is your gender?

- Male
- Female

Grade Level

- 11th Grade
- 12th Grade

Overall High School Grade Average

- A- to A (3.50-4.00)
- B to A- (3.00-3.49)
- B-to B (2.50-2.99)
- C to B- (2.00-2.49)
- C-to C (1.50-1.99)
- D to C- (1.00-1.49)
- Below D (0.00-0.99)

1. Did you feel this ACT Prep Course has prepared you to take the ACT Test?
   a. Yes
   b. No

2. Why?
   _____
   _____

3. Was this your first ACT Preparation Course?
   a. Yes
   b. No

4. What were your expectations for the ACT Preparation Course?
   _____
   _____

5. Where your expectations met?
   a. Yes
   b. No

   Explain:_____
   _____

6. What subject areas did you need help with before taking the ACT Preparation Course?

a. Math
b. English
c. Science
d. Reading
e. All subject areas

7. Did the ACT Preparation Course help you in these areas?
    a. Yes
    b. No

8. What score did you expect to get on the ACT Test before taking the ACT Preparation Course?_____

9. If you have taken the ACT Test – what was your score?_____

10. Where you happy with your score?
    a. Yes
    b. No
    c. N/A

11. How many times have you taken the ACT Test?
    a. Have not taken it yet.
    b. 1-2
    c. 3-4
    d. 5 or more

12. Were you nervous or anxious about taking the ACT Test?
    a. Yes
    b. No

13. If yes, did taking the ACT Preparation Course relieve your nervousness or anxiety?
    a. Yes
    b. No

14. After taking the ACT Preparation Course – what comes to mind?
    a. I still need to study for the ACT test.
    b. I feel more prepared because I took the ACT Preparation Course.
    c. I don't think the ACT Preparation Course helped me.

15. How you would rate your instructor?
    a. Excellent
    b. Good
    c. Fair
    d. Poor

Appendix F

Reflective Journal Questions

Your answers are required to be thoughtful and extended and are to be as different as you can make them from week to week.

Week 1

1. This week I learned.
2. What I have found difficult about what I have read/viewed/heard this week is.?
3. My writing and reading skills.....(reflect on them and your efforts, areas of strength and weakness providing specific examples).
4. What are your thoughts about this course?

Week 2

1. Do you feel taking this ACT Preparation Course is helping you become more confident about testing?
2. Is what you are currently reading/viewing or studying challenging you in any way? In what way?
3. What is puzzling you as you are taking this course?
4. What specific questions are being raised by what you are reading?
5. Can you make any connections between what you are reading/viewing and everyday life, any other subject you are studying or your own life?
6. Write down 3 questions you have for the instructor. Explain why you have asked those questions.
7. What are you learning about yourself from what you are reading/viewing/studying? (Your own values, attitudes and beliefs)

Week 3

1. Why do you feel this preparation course will help you get a good score?
2. What is puzzling you as you participate in this course?
3. What specific questions are being raised by what you are reading?

4. Can you make any connections between what you are reading/viewing and everyday life, any other subject you are studying or your own life?

5. Write down 3 questions you have for the instructor. Explain why you have asked those questions.

6. What are you learning about yourself from what you are reading/viewing/studying? (Your own values, attitudes and beliefs.

Week 4

1. What skills have you learned since you began this course?
2. What have you learned about yourself and your values over the last 5 weeks?
3. Do you feel any pressure because you are taking this course? Explain.
4. Share any experiences you have had over the last 5 weeks academically, socially or psychologically.
5. Do you feel you are laying down a foundation for your future by taking this course?
6. In the 4TH week of taking this course, is it what you expected? Why or Why not.

Week 5

1. Why do colleges and universities use the ACT for admission?
2. What advice would you give a friend who had not taken this class when he or she goes to take the ACT?
3. The writing portion of the ACT is new (starting in 2005). Some colleges require students to take it for admissions, and others do not. Do you think it should be required? Why or why not?
4. What colleges or universities are you looking at attending? What about those specific schools is attractive to you? What research have you done to look into their admission criteria, scholarships, available majors, etc.?

5. The ACT Test is only two weeks away – what are your thoughts about it?

Week 6

1. Do you feel you are more prepared to take the ACT Test that you were before you took this preparation course? Why?

2. What areas if any do you still feel you need help with before taking the ACT Test?

3. Would you recommend other students take this preparation course next semester? What would you tell them about this course?

4. Do you feel excited or nervous about taking the ACT Test? Explain your feelings.

5. What are your thoughts about journaling? Do you feel that it has been helpful to you in any way? Explain.

6. Do you think the ACT accurately reflects your academic abilities? Why or why not?

Appendix G

Final Questions After Taking ACT

Students were asked to answer the following questions after receiving their ACT scores and before turning in the completed journal to the College and Career Office of the study high school.

