

Teachers' Beliefs about Ability to Engage African-American Students and Identify For
Advanced Placement Through the Lens of the Ohio State Teacher Efficacy Survey and the Rand
Measure

A Dissertation presented to the Faculty of the Graduate School
University of Missouri

In Partial Fulfillment
Of the Requirements for the Degree
Doctorate of Education

By
ERIC C. GREELY SR., Ed.S

Dr. Timothy Wall, Dissertation Supervisor

DECEMBER 2017

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DEDICATION

This dissertation is dedicated to my brother, Carl Stanley Weary, Sr. Carl passed away on April 15, 2015, of cancer. It is my desire to acknowledge the important contributions he has made not only to my life, but his siblings' lives as well. He has four brothers, Eric Sr., Terrance, Kerry, and Efrem, and one sister, Sharon. This dissertation is also dedicated to my wife of twenty-seven years, Desha Matthews-Greely. Thank you for our three wonderful children, Eric Jr., Caleb, and D'Asia. Also, thank you for the incredible support you have provided me through my journey of being a life-long student and finally completing my dissertation. You are the love of my life.

Additionally, this dissertation is in memory of my father, Archie Greely—you taught me empathy, love, and the importance of caring for family and community.

ACKNOWLEDGEMENTS

First and foremost, I would like to acknowledge the role my brother Carl Stanley Weary, Sr., played in my life. He set the standard for high expectations for his siblings starting back in high school. He graduated Bogalusa High School in 1976 with honors, while taking rigorous courses to prepare him for college. He then attended Southern University and A & M College in Baton Rouge, LA. Carl played in a marching band for two years, rising to the position of first trumpet; he held the position of Student Government Association Vice-President two years and was a member of Alpha Phi Alpha Fraternity and a member of the Reserve Officers Training Corps (ROTC). Carl graduated from Southern in 1981 with honors in Electrical Engineering and was commissioned as a First Lieutenant in the United States Navy. He competed with Naval Officers across the United States to be accepted to the Navy's prestigious Nuclear Power Program. Only twenty officers were selected that year, one being my brother Carl. He was the first African-American from Southern University to attain the honor of attending Nuclear Power School and the only African-American officer selected for the class. Carl graduated at the top of his class as he accepted the challenge of working hard to achieve excellence in this rigorous program. To this day, my brother Carl continues to inspire his siblings and be the incredible role model for our family, fraternity, and all his friends who have had an opportunity to be a part of his life.

Additionally, I must recognize my exceptional mother Ella Mae Greely and father Archie Greely for the many sacrifices they made for their children. My mother was a role model for her family and set high expectations. One of her mantras was, "If I can do it, you can do it." She always led by example. My father passed in 2008; his most important contribution to our family was to teach us kindness, empathy, and the importance of helping others in our community.

My parents raised six children. My mother returned to college at the age of 30, while caring for her children, to obtain her Licensed Practical Nursing (LPN) certification. Approximately five years later, she was accepted to Charity Hospital School of Nursing and earned her Registered Nursing (RN) credentials and an Associate Degree. Her graduation changed our socio-economic status from poor to lower middle class. My mother has worked as an RN supervisor in hospitals, nursing homes, and then started her own business—EMG (Ella Mae Greely) Nursing Academy, to train future nursing assistants. Although my mother has held many positions as an RN, she returned to school late in life to earn her Bachelor of Science Degree in Nursing. Even though the degree did not provide any additional income, she taught her children the lessons of perseverance in accomplishing your goals. She set very high expectations for herself.

My mother is affectionately known as “momma” to her kids and Mrs. Ella Mae by co-workers and friends, whom she has had positive influences in all their lives. One of her former co-workers, who is currently employed as a Nursing instructor in a high school, lamented, “Mrs. Ella Mae was tough; your shoes better be shined, uniform ironed, and patients cared for with the highest level of respect and integrity. She really set high expectations for us.”

I am reminded of one of the many sacrifices my parents made on our behalf. My father was at work, and my mother had scheduled doctor appointments for us. The family did not own a car at that time. To ensure that the appointment would not be missed, my mother put Kerry, Terrance, and Sharon in a red wagon and proceeded to walk across the bridge to the hospital with Carl Sr. and I following behind the wagon. The hospital was approximately five miles from our home.

It is also important to thank my initial dissertation advisor who has since retired, Dr. Philip Messner. Before his retirement, he encouraged me as I completed my Educational Specialist degree and inspired me through difficult times not to give up. Additionally, Dr. Carole Edmonds, thank you for your belief in our cohort. Your wise counsel on issues relative to the program and the schools where we were employed is priceless. I also greatly appreciate the help of Dr. Timothy Wall, my dissertation supervisor. He has really challenged my thinking, and it is my hope this dissertation will add to the body of knowledge relative to student achievement.

Next, I would like to thank Dr. Martin Jacobs, principal of Liberty North High School, for providing me with the initial opportunity to become an assistant principal at Liberty High School. You mentored me well in the art of caring for students and parents. Also, thank you, Dr. April Adams, principal of Liberty High School. You taught me how to be an instructional leader and provided me with many opportunities to use my skills to build sustainable programs to positively impact children and the community.

Finally, thanks to my cohort at Northwest Missouri State, Liberty location, for your unselfish support and encouragement. Stephen Himes, Stephanie DeClue, Debbie Psychoyos, Tammy Bunchy and Mary Laughlin—all of you have been heroes in my life at some point. A special shout out is warranted to Stephen Himes for taking on the challenge of editing my dissertation, while caring for his wife and newborn baby.

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VIGNETTE

In September 2005, Hurricane Katrina forced my family to relocate to Kansas City, Missouri, from the city we resided in and loved for eleven years. A Midwest suburban school district gave me an opportunity to continue affecting children's lives as a teacher for one year and as an administrator for the next seven years.

The high school principal asked me that my responsibilities include being a role model to our minority students, especially African-American and Hispanic males, and inspiring them to continue their education by enrolling in a post-secondary school. At the time, the average ACT college entrance examination score for the majority population was 23.0, but the average score for minority students was considerably lower. African-American students averaged 17.5 and Hispanic students averaged 19.3 on the ACT (ACT, 2008). These statistics were quite alarming, considering that most of the African-American and Hispanic students attended this school district most of their elementary and secondary years.

While visiting classrooms, I noticed that many of our Advanced Placement (AP) and honors' classes appeared not to have many minority students. Knowing that students enrolling in more rigorous coursework tend to score higher on the ACT and earn college credit, I wanted to better understand the phenomena taking place in this otherwise high achieving school district. After further examination of some of the African-American students' grades in one of the high schools, the principal and I identified seven African-American students with high GPAs and MAP test scores who we thought would perform well in more challenging courses. The students were called to the office to discuss revising their schedules to include more challenging classes, and their parents were notified this option was available to their children. All seven students earned a "B" or higher in their AP classes except one who earned a "C" due to making a decision

to work full-time throughout the week. However, all these students chose not to take the AP tests. After further discussion with the students, the common reasons for not taking the AP tests were financial considerations, not understanding the implications of tests on college choice, and lack of confidence.

Nonetheless, this was one of the proudest moments of my educational career. To see students accept the challenge and have the confidence to realize they could succeed in such a challenging environment is priceless. Six of the seven students enrolled in college after graduation; four of them graduated and one started a family, but promised to obtain a college degree one day. The critical questions I had to reflect on included the following: why weren't these students recommended for more rigorous coursework as they entered ninth grade, so they could enroll in as many Advanced Placement courses as possible while in high school? Did teachers have a different perception of these students compared to students currently enrolled in Advanced Placement courses? Was there a perception these students would not succeed because of perceived behavior issues? How many other students predominately enrolled in general education classes could have successfully enrolled in Advanced Placement courses and experienced success? As administrators developed relationships with these students, the common qualities they emphasized were that these students were assertive, spoke passionately about school issues, and did not realize the benefits of enrolling in Advanced Placement classes. One potential explanation for the administrators not recommending at least some of them for AP classes stems from my observation that two of the students were disrespectful to authority but seemed to be academically gifted. In this research, I will strategically attempt to identify the kinds of issues that could create challenges for teachers to recommend students to enroll in Advanced Placement classes. The first goal of the study is to ascertain if teachers' efficacy

beliefs in engagement create difficulties in recommending African-American students to Advanced Placement coursework. The second aim is to ascertain if Advanced Placement teachers' efficacy beliefs in engagement are different compared to teachers whom do not teach Advanced Placement courses.

CHAPTER 1

INTRODUCTION TO THE STUDY

A fundamental right of American children is to have equal opportunities to obtain a quality education regardless of race, class, or economic status (United Nations Educational, Scientific and Cultural Organization, 2008). A quality education has many benefits, including the ability to compete for good jobs after college graduation, earning a significantly larger income over a lifetime, living a healthier life, attending the college of your choice after high school, earning academic or athletic scholarships, and the ability to choose a career that provides financial security in life (Becker, Hubbard, & Murphy, 2010). College graduates are less likely to live in poverty and more likely to have greater earning potential (U.S. Department of Education, 2014). On a more general level, in order for the United States to be globally competitive in science, technology and economy, students, schools and colleges must be able to compete with those of other advanced nations (United States National Commission on Excellence in Education, 1983).