1. Did the ACT Preparation Course prepare you for what was on the actual ACT Test?
2. How did you feel when taking the test? Explain.
3. What were your thoughts after you took the ACT Test?
4. Would you recommend this course to your friends, what would you tell them?
5. Were there things on the ACT Test you still did not understand or you felt you needed more instruction on? Explain your answer.
6. Did you put any individual time on your own after class? How much?
7. How many questions do you think you got right on the ACT Test after taking this class?
8. What were the best & worst things about this class?

Appendix H

Student Reflective Journal Entries

The journal responses submitted by students are listed by each week and identified numerically by the student journaling. It should be noted that some students did not answer all of the questions for each week.

Week 1
Student 1 journal entry

1. This week I learned that ACT has many strategies to make me underperform on the test by throwing many tricks on my way. I also learned how to avoid their tricks by creating my own strategies to make sure I do my best. One of them was to skip questions that are long and hard on the math section and find easy ones that I can get right.

2. What I found difficult was using the strategies the instructor told us about and to apply them to actual ACT Practice tests. Found it hard to break my pattern of solving problems from beginning to end.

3. My writing and reading skills are very low and I'm a slow reader which I think will affect how well I do on the ACT. However, I am working to improve them.

4. I think that this course will help me do well on the ACT because I will learn what the ACT test writers expect me to do and I will use my own strategies to recognize their tricks.

Student 2 journal entry

1. This week I learned more about the math section. I learned that on the last 15 questions of this section the answer is never "C" because the ACT test writers know that the most commonly put guess answer is "C". I also learned that the writers try and put every single trick they can to make you make stupid mistakes.

2. What I haven't found anything difficult about the course this week besides that I think I might fall behind on the homework part.

3. The weakness in my writing skills would be sentence structure and using more advanced vocabulary.

4. I think that this course can help me improve my test score of a 16 to at least a 19 or 20. Like it said before I think that I might fall behind on the homework.

Student 3 journal entry

1. This week I learned about the English and reading section.

2. What I found difficult was how to analyze the reading questions.

3. My writing and reading skills are not the best – they could be improved.

4. So far, it seems like a good course and it could help me.

Student 4 journal entry

1. This week I learned a different and easy way to on how to take the ACT test.

2. From what I read the one think I found difficult is the vocabulary in the book. The other thing I found difficult is watching my football team lose badly to another team.

3. So far, I think this course is really helpful for my ACT preparation program and not only that it is also helpful to my other classes.

Student 5 journal entry

1. This was the first week of the class and I already feel that I've learned some valuable information for the ACT.

2. Nothing seems difficult yet. In fact, I seem less overwhelmed about the test.

3. My reading and writing skills shouldn't be a problem for me as I consider both of these my strengths.

4. I think so far, this course will be very beneficial in helping me achieve a good score and learn some helpful strategies that I can apply to other fields as well.

Student 6 journal entry

1. The first week the instructor taught us about how the ACT people try to trick us. He taught us the tricks to getting through the ACT a little faster.

2. This week everything was a little clear, no problems, nothing difficult at all.

3. My reading skills are pretty good, but the writing needs a little work – writing paragraphs is a challenge at times – full essays are a challenge.

4. This course is very helpful and is awesome because shortcuts and tips are key for the ACT.

Student 7 journal entry

1. This week I learned that it helps to go to the easy problems in the mathematics section on the ACT before all the other problems. That way you won't rush yourself through the big problems. When I tried it I realized that I had a lot more tie to finish some of the other problems even though I did not finish it all. I accomplished a lot. Also I've tried it for other tests – that method is very handy and I really appreciate it. I wonder why it is set up for failure.

2. This course will better equip me for my first time taking the ACT test.

Student 8 journal entry

1. This week we focused on the science section of the ACT test. I learned that most of the reading they put in there is not necessary to read in order to answer the questions. They put the introduction on the test to slow you down and make you more confused.

2. I found the questions difficult to understand. I don't feel like I understand what they are asking me. I know they are trying to trick me and I find that unfair. I am a slow reader but I am getting the test on tape so it will be read to me. I also get extended time so I should be able to finish the test.

3. One of my weaknesses is writing, I don't always know how to put in words what I am saying. I think this course is very helpful – I am enjoying it a lot.

Student 9 journal entry

1. This course helped to learn how to eliminate the wrong answer by using the process of elimination and that the ACT had hidden tricks in the questions to confuse you.

2. On average my weaknesses are my study skills.

3. So far, I am finding this class very helpful and I believe it will help me score better the next time I take the test.

Student 10 journal entry

1. This week I learned to stay calm and read the questions very carefully.

2. I found the science section very difficult because I am not very good at reading graphs.

3. My reading and writing skills help me to think clearly and not rush through questions.

4. I think the course is ok.

Week 2
Student 1 journal entry

1. I think this course is helping me understand the ACT more. I have learned that the ACT writers know what our weaknesses are and how they create ways to make me underperform. I have learned that slowing down and doing questions that I know how to do will help me improve my ACT score.

2. What the instructor is teaching us is very challenging to me because my test taking habits are a lot different than what I should be using and I find it very hard to break those. I feel like he challenged me to do better and to attempt his strategies which are very effective.

3. What I find puzzling is how to solve problems that seem easy but are very hard – mostly the last section of the mathematics test.

4. I feel like the mathematics test has so many tricks that it is almost impossible for me to improve my score on the practice test. And I want to know if there are more efficient strategies that I can use.

5. I've learned from this class that I shouldn't waste my time on questions that are too hard for me and to focus on questions that I might have a chance of answering correctly.

6. I should look at question length or read the questions and pick quick and easy questions on the math section. What concepts does the math section focus on? How many points maximum would my math score improve if I use your strategies. I asked those questions because I feel like I have major problems with the math section because I am little slow and most concepts on the ACT are things I have forgotten. I would like for the instructor to help me identify which ones I need to work on the most.

7. I have learned from this class that the ACT is hard and I need to practice every day to get a better score. I have also learned that I normally don't study for tests, but I am willing to work very hard to get a good score that will allow me to attend the college that I want with a scholarship.

Student 2 journal entry

1. The ACT Preparation Course is helping me to be more confident about testing because the first time I took the ACT I used my notes from the ACT class in 2008

and it helped me on the test. I feel that I will learn more and will be more aware of the tricks in the test.

2. This is challenging me because I don't normally have this amount of math and science practice as I would outside of class.

3. Something that is puzzling me as I am taking this course is why we are split up into two sessions and come very Academic Lab instead of every other.

4. I don't have any specific questions.

5. ACT prep class has helped me realize that it's time to start getting serious and that I cannot just wing it and that I really have to take this seriously if I want to get into a decent college..

6. Why do we not start preparing for the ACT at the beginning of high school instead of our junior year? Could we possibly take time in one class to just do one section of the test – timed to see what our score would be?

7. I've learned that I wish that I would have taken the ACT more seriously when the school gave it to use for free. I also learned that I should have gotten better grades freshman year and paid more attention to grasping the information.

Student 3 journal entry

1. Yes, I feel like the ACT course is helping me to feel more confident about not just taking the test but test taking strategies as well.

2. Yes, because I'm not used to practicing reading and writing skills like this.

3. At this point, nothing is puzzling me.

4. How to read the questions…which questions to answer first… and how to approach the questions in general.

5. Not really, but the information is proving to be valuable in helping me understand some of my classes better – the test taking strategies work in other classes too!

6. Any questions I might have had have been answered in class.

7. What I am learning about myself is that if I really try to slow down to think I do must better in all my classes.

Student 4 journal entry

1. Yes, definitely I think this class will help me to take the ACT test and get a better score.

2. No, not really – there are no challenges in my way of studying the words on the test questions.

3. What I am learning is how to study for the big test.

Student 5 journal entry

1. The ACT Preparation Course is definitely making me more confident about testing, I don't think I will be very nervous by the time the test date comes.

2. We studied science this week, and I need to work on reading and analyzing charts and graphs.

3. Nothing is puzzling so far, it is actually very informative.

4. I have no questions that have not been answered.

5. I have applied what I've learned so far to a few tests I've taken recently in my classes. The strategies really work.

6. What difference does taking the ACT with writing make? If there was just one trick to remember what would it be?

7. I have learned that I am determined to learn whatever I can from this course.

Student 6 journal entry

1. The course is helping me with confidence but not as much as I thought it would.

2. Math is a big challenge – I barely remember any 7^{th} or 8^{th} grade math (Algebra), I'm currently in statistics so my math is a little rusty, stats class is mostly words – very little equations, formulas and numbers.

3. The comma rules the instructor taught us is very confusing – got to focus on. The government section in reading is a little hard – people think it is common sense but it isn't.

4. Heck no, no connections at all.

5. Don't have any questions for the instructor right now.

6. I am horrible at math, science needs work and reading needs work too!

Student 7 journal entry

1. Yes, every day I came to the class I learn something new. The strategies I learn are very helpful and also easy to remember. I think by the time the testing date comes I will be real good at the ACT test.

2. To me, it is more surprising than challenging, it's just the matter of adapting to it.

3. To be honest, everything so far is pretty much easy, just new.

4. My questions will when I reach a point when I am confused or what I will do during a strategy?

5. Yes, I am pretty sure that these skills will come in handy for other tests.

6. I don't really have any questions that haven't been answered. It's a lot easier than I thought.

Student 8 journal entry

1. I am definitely feeling more comfortable about the ACT test. Doing the questions makes me less scare because I know I can do them and I know the correct answers.

2. I think the English and reading sections are hard because I don't find it interesting so I have trouble remembering what I read.

3. Why does ACT try to trick you so much? I feel like they don't want you to do good. How can I do better remembering the English passages?