The academic achievement gap between low-income students and higher income students in the United States continues to widen (Byrnes, 2003; Frederickson & Petrides, 2008). Researchers have confirmed numerous times that Black and Latino students are performing significantly worse than their White counterparts (Hollins, King, & Hayman, 1994; Jencks & Phillips, 1998). In 1966, the U.S. Department of Education commissioned a report called “Equality of Educational Opportunity” that suggested in-school and out-of-school factors contributed to the achievement gap between students of different incomes. Several federal mandates have been passed since 1981 to improve the education of children in the U.S. and close the achievement gap. In 1981, Secretary of Education T. H. Bell created the National

Commission on Excellence in Education to assess the quality of teaching and learning in U.S. schools, publishing the report “A Nation at Risk” (United States National Commission on Excellence in Education, 1983). “A Nation at Risk” report identified obstacles to American academic competitiveness nationwide. These included comparisons of student achievement among nations, functional illiteracy among minority youth, academic decline in subjects like physics and English, and the fact that remedial mathematics courses have increased by more than 72% in 4 year colleges. The *No Child Left Behind Act* of 2001 required states to develop standardized tests in various grades to receive federal funding (United States Congress House Committee on Education and Labor [U. S. Congress], 2008). Finally, President Obama signed the reauthorization of ESSA and used legislation as a springboard to implement his White House College Scorecard and Race to the Top, which focused on the importance of rigorous standards and effective data systems to measure student’s progress (U.S. Department of Education, 2009).

Unfortunately, in the U.S. educational system, some teachers do not possess a high level of teacher self-efficacy, defined as the belief in their capability to be successful in teaching all children. Teachers subscribing to this type of thinking may infrequently recommend students for Advanced Placement courses as a result of deficit thinking. Teachers may also believe they will have limited success with students from certain ethnic groups. Oakes and Lipton (2007) refers to this as a deficit perspective, defined as having negative assumptions about non-White and poor students who come to school with deficits that make their success difficult (Oakes & Lipton, 2007). Such teachers possibly believe students who are African-American or Hispanic, poor, or non-English speaking are at a disadvantage, as the teachers perceive them from a deficit perspective. Thus, deficit perspective thinking leads to writing students off unless they change to fit into the status quo system (Garcia & Guerra, 2004). According to Garcia and Guerra (2004, p.

6), some educators may not realize they are engaged in deficit thinking. Donnell (2010) suggested that if a person subscribes to the idea that some students' failure results from a lack of intelligence or being from a dysfunctional family, that is an attribute of deficit perspective thinking.

Although legislation has been passed and federal mandates forced upon states to improve education, teachers and students as well must possess a sense of self-efficacy in engagement to achieve academic success and close the achievement gap between African-American and non-minority students (Armor et al., 1976; Ashton & Webb, 1986; Moore & Esselman, 1992; Ross, 1992). If students do not have the confidence to complete a task, they often become disengaged and unmotivated to continue engaging in that task. Teachers must consistently work to identify strategies that will encourage student engagement, motivation, and a positive sense of self-efficacy for themselves.

In this study, the researcher will attempt to identify the kinds of issues that could create difficulties for teachers in recommending African-American students to enroll in challenging academic courses such as Advanced Placement courses. Also, this research will help determine if Advanced Placement teachers' beliefs about their ability to engage African-American students differ from those of teachers who do not teach Advanced Placement courses. The first pillar undergirding the study relates to standardized assessments and the states and national policies which drive them. The second pillar undergirding the study is teacher efficacy beliefs of their ability to teach students. Lastly, the third pillar undergirding the study will examine the impact of teacher efficacy on student engagement.

Accountability and Testing

Teachers' efficacy beliefs may affect whether they recommend African-American students for rigorous coursework, such as Advanced Placement courses; thus the students' ability to perform at acceptable levels on high stakes standardized tests like End-of-Course Exams (EOC) and the American College Test (ACT) may be greatly reduced. End-of-Course Exams are criterion-referenced tests taken at the completion of a course of study to determine if students demonstrate attainment of knowledge and skills necessary for mastery of the subject (Missouri Department of Elementary & Secondary Education, 2015). The ACT is a college entrance examination that assesses students' ability to perform college-level work (ACT, 2008). Students engaging in rigorous coursework like Advanced Placement courses tend to earn higher scores on high school End of Course exams (EOC) and the American College Test (ACT), and they have a higher chance of graduating from college (Dougherty, Mellor, & Shuling, 2006). According to the Center for College Readiness (2015), there are strong correlations between students participating in AP courses, student achievement, and college readiness. Being college ready is an indication students will most likely perform at the proficient or higher achievement level on standardized high stakes test. Scoring proficient or advanced on the Missouri End-of-Course assessment demonstrates mastery of course content and usually indicates that students are well prepared for the next level of courses (Missouri Department of Elementary & Secondary Education). African-American students who are not recommended to enroll in AP courses, which are considered rigorous coursework, may be at a disadvantage for earning higher EOC and ACT scores. EOC scores influence Missouri School Improvement Performance Scores (MSIP 5), while ACT results affect college choice. MSIP 5 is Missouri accountability system for reviewing

and accrediting public school districts. It delineates EOC and AP data by ethnicity, among other factors (Missouri Department of Elementary & Secondary Education).

High-stakes standardized tests such as EOCs have swept across America as a prerequisite to graduation in many public schools in the United States (Domaleski, 2011). The goal is for students to earn a proficient or advanced on EOCs and at least a 21 on the ACT, as an indication that they are college ready. Proponents of high stakes standardized testing argued these tests led to increased achievement and addressed the accountability requirement of *No Child Left Behind*. Opponents of the tests argued, on the contrary, that high stakes standardized testing would result in increased numbers of students failing to attain a high school diploma, which would limit their opportunities and earning power (High-Stakes Testing, 2017).

There is a correlation between earning higher EOCs scores, taking AP courses, and earning higher ACT scores (Radunzel, Mattern, & Allen, 2015). High school students performing at the proficient level on EOCs, enrolling in AP courses, and scoring a minimum of 21 on the ACT improve their chances of being college ready (Dougherty, Mellor, & Shuling, 2006). The ACT appears to be the gatekeeper to selecting the college of your choice and earning scholarships. The national average ACT is 21 (ACT, 2010) while African-American students' average ACT is 17, Hispanic—18, Asian—21, and White—22 (ACT, 2010)

Teacher Efficacy and Locus of Control

Teacher efficacy is conceptually related to the social cognitive theory introduced by Albert Bandura. Bandura (1997) defined teacher efficacy as the teachers' self-assessment of their ability to support student learning. Bandura posited that if a teacher has high efficacy, he or she would have the ability to positively influence student achievement regardless of socio-economic

status or limited resources afforded the student. Conversely, teachers with low efficacy lack confidence in their ability to affect students' achievement and learning (Bandura, 1997).

Locus of control is a concept developed by Rotter in 1954, which refers to individuals' beliefs they can control events affecting them (Rotter, 1966). Rotter (1966) believed that the teachers' locus of control is beyond their ability to influence student learning. For the purposes of this study, locus of control refers to teachers believing they can affect teaching and learning for all students (Rotter, 1996), regardless of racial affiliation, background, or educational deficits students bring to the classroom. Research confirms that teachers' efficacy beliefs influence their behavior in the classroom, effort they invest in teaching, their goals relative to student achievement, and openness to new ideas. Teachers with strong efficacy beliefs exhibit a higher level of planning and organizing and are more willing to try new teaching methods (Berman, McLaughlin, Bass, Pauly, & Zellman, 1977). Differentiated instruction, in which the instruction is aimed at a particular learning style to maximize students learning needs, is one fairly new research-based pedagogical method used by educators (Bender, 2009). The challenges of high stake tests, school performance scores (SPS), and school choice require that teachers have high efficacy beliefs if they are to provide teaching and learning for all children.

Rand researchers (Armor et al., 1976; Rotter, 1966) defined teacher efficacy as the extent to which teachers believed they could control the reinforcement of their actions, that is, whether control of reinforcement lay within them or with the environment. This notion is premised on the idea that teachers' beliefs of their own capabilities are important. Teachers' beliefs about the power of these external factors compared to the influence of teachers and schools have since been labeled general teaching efficacy (GTE) (Ashton, Olejnik, Crocker, & McAuliffe, 1982). Teachers' sense of efficacy has also been directly related to student outcomes such as

achievement (Ashton & Webb, 1986; Ashton & Webb; Moore & Esselman, 1992; Ross, 1992). Furthermore, teachers' efficacy beliefs allow them to overcome challenges, be less critical of students when errors are made (Ashton & Webb, 1986), and have more patience to work with students through their challenges (Gibson & Dembo, 1984). In other words, students will be valued based on the talents each bring to the classroom because of thoughtful, caring teachers who develop relationships with students and possess a high level of self efficacy.