4. It isn't easy to read things you don't enjoy.

5. I have realized I need to keep myself focused on all the questions even when I am almost done I need to still think about my answers.

Student 9 journal entry

1. Yes, after I read a section and review the answers, my confidence builds dramatically.

2. Not really.

3. The thing that puzzles me the most is the reading section – it's very long.

4. Do I need to read the whole story to answer the questions?

5. I have a lot to learn about reading faster and retaining the information.

Student 10 journal entry

1. Yes, my confidence has gone up completely.

2. Yes, because sometimes I read the questions and try to rush through the problem.

3. How to solve the problem or question that is being asked.

4. Yes, like just the simple basic questions. I hear questions like those every day.

5. I am learning that I have the ability to answer any questions that are asked of me.

Week 3
Student 1 journal entry

1. I feel like this class will help me improve my score because each class, I am learning about ACT's strategies to make me underperform on the test. I am learning efficient ways to approach questions on the ACT. Also, I am learning how to slow down and take my time on easy questions.

2. I still feel like I don't how to use my time wisely on the actual test.

3. I don't know how to pick quick and easy questions on the math test and I feel like I need more practice on the science and reading parts.

4. What grammar concepts should I study in order to do well on the English section?

5. I am learning that I like to work hard to get a good outcome on everything that I do. I also am learning that I am willing to spend hours a night to get a score that will help me get a good score.

Student 2 journal entry

1. This preparation course is going to help me get a good score because it tells me all of the secrets behind the test and why the questions are easier than they seem. Also, this course is helping me learn math and English skills that we don't learn and go over in school.

2. A specific questions I have about the test is how they accumulate the scores on a scale.

3. It's helping me get more serious about my grades and my college career.

4. I would like to take up one whole Academic Lab to do a few sections as practice.

5. I've noticed that I am not as self-driven and motivated as I thought.

Student 3 journal entry

1. It's telling me things I don't know about the test.

Student 4 journal entry

1. This course has made me more confident already. I am not nervous about taking the test like I was before.

2. We have just started the English drill which isn't all that difficult, but it is very time consuming. The instructor says that the drill will do a lot to help my score on the test.

3. I am still using my learned strategies from this course in my classes and on tests and quizzes.

4. I am learning that although it isn't hard work, it really helps me prepare for the ACT.

Student 5 journal entry

1. I'm learning studying questions over tine is getting me used to what the questions are like, but I still need to work on my math.

Student 8 journal entry

1. It shows you tricks that are helpful to know when reading and answering the questions. I wonder why ACT makes the test so confusing and tricky.

2. I feel the test will be easier because I have more of a visual of it.

3. I feel like I should know the stuff and I feel good when I remember things I have learned when answering the questions.

Student 10 journal entry

1. Because they teach you how to get around the tricks that the ACT book is asking you.
2. Just the hard problems.

Week 5
Student 1 journal entry

1. I have learned to create effective strategies that will help me become a better test taker. Also, I learned how to approach different tests such as mathematics and science.

2. Over the past five weeks, I learned that I am not a quitter in everything I do. Also, I learned that education means a lot to me and I would do anything that would maximize my chances of getting accepted and scholarships to the college of my choice.

3. Yes, I feel like I am expected to improve my score a lot because I took this class for the last two months. I feel that my parents and as well as myself expect me to improve my score drastically.

4. In this class I have learned a lot of things including how to take certain tests like the ACT. I have used these strategies in my other classes and they have worked. Also, I learned study skills that I never had before.

5. By taking this course, I feel like I am creating a good foundation for my future because the ACT has a huge impact on colleges and scholarships. Also, I believe that the class has helped me become a better test taker.

Student 2 journal entry

1. I took the October ACT ad my current score is 18. Some skills I have learned since this course began in mostly math skills and English skills. I've learned a few science skills, but my score in science did not improve.

2. I have learned that I won't get better at this test unless I apply myself and practice. Also, if I keep up with the drills and do more than asked my score will improve.

3. I did feel pressure at the beginning, but now I've realized that I'm not taking the class to impress others. I'm taking it for myself. I thought the instructor would think little of me if I did not finish the English drill, but I realized if I do it at my own speed and do it more efficiently then my score will improve.

4. Over the last 5 weeks my test score for the ACT went up 2 points and I feel much more confident about my academics.

5. I do feel like I am laying down a foundation for my future because I'm proving to myself that if I put my mind to it then I will succeed.

6. I feel like we have covered what I expected but I wish that my peers would have kept up with the class and been more serious.

Student 3 journal entry

1. I learned how to answer each type of questions and which to answer first.

2. I know that I am capable of doing a lot better than I actually do.

3. I felt some pressure because I'm a African American student who is expected to get a good score because of taking this course.

4. Some people chose not to attend or complete the homework because they thought it was stupid. I never missed a class because I wanted to get as much out of it as I could.

5. I kind of feel like I am laying down a good foundation by taking this course.

6. I guess this course is what I expected, I really did not expect anything one way or the other.

Student 4 journal entry

1. I have learned math, science, English and reading test taking skills.

2. Over the last 5 weeks I have learned if you put effort in what you want to accomplish you will be successful at the end.

3. No, I don't feel any pressure because I am taking the ACT Preparation Course. It actually motivates me to do more.

4. Well, I've done a good job in my regular classes and my grades are all at B or above.

5. Yes, definitely I feel like this course would help me a lot in my ACT test.

6. Not, it wasn't because I thought we would learn more stuff than we have right now.

Student 5 journal entry

1. Since beginning this course I have learned skills like time management, and picking answers based on the process of elimination.

2. I feel more confident about my test taking skills and I think I will be able to do well.

3. Actually, if feel less pressure by taking this course. The course has made me less intimidated by the test.

4. Some good experiences I've had include getting good grades on recent tests and learning a lot in this class. Also, I have applied to Fontbonne University.

5. Yes, because the better I do on the test, the more chance I have of getting into the college I want.

6. It is exactly what I expected, the course is helping me a lot and hopefully it will show in my test score.

Student 6 journal entry

1. There are a bunch of skills I had to learn. So many I can't write them all.

2. Yes, I have learned about myself and my values.

3. Tons of pressure because the ACT is no laughing matter – no joke, this is basically where life starts! Socially my class is pretty much people I don't talk to at all. Don't know them – don't like them. Psychologically the environment that where take the ACT in is just like where you should study for the ACT peaceful and quiet. Academically, I have been struggling with my grades because Academic Lab is when I do my work – so the class takes up 45 minutes of my time so I've had to push it.

4. Totally feeling like this is the starting point for my life.

5. Yes it has been what I expected because this is the time we review and do crappy, hard drills.

Student 7 journal entry

1. I have learned numerous things such as math, science, English and reading. I have learned that it's a lot easier that what it seems to be. Somewhat because of the time we take it during school.

2. Lately, I haven't been able to use any of my skills yet.

3. I am grateful I signed up for this class.

4. No, this class is not what I expected, I expected some head banging stuff because if never took the ACT before.

Student 8 journal entry

1. I have learned tricks on taking the test that are very helpful to know. I have learned that I know all of the information I just need to apply it.

2. I feel pressure taking this course because I have been giving up useful Academic Lab time.

3. I have realized the scariness of the test is all in my head and I know how to do the problems.

4. By taking this course it will help me get a good score on the ACT and I can get into a good college to have my career choice.

5. This is more than I expected, I have learned tricks and applying them on the test.

Student 9 journal entry

1. I've learned the process of elimination to help me do well on the test.

2. I've also learned what my strengths and weaknesses are.

3. No, it is more than I expected, I did not expect to earn as much in this short period of time.

Student 10 journal entry

1. I have learned how to get around hard problems to make them seem easier.

2. To take life a little more serious so I can have a successful life and job.

3. No, because it's helping me to be more relaxed and calm so I don't freak out of the ACT.

4. My grades are improving from where they were because of this class.

Week 6
Student 1 journal entry

1. I don't think that ACT reflects a person's academic abilities because the goal is to make students underperform. Most of the questions on the ACT are very simple, but because it is timed and it is very long, students get lower scores than they deserve.

2. The ACT score is a way for colleges to choose from thousands of students who have the same GPA. Act is believed to be a better predictor of a student's achievement in college in this situation.

3. I have been telling my friends to take this class because it has given me insight into what the ACT is like and what their goal is. I know that they try to trick me into choosing a wrong answer and I've learned how to identify wrong answers.

4. I don't think it should be required because there is already a section that represents English and I believe that a person's ability to write a good paper doesn't determine whether he is a good student or not.

5. My dream schools are Washington University and St. Louis College of Pharmacy. They are very choosey and their criteria are very difficult. For example Washington University requires a 27 on the ACT.

Student 2 journal entry

1. I think the ACT does not reflect my academic abilities because most people freeze up on standardized tests. Also, when you hear that the test takes 3 hours you feel nervous and think that it's going to take forever and be hard.

2. Colleges and universities use the ACT because different high schools teach different things and the only way for them to know you have certain knowledge is to base it on something that is the same for everybody.

3. Advice I would give someone that is taking the ACT test and hasn't taken this course would be to take their time, don't rush and concentrate solely on getting questions right instead of getting done. Also, I would tell them to not leave anything blank.

4. I, myself haven't taken the written part of the test but think that it should be required because it is a crucial element that should be tested and looked at by all colleges and universities.

5. The colleges I am looking to attend are University of Missouri Columbia (Mizzou), Southeast Missouri State and Maryville University. Most of these schools specialize in at least one of my two interests are art education and physical education. I have looked at all of these schools online and have filled out the applications.