Student Engagement

Student engagement is necessary for all students' success, especially for African-American and Latino males. According to a report released by the Schott Foundation on public education, the achievement gaps between African-American males and their white peers have widened from 19 points in the 2009-10 school year to 21 points in the 2012-13 school year (Superville, 2015). The report also purported that with respect to all the academic achievement measures, educational attainment, and school success, African-American and Latino males have not shown accomplishments at the same level as their peers because African-American and Latino males seem to have a pattern of ending up at the bottom of educational reports, including reported graduation rates. In 2012- 2013, the graduation rate for African-American males was 59%. Latino males had a 65% graduation rate, and the graduation rate for their White peers was 80% (Schott Foundation for Public Education, 2015) . Additionally, African-American and Latino males are more likely to be absent from rigorous courses such as gifted/talented programs, AP, honors, and international baccalaureate programs (Noguera, 2008).

Researchers have suggested that students engaged in their schoolwork are more likely to perform academically and earn higher grades in the classroom on high stakes standardized tests (Corso, Bundick, Quaglia, & Haywood, 2013). Furthermore, student engagement leads to a

variety of desirable academic and life outcomes (National Research Council and Institute of Medicine, 2004) Student engagement has also been linked to reducing student dropout rates; it encourages students to attend post-secondary education (Corso et al.). Lee and Shute (2009) argued that student engagement may help close the achievement gap (Lee & Shute, 2009). Unfortunately, research examining high school motivation and student engagement reveals that up to 60% of students in high school are chronically disengaged (Klem & Connell, 2004).

Instruments

The instruments used in this study to answer the research questions include the Calculus AB Teacher Questionnaire sanctioned by the College Board to collect demographic information, The Ohio Teaching Efficacy Survey (OSTES), and the Rand Measure. The OSTES measures efficacy for student engagement (8 items), instructional strategies (8 items), and classroom management (8 items). For the purposes of this study, the researcher will focus on measuring efficacy for student engagement. The Rand Measure uses self-reported responses using a five-point Likert scale to answer two items, Rand 1 and 2.

Rand item 1: “When it comes right down to it, a teacher really can’t do much because most of a student’s motivation and performance depends on his or her home environment.”

If a teacher expresses strong agreement with this statement, it indicates that in his/her opinion, environmental factors overwhelm any power that teachers can exert in schools.

Rand item 2: “If I really try hard, I can get through to even the most difficult or unmotivated students.” Teachers who agree with this statement indicate confidence in their abilities as teachers to overcome factors that could make learning difficult for a student. Additionally, the demographic information and four questions relative to African-American and Hispanic students were extrapolated from the AP Calculus AB Teacher Questionnaire.

Theoretical Framework

According to Yough (2008), many researchers have found that one of the most significant factors in student outcomes is teachers' sense of self-efficacy. Therefore, the Cultural Deficit Theory is the primary theoretical framework used in this study to examine teachers' efficacy beliefs and perceived difficulties of recommending students to AP courses compared to the efficacy beliefs of teachers not teaching AP courses.

The Cultural Deficit model concerns negative beliefs and assumptions regarding the abilities, aspirations, and work ethic of systematically marginalized people—in the context of this dissertation, poor and African-American students in public American schools. The model asserts that African-American and low-income students often fail to perform well in school, at least partially, because teachers think the students are culturally deprived or lack exposure to cultural models more obviously congruent with school success (Irizarry, 2009). The model further contends that students of color and poor students often enter school with a lack of cultural capital (Bourdieu, 1997), which consists of cultural assets affirmed by teachers and administrators, which are considered valuable to students. Additionally, there is an assumption that the families of students of color and socioeconomically disadvantaged students do not value education in the same ways that their middle and upper class White counterparts often do, thus leading to the idea that African-American students are less capable academically. Conversely, upper and middle class students, according to the theory, are more likely to do well in school because they possess more cultural capital. Some cultural deficit literature suggests a lack of parental or family involvement of students in poverty is also responsible for educational outcomes of students living in poverty (Irizarry, 2009). However, to some extent, the teachers' assumptions and prejudices may be to blame for the disparity of outcomes: a report titled *Dispelling the Myth*

Revisited indicated that under the right conditions, poor and minority-group children can achieve at high levels (Education Trust, 2002, p. xi).

Oakes and Lipton (2007) concurred with Irizarry's (2009) definition of the deficit perspective by describing teachers' negative assumptions about non-White and poor students who come to school with deficits that make their success difficult (Oakes & Lipton, 2007).

Donnell (2010) suggested that an individual subscribing to the idea that students' failure is due to their lack of intelligence or dysfunctional families is thinking from a deficit perspective. Deficit perspective thinking does not capitalize on the strengths of marginalized students or the cultural resources they bring to their schools and communities. Deficit thinking allows educators to focus on what is "wrong" with the student as opposed to what is "right" with the student (Donnell, in press).

The purpose of this quantitative study is to add to the body of research regarding teacher efficacy beliefs in student engagement and ascertain if teachers' beliefs create difficulties in recommending African-American students to Advanced Placement courses. The researcher will also seek to understand whether the efficacy beliefs of Advanced Placement teachers are different from those of general education teachers.

Statement of the Problem

The problem under investigation is a lack of information about teachers' efficacy beliefs in recommending specific types of students for Advanced Placement courses. The underrepresentation of students in Advanced Placement courses creates equity issues and long-term disadvantages that may affect students throughout their lives. Attewell and Domina (2008) purported that a rigorous curriculum promotes higher order thinking, engages students, reduces discipline problems, and builds their capacity to learn. Advanced Placement courses qualify as

rigorous coursework. Rigorous coursework can provide students with a competitive advantage on standardized test, college admission, and have significant financial implications.

Purpose of the Study

The purpose of this quantitative study is to add to the body of research on teacher efficacy beliefs in student engagement. The first goal is to ascertain if teachers' efficacy beliefs in engagement prevent them from recommending African-American students to Advanced Placement coursework. The second goal is to ascertain if Advanced Placement teachers' efficacy beliefs in engagement differ from those of teachers not teaching Advanced Placement coursework.

Research Questions

This study was designed to address the following research questions:

1. What are the descriptive summary statistics of teachers' opinions from The Ohio Teacher Efficacy survey of the eight engagement questions that may create difficulties for teachers' in their school activities?
2. What are the descriptive summary statistics of Rand 1?
3. What are the descriptive summary statistics of Rand 2?
4. Is there a difference in the perceived levels of efficacy beliefs for student engagement among AP teachers compared to general education teachers?

Ho4: There is no difference in the perceived levels of self-efficacy beliefs for student engagement among AP teachers compared to general education students.

Limitations of the Study

There are some limitations in this quantitative research study. First, a survey limits the richness of information the researcher will receive from respondents. Researchers normally allow

15 to 20 minutes for respondents to complete surveys; thus, respondents can only answer so many questions. Additionally, respondents may choose not to answer all questions on the survey, potentially making the survey less valid. The meaningfulness of survey responses is subject to the honesty and accuracy of participants' perceptions and self-reporting. Any generalization of the researchers' findings is limited to the midwestern suburban school district. Finally, the research setting is the school district in which the researcher once was employed. This can potentially create biases in the study because the researcher has formed theories and ideas about the school district while employed. However, using a quantitative design may limit the opportunity for some biases.

Delimitations of the Study

The study had the following delimitations:

- a. The location of this study was a midwestern public suburban school district.
- b. The population of this study included only teachers at two high schools in the midwestern public suburban school district.
- c. Students are not permitted to participate in this quantitative study, thus limiting the full complement of possible information to answer vital study research questions.

Assumptions

The first epistemological assumption of this study is that the researcher is independent of what is being studied. His role is to be an objective observer who does not influence the problem being studied. Biases of the researcher are due to the researcher using a quantitative design. The ontological assumption is the reality the research is objective as a result of using the Statistical Package for Social Sciences (SPSS) to analyze the data, but must be interpreted by the researcher. Secondly, the data will be reduced to numerical indices. Finally, the methodological

assumption regarding the process used is deductive in nature, in which is often referred to as top down logic. An example of deductive reasoning based on this dissertation is:

- a. Teacher efficacy beliefs leads to higher enrollment in rigorous coursework
- b. AP courses are considered rigorous coursework
- c. Therefore, enrollment in AP courses is associated to teacher efficacy beliefs

Definition of Key Terms

Advanced Placement Program: An educational program that permits high school students to take introductory college-level courses and receive college credit by passing a standardized end-of-course exam (Warne, Larsen, Anderson, & Odasso, 2015).

Academic Content: The subject area and the specific topics being covered in class.

Achievement Gap: The achievement gap refers to the difference between the performance of White students and Black students on academic assessments such as SAT and ACT and graduation rates (Paige & Witty, 2010).

Achievement Levels: Describe students' performance in terms of the content and skills on the assessment (Missouri Department of Elementary & Secondary Education, 2015).

American College Testing (ACT): The ACT Assessment is a widely used college entrance examination that assesses high school students' general educational development and their ability to complete college-level work (ACT 2008).

African-Americans: "Black or African-American" refers to a person having origins in any of the Black racial groups of Africa (Rastogi, Johnson, Hoeffel, & Drewery, Jr., 2010).

Affordance Value: The extent to which adults bring to the relationship resources to support a child's intellectual, social, and emotional development that would have otherwise been available (Davis, 2003).

Asset Perspective: Characterized by teachers recognizing the resources students bring with them and believing they can and will succeed in school (Stairs, Donnell, & Dunn, 2012).

Assimilationist Perspective: The belief that the teacher's role is to ensure that students fit into society (Ladson-Billings, 2009, p. 24).

College Readiness: The combination of skills, knowledge, behaviors, and awareness necessary to succeed in college and careers (College Board, n.d.).

Culture: The values, traditions, social and political relationships, and worldview created, shared, and transformed by a group of people bound together by a common history, geographic location, language, social class, and/or religion (Nieto, 2004).

Culturally Relevant Teaching: A pedagogy that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills, and attitudes (Ladson-Billings, 2009, p. 20).

Creative Traits: A set of motivational, attitudinal, and behavioral tendencies or proclivities conducive to creative ideation and productivity and typically measured by self-report instruments (Dai, Tan, Marathe, Valtcheva, & Pruzek, 2012, p. 192)

Critical Thinking: The ability to analyze the way you think and present evidence for your ideas instead of simply accepting your personal reasoning as sufficient proof (Morgan, n.d., p. 1).

Deficit Theories: Explanations that hypothesize that some people are deficient in intelligence and/or achievement either because of genetic inferiority (due to their racial background) or because of cultural deprivation (because of their cultural background and/or

because they have been deprived of cultural experiences and activities deemed by the majority to be indispensable for growth and development) (Nieto, 2004, p. 436).

Deficit Thinking: Blame the victim for school failure instead of examining how schools are structured to prevent poor students and students of color from academic success (Valencia, 2010).

Differentiated Instruction: Teaching the same material to students using a variety of instructional strategies, or it may require the teacher to deliver lessons at varying levels of difficulty based on the ability of each student (Weselby, 2014).

Divergent Thinking: The ability to generate many ideas that are appropriate to the task at hand (fluency), flexibility in crossing the boundary of categories (fluency), and originality in terms of rarity (originality) (Dai, Tan, Marathe, Valtcheva, & Pruzek, 2012, p. 192).

Dual Credit: A way to allow high school students to take courses offered by colleges while earning high school and college credits (LPSD Career and Educational Planning Guide, 2015).

End-of-Course Testing: The End-of-Course Exams are criterion-referenced tests taken at the completion of a course of study to determine whether a student demonstrates attainment of the knowledge and skills necessary for mastery of that subject (Missouri Department of Elementary and Secondary Education, 2013-2012).

Engagement: Energy in action, the connection between person and activity, consisting of three forms: behavioral, emotional, and cognitive (Russell, Ainley, & Frydenberg, 2005).

Every Student Succeeds Act (ESSA): Supports state efforts to ensure success for all students, to include students “being taught to high academic standards, equity by protecting disadvantaged and high need students, and accountability through implementation of statewide

assessments that measure students' progress toward high standards (U.S. Department of Education, n.d.).

Equity: All students receive the individual support they need to reach and exceed a common standard (Edwards & Duggan, 2011).

Generational Poverty: Having been in poverty for at least two generations (Payne, 1996).

Hidden Rules: The salient, unspoken understandings that cue the members of the group that this individual does or does not fit (Payne, 1996).

High-Stakes Test: Used to describe tests that have high stakes for individual students, such as grade promotion or standard high school diploma. High stakes testing is designed to hold individual students accountable for their own test performance (Cortiella, 1999).

International Baccalaureate (IB): A way for students to prepare for university entry through a rigorous curriculum and standardized examinations. IB is organized around a school-level curriculum that includes all academic subject areas (Missouri Department of Elementary & Secondary Education, 2015).

Majority Culture: Those with more power and privilege; those who are perceived as the norm (Bucher, 2011).

Meritocracy: The assumption that with hard work and determination, all individuals can achieve whatever they desire (Stairs et al., 2012).

Minority Group: A subordinate group whose members have significantly less control or power over their lives than members of a dominant or majority group (Schaefer, 1993).

Missouri Assessment Program (MAP): Mandated educational reform by the Outstanding Schools Act of 1993. The Missouri Department of Elementary and Secondary Education (DESE) identified the knowledge, skills, and competencies that Missouri students should acquire by the

time they complete high school and created a program to evaluate student progress toward those academic standards. The standards and the assessment system that evaluates students' performance are called the Show-Me Standards/Course Level Expectation (CLE) (Missouri Department of Secondary Education, 2013-2014).

Motivation: The teacher's sense of efficacy in the area of motivation is his or her ability to "tap into one's perceived ability to get students to value learning and to engage their interest" (Yough, 2008).

MSIP 5: Missouri accountability system for reviewing and accrediting public school districts (Missouri Department of Elementary & Secondary Education, 2015).

Multicultural Education: An approach to teaching and curriculum that rejects discrimination and advocates the value of all racial, ethnic, linguistic, sexual, religious, economic, and ability groups (Stairs et al., 2012)

Myth of Meritocracy: Refers to the critique of the overarching notion that hard work always leads to success and everyone can succeed equally if he or she desires it enough (Stairs et al., 2012).

No Child Left Behind: A United States Act of Congress that is a reauthorization of the Elementary and Secondary Education Act, which included Title I, the government's flagship aid program for disadvantaged students. The act increased accountability through required statewide annual testing in reading and mathematics in grades three through eight, and one statewide test of reading, mathematics, and science between tenth and twelfth grades (Stairs et al., 2012).

Rand Corporation: A research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous (Rand Corporation, n.d.).

Rigorous Curriculum: Refers to the breadth of courses taken as well as the intellectual difficulty of content within a subject matter (Atteweell and Domina, 2008).

School Culture: The stream of norms, values, beliefs, traditions, and rituals that has built up over time as people work together, solve problems, and confront challenges (Deal & Peterson, 1997).

Stakes: The consequences associated with test results (Glass, 2002).

Standardized test: A test that contains well-defined questions of proven validity and produces reliable scores. Such tests are commonly paper-and-pencil selected response examinations containing multiple-choice items, true or false items, or matching exercises. They may contain short fill-in-the blank items. Such tests may also contain performance assessment items (e.g., a writing sample); however, the performance assessment items require a short time to complete and can be reliably scored. The time spent on performance assessment items is limited to assure that enough selected response items can be administered during the allotted testing time to yield good score reliability (FairTest, 1995).

Situational poverty: Lack of resources due to a particular event such as death, chronic illness, and divorce (Payne, 1996).

Socioeconomic Status: Socioeconomic status is the social standing or class of an individual or group. It is often measured as a combination of education, income, and occupation (Manning & Baruth, 2000).

Student Engagement: Being alert, completing assignments, being curious and passionate (Corso, Bundick, Quaglia & Haywook, 2013).

Teacher Efficacy: The teacher's belief in his or her capability to organize and execute a course of action required to successfully accomplish a specific teaching task in a particular context (Bandura, 1977).

Summary

This chapter contained an introduction to the researcher's quantitative study that investigated teacher efficacy beliefs in student engagement and ascertained whether teachers' beliefs create difficulties in recommending African-American students to Advanced Placement coursework. The researcher also sought to understand if the efficacy beliefs of Advanced Placement teachers are different compared to those of general education teachers.

Additionally, this chapter included background information, statement of the problem, purpose of the study, research questions, conceptual underpinnings, delimitations, limitations, assumptions, and definitions of key terms used in the study. Chapter 2 consists of a comprehensive review of the literature relative to testing and accountability, teacher efficacy, and student engagement. Chapter 3 contains the methodology used to conduct the study. Chapter 4 includes the analysis of the study's results using *Discovering Statistics for Social Sciences* computer software (Fields, 2009). In chapter 5, the researcher discusses findings and conclusions and offers recommendations for future study. At the conclusion of this study, it is the researcher's hope that the study will inform best practices for leaders and allow them to recommend a framework for future practice in resolving the issue of equity and access for marginalized students, more specifically, to include African-American students being recommended for AP coursework.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The purpose of this quantitative study is to add to the body of research regarding teacher efficacy beliefs in student engagement. The first goal is ascertain if teachers' efficacy beliefs in engagement create difficulties in recommending African-American students to Advanced Placement coursework. The second goal is to evaluate if Advanced Placement teachers' efficacy beliefs in engagement are different compared to teachers not teaching Advanced Placement coursework.

The researcher used the Cultural Deficit Theory (CDT) as the primary framework for this study. CDT purports that teacher's negative beliefs of African-American and low-income students can be a factor of students failing in school. Oakes and Lipton (2007) called this phenomenon deficit perspective; defined as having negative assumptions about non-White and poor students who come to school with deficits that make their success difficult. According to Perry (2012), teachers are the most important person in a child's education, thus deficit thinking may limit the opportunity to close the achievement gap for African American students (Perry, 2012) if teachers subscribe to CDT. The practice of concentrating low-income students in failing urban schools is also a major obstacle to closing the achievement gap (Rothstein & Santow, 2012). This chapter will review the pertinent historical literature relative to testing and accountability, teacher efficacy, and student engagement through the lens of CDT.