Student 3 journal entry

1. I don't think the ACT reflects academic abilities because it ask questions you may not have learned yet or been taught – not all schools teach the same information so it's almost unfair.

2. To filter out students since there are so many applications to attend their schools. They have to have some source or way to do this.

3. The advice I have given friends is to take this course because it could boost your confidence and help you feel better about taking the ACT. Also, you can use some of the strategies for your regular classes to improve in.

4. I don't think it should be required to take the writing portion of the ACT test. A lot of students might need improvement in the way they write.

5. The colleges I am looking at are in the south because I want to play football and I want to be in a warmer climate.

Student 4 journal entry

1. No I don't think it reflects my academic abilities because most of the ACT questions we do don't relate to the classes that I am taking right now.

2. To know your intelligence in taking different sections of the test and also to measure your ability to focus on what you do and know.

3. I would tell them to take it really seriously and to do all the work that their teacher is giving them.

4. Yes, it should be because I don't think the reading portion is a hard portion.

5. I haven't looked or checked any colleges yet, but after I get my ACT score I will think about it.

Student 5 journal entry

1. No, because they try to trick you and limit your time. So even if you know all of the answers you won't be able to finish the test. .

2. They look at the test's bell curve and try to pick the best students based on where they are on the graph.

3. Do all of the quick ones first to get them out of the way. Then go back and finish what you can, but don't move too fast.

4. I don't think it should be required because they should make the English and reading sections accurately test those skills.

5. I would like to attend Fontbonne University because it is a small local school and it has the major that I want to pursue. They have pretty much the same admission

requirements as my school's graduation requirements. To be considered for admission you must also have a cumulative score of 20 on the ACT.

Student 6 journal entry

1. I don't know – maybe because the classes I have are kind of hard – the ACT makes it a little more frustrating.

Student 7 journal entry

1. Yes, in a way it reflects towards the test that is similar to some of the sections on the ACT. It shows the trickery the tests have.

2. They use the ACT to help them give a better look at the people with the score they require. Most people average in the middle, a few get lower and higher.

3. I would tell my friends to take their time and do what they can, then do the hard questions on the test.

4. I think it should be based on what college or university you are trying to get into.

5. I am still searching, but I have Florida, USC, Mizzou and Virginia Tech. I've done a little research, but I need to do more. I kind of need help with finding a school that fits me.

Student 8 journal entry

1. No, because it doesn't fully test the academic abilities and some people are very smart but don't do well under pressure.

2. To see the potential of the student in succeeding.

3. I would tell them the tricks and strategies I've learned.

4. No, because the test is hard enough without it.

5. Truman State because they have a good program for students that want to be teachers.

Student 9 journal entry

1. No because they are trick questions.

2. To measure, separate students.

3. To gain confidence that it will help you does well.

Student 10 journal entry

1. Yes, because I have learned to take my time while I do my homework so that it's all finished.

2. To see where you stand academically and to see what kind of person you are.

3. Pay attention in the class because there us a lot of material that is very useful.

4. No, as long as they can pay for the tuition I think they should get admission.

5. No, I haven't thought about college really.

Week 7
Student 1 journal entry

1. Even though I have learned a lot in the past 6 weeks I am very nervous. I feel like my whole life depends on it.

2. I feel like I am more prepared now because I now have better strategies, and I know how to pick questions that I'm sure I know how to answer.

3. I feel very nervous about the science and reading sections.

4. Yes, I recommend this class and I would tell them to take notes as the instructor teaches about the strategies. I would also tell them to do the homework he gives because it is very important and it will help them get a better score.

5. I feel excited and nervous at the same time. I'm excited because I feel like I've been working hard and I want to see what score I will get when I take it. On the other hand, I feel nervous because I feel that I haven't mastered the science and reading sections.

6. I feel that journaling has helped me see the progress I'm making each week.

Student 2 journal entry

1. I'm nervous about the test, but mostly because I'm scared my score will stay the same or go down. But that's mostly because I know people this has happened to.

2. I do feel more prepared than the first two times I took the test because I have more math under my belt. The first time I took it was in the summer and I wasn't up on any of my skills. Also, when I took it in October I had only went through less than half of the course and only two of my sections went up.

3. I feel like I could use more help in the math section and the science section mostly because neither are my strong points. Both times I took the math I think I got a 16 in that section and it did not change even after the course and a semester of another math class.

4. I would recommend other students to take this course next semester. I would tell them that the course helps you learn more about the test and the tricks behind it and how you can avoid them.

5. Like I said in #1 I am nervous mostly of my score not getting better and not being able to get into the college I want.

6. I don't think that journaling has helped me, but I know it would help Ms. Badgett and her project for school so I did it. Also, I know other people saying that they weren't going to do it because they did not have to, so I thought I would do it to help her out.