Review of Historical Reforms Impacting Education

In the past thirty years, there have been three major education reforms that are important to ensuring the United States can compete globally and providing students with equal opportunities to realize their dreams through education. Those reforms include the 1983 report A

Nation at Risk, former President Bush's 2001 No Child Left Behind Act, and the reauthorization of The Every Student Succeeds Act (ESSA) signed by former President Obama on December 10, 2015. Former President Obama's reauthorization of ESSA was a springboard to implementing his White House College Scorecard and Race to The Top education initiatives. The common goals that emerged from these reforms are that schools must offer a more rigorous curriculum and higher standards, they must be held accountable for student growth, and students must meet higher academic standards to compete with their peers in a global economy that will not accept mediocrity.

A Nation at Risk

In 1981, Secretary of Education T. H. Bell created the National Commission on Excellence in Education. Secretary Bell was concerned that our nation was at risk of losing its competitive edge globally, and believed that Americans should understand they would be disenfranchised if they do not possess the skills, training, and literacy to compete in a global economy. The overall mission of the commission included the following aims: 1) to assess the quality of teaching and learning in public and private schools, universities, and colleges; 2) to compare United States schools to those of other advanced nations; 3) to study the relationship between college admissions and student achievement in high schools; 4) to identify educational programs which result in student success in college; 5) to assess the degree to which major social and educational changes in the last century have affected student achievement; and 6) to define problems we must overcome if we are to pursue educational excellence (A Nation at Risk, 1983).

The Commission identified several at risk indicators: students did not score first or second compared to their peers in industrialized nations, scores on average standardized tests were lower since Sputnik (1957) was launched, more than fifty percent of gifted students' tests

did not match their tested ability with comparable achievement in schools, and more than seventy-two percent of college students were enrolled in remedial mathematics courses (A Nation at Risk, 1983). The commission's findings indicated that American high school students were not enrolling in rigorous coursework in subjects such as mathematics and French when given a choice. Only 31% of students of the recent high school graduates completed intermediate algebra, while 13% completed French I. In order to compete with other industrialized nations academically and, later on, in their careers, students must demonstrate excellence, defined as performing up to their ability and challenging their personal limits. However, based on available statistics, students on the general track in high school earned 25% of their credits in physical and health education, work experience outside the school, and remedial mathematics and English courses. Additionally, when looking at expectations relative to the level of knowledge, abilities, and skills high school and college graduates should possess, the committee found that rigorous testing requiring students to show mastery before receiving a degree or diploma is important (A Nation at Risk, 1983). Students in the United States who enroll in general-track courses will not be able to compete academically with students in other industrialized nations.

No Child Left Behind

The No Child Left Behind Act (NCLB) of 2001 is a federal mandate that require states to develop assessments in basic skills at various grade levels in order to receive federal funding. The framers of this act believed that setting high standards and establishing measureable goals could improve student outcomes in education. Each state had the latitude to establish its own standards (U.S. Department of Education, 2002). In order to comply with the federal mandate, the state of Missouri requires students to complete the Missouri Assessment Program (MAP) in

elementary and middle school and End-of-Course exams in high schools (Missouri Department of Elementary and Secondary Education, nd).

Although the introduction of NCLB started the conversation regarding states setting higher standards, the initiative caused unintended negative consequences for many states. States received incentives to improve rigor and standards, but instead of improving the standards, they lowered expectations for standards (Weiss-Green, 2007). NCLB emphasized the importance of creating an environment where all kids are held to the same academic standards and expectations regardless of race, language, socioeconomic status, or nationality (Boykin & Noguera, 2011). However, in the process of implementing the new rules, states punished schools that failed as opposed to rewarding success. Also, states focused on absolute scores as opposed to rewarding students' growth and progress toward meeting the standards (Weiss-Green, 2007). States also subscribed to a pass-fail mentality and recommended a set of one-size-fits all interventions for schools not meeting their goals (Elementary and Secondary Education Act, 2001).

Author Jonathan Kozol is a National Book Award-winning author of *Death at an Early Age*, *Savage Inequalities* and *Amazing Grace*. He is not fond of NCLB and its implementation. These school reforms most often affect urban school districts that do not have the infrastructure to meet the academic of African-American and Latino students. The educators speak of raising test scores, promoting students to the next grade, and graduation policies in general terms, but these policies are primarily targeted toward poor children of color. Kozol purported he could not foresee a time when Black and Latino students would not be attending a segregated school (Kozol, 2005).

NCLB also required schools and teachers to abide by accountability standards. Students were required to pass standardized tests or the school could risk losing funding. Losing funding,

turn, could result in teachers losing their jobs and school programs being cut that students may have needed to be successful in school. Under NCLB, teachers were required to have a bachelor's degree, be fully certified, and demonstrate subject matter knowledge usually through Praxis tests (Elementary and Education Act, 2001). PRAXIS Series tests are comprehensive tests that measure academic skills in reading, writing, and mathematics. The first praxis test is usually referred to as Praxis I. Praxis II measures content knowledge and general subject specific teaching skills of teachers attempting to become certified (Educational Testing Service, 2016) NCLB's goal is to close the achievement gap in education and change the culture of America's schools using strategies of accountability, greater freedom for states and communities, encouraging proven methods of education and more choices for parents (U.S. Department of education, 2002). Well-performing suburban schools that are generally may see their scores drop as more minorities enter the district if those schools are not engaging students. If that occurs, the school's performance decreases, jeopardizing its letter grade. Ferguson suggested three strategies to close the achievement gap (Ferguson, Clark, & Stewart, 2002):

- a. Reduce skill deficits.
- b. Increase support at home.
- c. Support professional development that emphasizes content, pedagogy and teacher/student relationships.

Clark found in his research five influential factors that influence in-school and out-of-school achievement for minority and at-risk students listed below (Ferguson, Clark, & Stewart, 2002). The CDT suggests that African-American and poor students often fail to perform well in school if teachers have negative beliefs about the ability of these students, then teacher actions in the classroom can be detrimental to the academic success of these students (Irizarry, 2009).

Additionally, research suggests that being engaged in the classroom and other activities may affect the students' academic success (Corso et al., 2013). Even if a school is considered an exemplary school in their state, they cannot afford to rest on their success. They must continue closing the achievement gap for African-American students and provide them with skills required to compete in a changing world, and in the twenty-first century marketplace (Boykin & Noguera, 2011). The five influential factors Clark focused on include:

- a. Teacher actions in the classroom
- b. Students' weekly participation in high-yield in-school and out-of-school activities
- c. Quality of students' participation in out-of-school activities
- d. Parental beliefs and expectations
- e. Parent-teacher communication

White House Scorecard

President Barack Obama's White House Scorecard hoped to be a major contributor to strengthening the education system and middle class security (U.S. Department of Education, 2009). President Obama stated, "If we want America to lead in the 21st century, nothing is more important than giving everyone the best education possible, from the day they start preschool to the day they start their career" (Obama, 2012). President Obama's White House Education initiative focused on six important goals: 1) make college education more affordable, 2) ensure every student graduating high school is prepared for college, 3) ensure students understand that a post-secondary degree is necessary to obtain twenty-first century jobs, 4) support great teachers, especially in the math and science disciplines, 5) support early learners, and 6) implement the Race to the Top initiative (U. S. Department of Education, 2009).

To ensure students graduating high school are ready for college, Obama recommended four reforms:

1. Higher standards and better assessments for students to succeed in college and the workplace
2. Ambitious efforts to recruit, prepare, develop, and advance effective teachers and principals, especially in the classrooms where they are needed most
3. Adoption of better data systems to provide schools, teachers, and parents with information about student progress
4. Increased emphasis and resources for the rigorous interventions needed to turn around the lowest performing schools

Obama's Race to the Top

President Obama's Race to the Top initiative changed the landscape of education by offering incentives for states willing to implement systemic reform to improve teaching and learning in our schools. The systemic reform implies states will raise standards, improve teacher effectiveness, use classroom data effectively, and develop new strategies to assist struggling schools. In the process of redesigning high schools in America, schools are expected to implement reforms that are rigorous, relevant, and focused on real world experiences. The goal of these reforms is to ensure high school students are college ready and all graduate with college-level coursework or college credits. Advanced Placement courses can be considered college level coursework, and students can earn college credits by getting a 3 or higher on an AP exam or completing dual credit courses (U. S. Department of Education, 2009).

In 2012, President Obama committed over 400 million dollars to states that develop creative models to address the individual learning needs of students, with the goal of helping

them take the initiative for their success. Currently, 46 states and the District of Columbia have submitted plans to reform education in their states. Nineteen states received over 4 billion dollars in 2011, serving 22 million students, employing 1.5 million teachers in 42,000 schools, and representing 45 percent of K-12 students and 42 percent of all low income students nationwide.

Former President Obama's assertion that nothing is more important than giving everyone the best education possible is affirmed by Strong-Leak's (2008) statement: "One of the most important goals of the modern American high school is to prepare students for college" (Strong-Leak, 2010). Attewell and Domina (2008) suggested that students enrolling in rigorous coursework are more likely to attend a four-year college or a selective university and graduate from college than students enrolled in less rigorous classes. High schools must bolster academic expectations and improve outcomes (Strong American Schools, 2008). Additionally, students who typically need remediation courses are those who took weaker course loads. Students graduating with Algebra 2 being the highest math completed are twice as likely to enroll in remediation courses as students having completed Calculus (Strong American Schools, 2008).

The three reforms implemented in the past thirty years have been studied extensively; however, there is a lack of studies regarding reasons African-American high school students continue to be underrepresented in rigorous AP courses. Additionally, Attewell and Domina (2008) suggested that a rigorous curriculum promotes higher order thinking, engages students, reduces discipline problems, and builds students' capacity to learn.

Race and class continue to play a significant role in education. Middle and upper class families flee to the suburbs, while lower class kids are crowded in inner city schools (Hooks, 1994). African-Americans are far behind whites in participating in AP programs. This is significant because AP courses allow students to earn college credits, reduce cost of college, and

let students graduate early from college. Also, AP courses have a great impact on college admission (Warne et al., 2015). Research indicates the AP gap is widening relative to African-Americans enrolling in AP courses. Furthermore, AP credits are disproportionately valuable to African-Americans because of the wealth gap between African-American and Whites. AP courses can significantly defray the cost of college for students (*The Journal of African-Americans in Higher Education*, 1998). Requirements to enroll in AP coursework in some high schools include the following: complete prerequisite coursework, minimum grade point average (usually 3.0 – 3.5), and teacher recommendation. Many teachers, guidance counselors, and administrators continue to hold the deficit perspective that black students cannot handle rigorous coursework like AP classes ("There is both good news and bad news in black participation in Advanced Placement programs," 2005/2006). Often schools can even discourage low-performing students from enrolling in AP courses through policies, rules, and practices (Ndura, Robinson, & Ochs, 2003).

Students who do not enroll in rigorous coursework can have to enroll in remedial courses just to acquire basic academic skills in college. Research has shown that forty-three percent of students enrolling in two-year institutions and twenty-nine percent enrolling in four year institutions are enrolled in remedial classes (Strong American Schools, 2008). It is estimated that in 2004-2005 each student enrolled in remedial classes paid an estimated \$1,607 - \$2,008 per class at two-year institutions and \$2,025-\$2,531 at four-year public institutions (Strong American Schools, 2008). The literature also indicates students enrolling in remedial classes are more likely to drop out. Only nineteen percent of students enrolling in three to four remedial courses in 1992 earned bachelor's degrees by 2000 (Strong American Schools, 2008).

Furthermore, students enrolling in more advanced classes exhibited more enthusiasm for the school and their peers (Conchas, 2006, p. 25).

Poverty

Teachers who exhibit deficit thinking must understand the mindset of students living in poverty and poor students if they are to have consistent success with these students. In her book *A Framework for Understanding Poverty*, Payne suggested each economic social class has hidden rules that are only known to those within the group. Payne's research also shows it is very difficult for students to move to the next class because those rules are hidden and become barriers. Students living in poverty are being taught by middle class teachers, and those teachers bring middle class values and economic class hidden rules to the classroom. Middle class teachers do not understand students from poverty nor do they know hidden rules that are necessary for survival while living in poverty. Payne argued that not understanding the existence of different hidden rules makes it difficult for children living in poverty to succeed because they grow up understanding the hidden rules of poverty, but not the hidden rules of the middle class (Payne, 1996).

Payne listed twelve points one should remember about poverty (1996, p. 2-3):

1. Poverty is relative.
2. Poverty occurs in all races and in all countries.
3. Economic class is a continuous line, not a clear-cut distinction.
4. Generational poverty and situational poverty are different.
5. This work is based on patterns. All patterns have exceptions.
6. An individual brings with him/her the hidden rules of the class in which he/she was raised.

7. Schools and businesses operate based on middle-class norms and use the hidden rules of middle class.
8. For our students to be successful, we must understand their hidden rules and teach them the rules that will make them successful at school and at work.
9. We can neither excuse students nor scold them for not knowing: as educators we must teach them and provide support, insistence, and expectation.
10. To move from poverty to middle class or middle class to wealth, an individual must give up relationships for achievement (at least for some period of time).
11. Two things that help one move out of poverty are education and relationships.

Payne (1996) suggested further there are four reasons one leaves poverty: 1) it is too painful to stay, 2) a vision or goal, 3) a key relationship, or 4) a special talent or skill. Students living in poverty must understand the connection between taking rigorous coursework, being successful in college, and being able to live a good quality of life. Teachers possessing the CDT view must understand African-American students and students living in poverty to start the process of changing those kids' negative efficacy beliefs and their lack of belief in education.

In this study, the researcher will explore the teacher efficacy beliefs to ascertain the issues that may create difficulties for teachers in recommending African-American students for rigorous coursework, measure teacher efficacy beliefs in student engagement, and seek to understand if the efficacy beliefs of AP teachers are different compared to the beliefs of those who do not teach AP classes.

This research is significant because it may help leaders develop frameworks to properly represent poor and African-American students in rigorous coursework. For the purpose of this study, poor students are defined as receiving free or reduced lunch or state aid.

Accountability and Testing

History of High Stakes Testing

The history of high stakes testing has roots in the launch of Sputnik in 1957. The Soviet Union beat the United States to space; at that point, politicians began questioning the education system in the United States. State and federal politicians became more involved in education to include supporting tests to assess learning in American schools (Amrein & Berliner, 2002).

Sputnik was the world's first artificial satellite, launched by the Soviet Union on October 4, 1957. After the launch, the United States were concerned the Soviets may also have the ability to launch ballistic missiles carrying nuclear weapons (NASA, n.d.). Concurrently, politicians believed students in the United States were falling behind other countries. Therefore, they instituted a minimum competency test during the 1970s to measure basic skills of American students. The test was supposed to ensure that students master the minimum basic skills to be productive citizens. Florida was the first state to implement a minimal competency test. However, they postponed the test in the 1980s when students from low socioeconomic backgrounds and minorities' dropout rates increased (Amrein & Berliner, 2002).

In 1983, the National Commission on Education released a report called *A Nation at Risk*. After the report, the era of high stakes testing began, along with a movement to end Minimum Competency Testing. The creators of new tests thought high stakes testing would raise the nation's standards of achievement in education. They rewarded high performing schools that

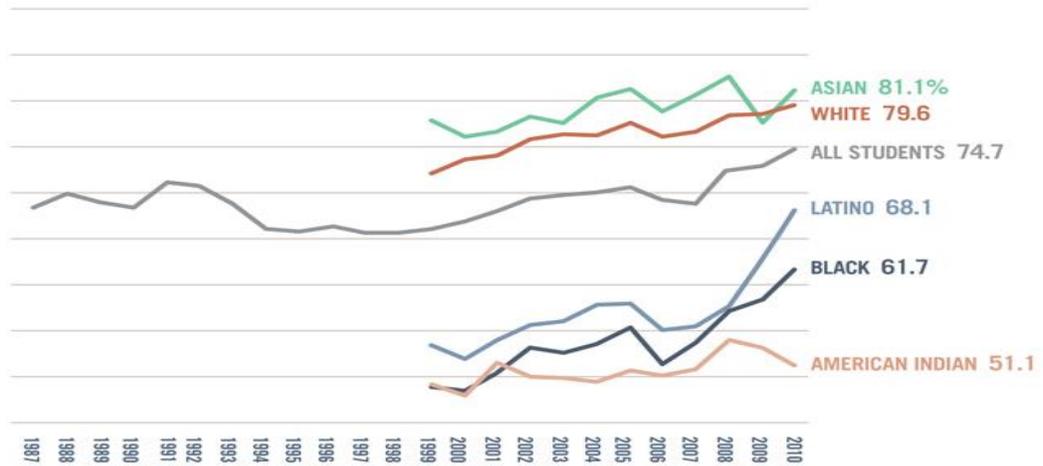
met state standards and penalized low performing schools, thinking schools would improve to avoid further penalties (Amrein & Berliner, 2002).

Despite previous predictions, a study conducted in year 2000 concluded that high stakes testing programs were linked to decreased rates of high school completion, corroborating the view of high stakes tests opponents. The first piece of information that led to researchers' conclusion was the Minimum Competency Testing (MCT) era. The MCT error occurred as a result of the State of Florida passing a law in 1976, which required students to pass minimum competency test to graduate high school (Beard, 1986). Madaus and Clark's (Clarke, 2000) research indicated there was a strong correlation between high stakes testing and high school dropout rates. They also indicated in a 1986 study that states with the highest dropout rates administered high stakes tests, while half of the ten states with the lowest dropout rates did not administer high stakes tests. The remaining half administered low stakes tests. Nine of the ten states with the highest dropout rates administered high stakes tests to determine if students would graduate (Orfield & Wald, 2000).

The graph below indicates that African-Americans had the lowest graduation rate for the class of 2010 in Missouri, but the numbers do not reveal the reason was due to students failing high stakes standardized tests (Editorial Projects in Research, 2013).

RATES STILL RISING

The nation's public school graduation rate continued to climb for the third year in a row, reaching 74.7 percent for the class of 2010. The last time three-quarters of high school students graduated was in 1973. The strongest year-over-year improvements were found for Latino, black, and Asian students.



SOURCE: EPE Research Center, 2013

Figure 1. Public School Graduation Rate.