Student 3 journal entry

1. I am nervous about taking the test even though I know a lot more than I did when before I took this course.

2. Yes, because I have at least some information about the test.

3. Analyzing, reading questions.

4. Yep, it helps. A good helper/tool for taking the test.

5. Yep. I just don't want to score low.

6. The journaling helps project your feelings. Yes, because it's always good to write down or speak about your thoughts.

Student 4 journal entry

1. My thoughts about the ACT test are that I have more confidence than it was before I started to take this class.

2. Yes, I think I am more prepared for the test because now I know how to take the test more strategically.

3. I feel like I'm still not confident on my science and math section of the test.

4. I feel both excited and nervous. When I think about the ACT test because I feel like I know more than I used to and I feel nervous because I doubt myself sometimes when I think about my weak sides.

5. Yes, journaling has helped me to realize what to focus on and share my thoughts with others.

Student 5 journal entry

1. I am not too nervous about it, but I hope I will be clear minded and focused that day.

2. I do feel more prepared to take the test because of this course because I've never taken it before and I was completely clueless as to what to expect on the test.

3. Before the test, I really need to work on the math section and reading section because I go very slowly in those sections and end up trying to rush and get problems wrong or I just don't finish many problems.

4. Yes, I would recommend this class to other students. I would tell them that it really helps to practice and discuss the test, not only with the instructor, but with your peers as well.

5. I am trying not to get too nervous about the test because I know I will do poorly if I am. I don't have much to be worried about either since I know what to expect and how to go about taking the test.

6. Journaling helps me with my feelings about the test. When I write about it, I feel like I don't have anything to be worried about. It also helped with seeing how I progressed through the course because I can see what my feelings and thoughts were at the beginning of the course and now.

Student 7 journal entry

1. My thoughts about the ACT is that I'll do better than if I did not take this course. No, to be honest it was my first time taking the course.

2. I did not have a clue on how to take the test, but I do now and still feel it need help with math and science.

3. Yes, I would say it's a lot of work, but well worth it.

4. I'm kind of excited to see how well I do with the tricks I got.

5. I feel that journaling is helpful as far as writing skills and it keeps me focused on the task at hand.

Student 8 journal entry

1. Not to be worried yet, but it's becoming more real.

2. Yes!! I feel more prepared and I have learned some tricks that are very helpful.

3. I highly recommend this class. I would say it is worth your time and it will help you be less stressed.

4. Nervous, I know I will do fine but the thought of it still scares me.

5. Journaling helps me to be less nervous.

Student 10 journal entry

1. I'm not as nervous as the first time I took it.

2. Yes, because I have learned all kinds of new tricks to help me get around hard problems.

3. Math, because I've always struggled with math.

4. Yes, I would definitely encourage them to take it as long as you are going to listen and take the class seriously.

5. Yes, because I can express how I feel about taking this course.

Appendix I

Student Reflective Journal Entries After Taking ACT

Student 1 journal entry

1. The ACT prep helped me see and identify the ticks that the writers put on the test.

2. When I was taking the test I felt confident that I have done my best and I felt good that I've used the strategies the instructor gave me.

3. However, I thought I did fine after the test.

4. I recommend this course because it gave me an insight to the test and how to make strategies that work for me.

5. Yes, I felt that the science section was very new to me and my strategies weren't very effective. I feel that the instructor needs to spend more time on science even though many people believe it is the easiest section.

6. Yes, I did. I spend about half an hour each night.

7. About 50 questions.

8. The best things about the class were that we went over questions together and we had a chance to learn from our peers.

9. The worst things about the class were that many students talked during the class and the teacher was upset.

Student 2 journal entry

1. I believe the ACT prep class did prepare me for what was on the test because we went over things in class that were definitely going to be on the test and things that might be on the test.

2. During the test I was mostly nervous that my score would decrease or stay the same. At the same time I was confident because I came across some of the tricks that we talked about in class and I did not fall for them.

3. After it took the ACT I wasn't upset with myself. I felt like I did my best and that I knew I would improve in at least two sections.

4. I would recommend this class to all students wishing to raise their scores because my score went up from 16 to 18 and it's all because of this class. I would tell them that the ACT prep class is a long, annoying process, that it takes up your Academic Lab time, but well worth it and should be taken seriously.

5. There were a few things on the test I did not understand, mostly in the science and math sections.

6. I did not do any extra work on the ACT outside of class.

7. The best thing about the class was the cookies and that it only took up half of the Academic Lab time.

8. The worst thing about this class is that most of my classmates did not take it as seriously as me by not showing up half of the time.

9. The purpose of this course is to help students raise their test scores on the ACT. This course helps you better understand the test and helps reveal all of the tricks the test uses to try and mess you up. Even though this course may take up half of your Academic Lab its very much worth it seeing that it raised my score 2 points. I found myself using a lot of the tips I learned in the course on the test for more than a few questions. I would recommend this course to anyone who is serious about raising their ACT score.