Achievement Gap

One of the most important attributes of NCLB is holding all children to the same standards, regardless of socio-economic status, race, language, or nationality (Boykin & Noguera, 2011). The White House scorecard builds on closing the achievement gap by the Obama Administration (2009) recognizing that every student graduating from high school must be prepared for college (U.S. Department of Education, 2009). Holding all children to high expectations is a step in the right direction to closing the achievement gap between Black and White students. One strategy intended to close the achievement gap is teaching students critical thinking, a skill that transcends careers and academics. Critical thinking is defined as the ability to analyze the way you think and present evidence for your ideas instead of accepting your personal reasoning or opinion as sufficient proof (Morgan, n.d., p. 1). Students possessing critical thinking skills have the ability to engage in autonomous learning—not to depend on the classroom teachers as often, but to engage in independent learning. Also, critical thinking skills

improve academic performance. According to Elder and Paul, students with critical thinking skills are able to make connections across disciplines, view knowledge as useful, understand content much deeper, and can apply the knowledge to everyday life (Elder & Paul, n.d.).

Holding students to high expectations will help to close the achievement gap, which is widening relative to African-American AP test takers. The largest African-American to White scoring gap was in the electrical physics test (1988). African-Americans scored an average of 1.26, while Whites scored an average of 3.36. While more African-American men take AP exams than African-American women, the men are scoring an average of 2.28 while African-American women's average score was 2.18 ("College Bound African-American Students are Making Gradual Inroads in Advanced Placement Tests," 1998). Decuir-Gunby and Taliaferro (2008) indicated educators are concerned about African-American students' access to AP courses. According to The College Board (2008), African-American students are the most severely underrepresented among AP test takers by 50%. Former Secretary of Education Rod Paige (2004) advocated that AP courses can help close the educational divide because they are characterized by more intensive learning, higher expectations, and more pronounced results. Decuir-Gunby and Taliaferro (2008) claimed fewer African-American students are enrolled in AP courses because they are less likely to be recommended by white teachers. Additionally, minority students enrolled in AP classes frequently feel alienated because they are not adequately represented (Ford, 2009). Furthermore, even African-American students enrolled in AP courses rarely take the College Board AP exams or earn high scores on the exams (College Board, 2006).

Many schools seek to assign blame for reasons children are underperforming in schools. Their reasons include lack of parental support, students being lazy and unmotivated, and lack of

prioritizing by administrators and district personnel. Boykin and Noguera (2011) suggested that all these reasons may have some impact on low-income students' achievement, but achievement gap is more of a multidimensional phenomenon. They argued that we must recognize how these multidimensional phenomena interact or we will have little success on closing the achievement gap (Boykin & Noguera, 2011). Some parents and educators believe that the achievement gap will not be closed due to ingrained attitudes and beliefs about underperforming children and their ability to eventually perform at high levels. Schools are attempting to implement "race neutral" policies, but these often become obstacles to eliminating racial disparities in academic outcomes (Boykin & Noguera, 2011, p. 7).

Furthermore, Boykin and Noguera's (2011) research confirmed that the achievement gap is multidimensional as they identified schooling indexes which influence student achievement. Those indexes include students' grade point averages, performance on district, state, and national achievement tests, rates of enrollment in rigorous courses, and differential placements in special education and gifted and talented programs. They also indicated that behavioral indicators such as school dropout, suspension, and referral rates contribute to the achievement gap (Boykin & Noguera, 2011, p. 4).

End-of-Course Exams

End-of Course tests were implemented in the state of Missouri in 2008 for three subjects: Algebra I, English II, and Biology. In 2009, Missouri added English I, Algebra II, Geometry, American History, and Government. Starting in 2014-2015 school year, Physical Science will be a new EOC included in Missouri's accountability suite. High school students were required to pass EOCs in Algebra I, English II, Biology, and Government prior to graduation, starting in 2014-2015 school year. Students who have taken Algebra I prior to high school must pass the

Algebra II EOC prior to graduation. The Missouri Department of Elementary and Secondary Education identified the following as the purposes of EOCs (Missouri Department of Elementary & Secondary Education, 2015):

1. Measuring and reflecting students' mastery toward post-secondary readiness
2. Identifying students' strengths and weaknesses
3. Communicating expectations for all students
4. Serving as the basis for state and nationally accountability plans
5. Evaluating program

Currently, 19 states have adopted EOC tests, compared to only two states that have reportedly implemented EOC tests in 2002. Nine other states are currently developing EOCs to be implemented (Domaleski, 2011).

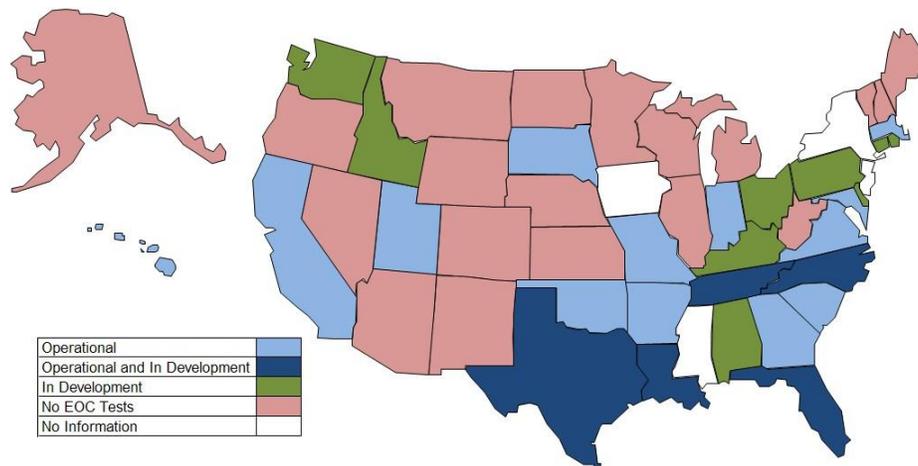


Figure 2. State Implementation of End-of Course Tests (Domaleski, February 2011).

EOCs are assessed based on achievement level descriptors. Scale scores are used to determine the students' achievement level. Scale scores range from 100 to 250. Each

achievement level represents standards of performance for each assessed content area; achievement levels describe what students can do in terms of the content and skills on the assessment. The four achievement level descriptors corresponding to their scale scores are as shown in Table 1 below.

Table 1

Achievement Levels and Corresponding Scores

Achievement Levels	English II	Algebra I	Biology	English 1	Algebra II	Geometry	American History	Government
Advanced	225-250	225-250	225-250	225-250	225-250	225-250	225-250	225-250
Proficient	200-224	200-224	200-224	200-224	200-224	200-224	200-224	200-224
Basic	180-199	177-199	178-199	177-199	182-199	182-199	182-199	179-199
Below Basic	100-179	100-176	100-177	100-176	100-181	100-181	100-181	100-178

Assessment Issues

The Office of Civil Rights resource guide in 1999 stated, “a decision or characterization that will have major impact on a student should not be made on the basis of a single test score.” Robert Schwartz, president of ACHIEVE and a prominent advocate of standardized tests also pointed out, “Common sense suggests that states should not rely solely on the results of one-shot assessment.” Although educational testing services warn against using test scores alone to make graduation decisions about students, school districts continue to use these tests to make graduation, promotion, and tracking decisions (Orfield & Wald, 2000).

In response to the issues outlined above, Minnesota Senator Paul Wellstone introduced a bill called “The Fairness and Accuracy in Student Testing Act.” The act was designed to slow the pace of high stakes tests and prevent standardized tests from being the sole determinant for students to graduate. He suggested using multiple measures to assess students’ performance in school (Wilson, 2000).

Social Consequences of High Stakes Testing

Janel Byrd-Chichester warned that because minority students did not score as well as the majority, education barriers would be created, and opportunities would be limited to low wage jobs for a group of people. Chichester also warned that the prison population would increase and more resources would be spent investing in prisons than in our children (Wilson, 2000).

Furthermore, state dropouts were about three times likely as high school completers who don't attend college to be welfare recipients. In addition, thirty to forty percent of state and federal prisons inmates are high school dropouts, thus imposing a significant strain on the government (Alliance for Excellent Education, 2002).

American College Test (ACT)

ACT is a required test to be accepted in most colleges and universities in the United States. It is often referred to as the gatekeeper to entrance in colleges and universities of your choice and to earning scholarships that can significantly defray the cost of college. The ACT benefits students by evaluating college readiness. It provides students with college choice and it provides an interest inventory indicating majors students might want to consider (Go College, n.d.).

Role of AP Courses

The AP Program was started in the 1950s and administered by the College Board for the purpose of providing rigorous college level coursework for high school students. The AP program currently offers 34 exams and courses, designed to serve high school populations (College Board, 2012). The College Board has recognized the under-representation of minorities and less privileged students in AP courses. To increase enrollment equality in the AP program among students from disadvantaged schools, states have implemented teacher training and AP

incentive programs. The implementation of incentive programs includes paying for exam fees in many disadvantage communities. Unfortunately, even with these AP initiatives, the populations of students from disadvantaged schools fail to qualify for the AP program. College faculty members develop the AP curriculum for the College Board after surveying the content of courses in similar subjects at more than 200 colleges. In this study, the researcher attempted to add to the body of research regarding the underrepresentation of minority students in AP, advanced and honors courses.