Student 3 journal entry

1. Somewhat.

2. Good, sort of nervous.

3. I hope I got a good score.

4. Already explained.

5. Yep. Did not recognize anything on the science section.

6. No

7. Not sure

8. Learning with other in class and cookies.

9. Missing part of study hall every day.

Student 5 journal entry

1. Yes, the prep course really helped with what was on the test. I felt very well prepared when taking the ACT.

2. I felt prepared and I felt confident that I was doing everything I learned to help me do well.

3. I was thinking that I did rather well after I took the test. I think I got close to my goals.

4. Yes, I would recommend this course to friends because it was very helpful. I would tell them they could boost their score if they participated in this class.

5. I think I should have studied more of the science section because it was the most challenging for me.

6. I spent time outside of class reviewing my strategies for each section of the test until I memorized them.

7. I think I answered enough questions to reach my goals on each section.

8. The best things about this class were being able to talk as a group about things or topics we may have had questions over learning and applying the strategies we were taught and knowing that it was a productive experience that would help me improve my test scores and skills.

9. The worst thing about this class was that we sometimes had long homework that interfered with other schoolwork, but it was manageable.

10. Taking this course will really help anyone who wants to improve their test skills and scores. It helped me feel more confident about taking the test, and I felt prepared for what would be on the test. If you put in the time and work, this class will really work for you.

11. My ACT score was 25. It was more than what I had expected. I did better than my goal.

12. I was both nervous and confident when I was preparing to open my scores. Nervous because you never know what can happen and confident because I know I did the best I could on the test.

13. I will not be taking the test again.

14. I am applying to Fontbonne University and Webster University.

15. For Fontbonne I need a score of 20 or higher and for Webster I need 21 or higher.

Student 7 journal entry

1. It did, but I'm thinking I'm going to have to take the class again. I felt good at the moment because of all the confidence I had from the class. I have to take the class in the spring.

2. Yes, I would tell them it is very beneficial.

3. Yes, I kind of forgot the methods during the test.

4. Not as much as I should have.

5. I probably got a good amount on certain sections.

6. It gave you ways not only to pass, but to beat the test systems.

7. It kind of took up time from other classes.

8. This course will better prepare you for the ACT. Rather you took it already or you haven't. The course gives you strategies you never thought of.

Student 8 journal entry

1. Yes, I felt very prepared – I had no surprises while taking the test.

2. I felt calm because I knew what I was doing.

3. I can't wait to see my scores.

4. I would definitely tell them it gets them ready for the ACT.

5. I understand everything, but some questions were confusing.

6. I did some extra practice tests.

7. I have no clue.

8. I felt calm and ready for the test.

9. It took Academic Lab time but it was definitely worth it.
10. This class gives you good useful strategies and will help you.

11. I got a 23 and I was happy.

12. I did not open it I was told by my mom, but I felt pretty confident.

13. Yes, I want to raise my score.

14. I would like 27 or 28 or maybe higher.

Student 10 journal entry

1. Yes, the class helped me.

2. I felt confident when taking the ACT test.

3. After I took the test I wondered about my score.

4. Yes, I would recommend this course to my friends because it will help them a lot.

5. I did not understand some of the math and science.

6. I spent about 30 minutes a day after class studying.

7. I don't know how many I got right.

8. The best thing about the class was the instructor.

9. The worst thing about class was when the students interrupted the teacher when he was talking.

10. When you are taking this course you better come ready to learn because it's a lot of material to learn. The things they teach you will help you get around the way the question is being worded. If you listen well and actually do what they are saying you will get a good score.

11. Yes, my ACT score was what I expected.

12. I was nervous because I knew it was going to be a horrible score.

13. Yes, I will retake the test sometime in September and hopefully get a better score and get into a good school.
14. Not sure what colleges I'm going to apply to.

15. I need at least a 22 to get into college.

Vitae

Theresa L. Badgett has a diverse work history within secondary education and is certified in Business Education, Family and Consumer Sciences, and Marketing Education. She currently is a teacher at an urban high school, teaching Family and Consumer Sciences, and has held several instructional positions in Marketing Education and Business Education at suburban and charter schools. Badgett earned a Bachelor of Arts in Organizational Leadership, Master of Arts degree in Education, Master of Arts in Teaching, Education Specialist degree in Education Administration, and received her Doctorate of Education in August, 2015, from Lindenwood University. Badgett is passionate in preparing students for life outside of the classroom as twenty-first century leaders. She is committed to the social, emotional and academic growth and development of each student. Badgett facilitated successful fund raising and community outreach programs and was instrumental in implementing an ACT preparation program for African American students.

In addition to her teaching experience, Badgett has proven ability in grant writing, curriculum design, and administrative expertise. Badgett has also held key positions in the corporate arena as a marketing director, sales director, and real estate broker. She is uniquely positioned as an intercultural educator fused with a blend of corporate, academic, and instructional experience.