Federal Government Impact on AP Initiative

In 2006, former President Bush called for more math and science teachers to be trained to teach AP courses. More than 70,000 high school teachers were trained, doubling previous efforts. The U.S. Department of Education subsidized these efforts through grants by underwriting the expansion of the AP program and paying for test fees for students (Sadler, Sonnert, Tai, & Klopfenstein, 2010).

Equity

After conducting research on behalf of the College Board, Edwards and Duggan (2011) stated, “Enfolding equity and access in the overall learning environment happens when educators treat all students as intellectuals, instead of treating some as being intellectually challenged.” They also made recommendations to make equitable access a guiding principal and allow all students willing and academically prepared to enroll in AP classes. They encouraged educators to:

1. Eliminate barriers restricting access to students enrolling in AP courses
2. Ensure AP courses represent the diversity of their student populations
3. Provide students with rigorous coursework prior to enrolling in AP courses

Equity is critical a critical component for American schools to close the achievement gap. Race and class continue to be predictors of students of achievement. Children raised in poverty from low-income less educated families continue to struggle with high academic achievement; thus, seeing schools in low-income communities being at the bottom of reports in terms of test score rankings is no surprise to most educators (Boykin & Noguera, 2011).

Tracking

Tracking is a practice used in schools to place students in classes. Lack of exposure to a rigorous curriculum may cause students to believe they belong in lower tracks (Darity, Castellino, Tuson, Cobb, & McMillen, 2001). Some educators argue this practice is used to keep African-Americans, students of color, and economically disadvantaged students from reaching their full potential (Strong-Leak, 2007). Based on The Rand Measure 1, teachers who agree that a teacher really can't do much because most of a student's motivation and performance depend on his or her home environment believe that environmental factors overwhelm any power that teachers can exert in schools (Tschannen-Moran & Woolfolk-Hoy, 2001, p. 783). Payne suggested the reason might be because of the social class students are associated with (Payne, 1996). In other words, teachers who have negative beliefs and assumptions about the ability, aspirations, and work ethic of minority students may be one reason these students are tracked into lower classes.

Hooks described an incident with her daughters where the teacher encouraged her to have them tested to be in the gifted program at the cost of two hundred dollars for each child. Both performed at an acceptable level, allowing them to be fast-tracked into the gifted program in elementary school. This example demonstrate that if you are poor, without active parents, financial resources, or knowledge, you might not have the opportunity to engage in gifted

programs. Hooks possessed the resources and knowledge that benefited her daughters. Hooks (1994) inferred that kids put on the right track have access to special classes and activities that are more challenging and engaging (Hooks, 1994). Kozol (1991) also spoke of this practice in his book, *Salvage Inequalities*. Being poor equates to opportunities lost because kids in special programs have more chances to expand their knowledge base. If their parents were able and willing to pay, they could participate in the early bird program. Additionally, Hooks asserted tracking can result in kids having to accept low paying, low skill level jobs. Mickelson (2001) claimed the identification process for gifted kids is racially discriminatory because of how they handle parents. He says savvy parents are allowed to use their personal resources on their children's behalf, and programs selectively offer them information about private testing. Hooks (1994) agreed that class and race matter in determining if a kid has a quality education. Middle and upper class parents flee to the suburbs, while lower class kids are crowded into inner city schools. Hooks' suggestion is corroborated by Payne's poverty theory, according to which students and parents from poor backgrounds do not understand the middle class hidden rules (Payne, 1996)

Cocking (1990) further argued that although AP benefits students enrolled in AP classes, any type of a grouping program like AP is not beneficial to the school community as a whole because general and lower ability groups do not benefit (Cocking, 1990; Gamoran, 1992). Furthermore, Cocking's research indicated that it is undemocratic not to offer different educational opportunities to fit children's different needs. Grouping students in AP courses only benefits higher-level groups (Cocking, 1990). According to CRT, students in poverty may be at a disadvantage because of the racism engrained in society (citation) and many of them being grouped in lower tracks (Kelly, 2009).

By the 10th grade, African-Americans are enrolled in low-track mathematics courses more often than their white counterparts. The reason seems to point to lower levels of achievement, prior course taking, and lower socioeconomic status. One study found that the African-American/white gap in mathematics course-taking is greatest in integrated schools where African-American students are usually the minority (Kelly, 2009). Furthermore, Kelly purported that placement decisions by guidance counselors and teachers favor high-status groups in schools because African-Americans tend to enter schools with lower average levels of achievement than white students. African-Americans may be suffering from a perception that they put forth less effort completing schoolwork, thus they are put in low-track courses due to that perception (Ainsworth-Darnell & Douglas, 1998).

Barriers to Entry into AP and Advanced Courses

Barriers to African-American students taking AP and advanced courses include AP courses being concentrated in high schools of affluent white neighborhoods of major cities, African-American students being told they are not “up to snuff academically” for AP courses, and exam fees (“There is both good news and bad news in black participation in Advanced Placement programs,” 2005/2006). Many African-American students have been tracked into vocational training instead of college preparatory classes. Teachers, guidance counselors, and administrators perceive African-American students as not equipped for the rigorous AP curriculum. Another barrier is African-American students being told by their peers they are “acting white” or selling out their race because they are enrolled in AP courses (College bound black students are making gradual inroads in Advanced Placement tests, 1998).). Furthermore, peer pressure prevents some African-American students from enrolling in AP, honors, and gifted and talented classes (Kunjufu, 2002).

AP Impact on College Admissions

AP courses have tremendous impact on college admissions, earning college credits, and reducing cost of college, which allows students to graduate early. African-Americans should support the AP programs and encourage African-American students to participate because over 2900 colleges and universities in the United States grant college credits to students who receive a high score on AP exams (Strong-Leak, 2008).

Many colleges in the United States award additional points for admission if students have taken AP classes in high school (Hebel, 1999). Additionally, some colleges actually penalize students if they have not taken an AP course, but their transcript indicates they should be able to handle an AP course (Lawrence, 1996). Students taking rigorous high school coursework are better prepared for college and less likely to drop out (Lord, 2000, p. 28). AP studies conducted at Yale, Duke, and Michigan Universities indicated that AP students were a superior group prior to college entry and performed better over a four-year college career (Willingham & Morris, 1986). Teicher (2000) confirmed that even if students decide not to take the AP exams, teachers say that taking the AP courses help prepare them for college (Tschannen-Moran & Woolfolk-Hoy, 2001). Admission officers realize students taking AP courses are more mature than their peers and college work will not be a surprise for them because they are accustomed to hard work and know how to stay ahead in class. Additionally, it is perceived that individuals improves their chances of getting into the college of their choice by taking AP courses because admissions officers then see those students as willing to put in the extra time and effort (College Board, 2008). AP courses also help students to boost their academic confidence by being successful in challenging work (College Board). AP courses truly provide a significant advantage that pays off academically and economically for students (Santoli, 2002). The ultimate payoffs for students

taking AP courses are the study skills developed by rigorous coursework and saving money on college tuition if students earn a 3 or higher because of the low cost to take AP exams compared to the cost of a college credit (Klopfenstein, 2003 of Advanced Placement programs).

AP Exams Grading

AP courses are offered in many schools, and curriculum and college faculty members develop course outlines for the College Board after surveying the content of courses in similar subjects at more than 200 colleges nationwide (College bound black students are making gradual inroads in Advanced Placement tests, 1998). Exams are graded on a scale of 1-5. Students scoring a 3 or above on the AP exam are usually deemed qualified to receive AP credit. Scoring a 5 is equivalent to an “A.”

Economic Implications of AP Courses

Students earning an acceptable score on AP tests may save considerably by earning college credits. Because of wealth and income inequalities, African-Americans are at a disadvantage if they are not enrolling in AP courses (“African-Americans Making Gradual Inroads in AP,” 1998). Students taking AP courses have an opportunity to obtain a year’s worth of college credits at a much lower cost. For instance, Stanford University’s tuition cost is approximately \$16,329 per quarter (\$65,000 per year) (Stanford Registrar’s Office, n.d.), but students earning AP credits by meeting the required AP exam score of a 4 or 5 will reduce their cost significantly. On average, an incoming freshman at Stanford has at least 10 college credits by the time he or she enters college. Students are allowed to submit a maximum of 45 quarter units of AP, transfer credits, or other external credit that may be applied toward an undergraduate degree (Stanford Registrar’s Office, n.d.). The cost to take an AP exam is \$93, which translates into completing 3 hours of college credit (College Board, n.d.). Dallas, TX, public schools offer

students \$100 for each AP exam where they earn a passing score, and schools receive financial rewards as well (Teicher, 2000).

Another economic factor that may influence a student's decision to enroll in an AP class is the requirement of purchasing one's own books and supplies. This requirement may affect the promise of equal educational opportunity for all students. Although research indicates there is not a correlation between wealth and intellectual ability, poor students may feel a disadvantage and not enroll in AP courses, so as not to incur the extra cost for textbooks. Payne (1996) suggested that for poor students to be successful, we must understand their hidden rules and teach them the rules that will make them successful at school and at work. Taking rigorous coursework may give students financial and admission advantages. She also purported we can neither excuse students nor scold them for not knowing those hidden rules: as educators we must teach them and provide support, insistence, and expectation (Payne, 1996). Public education should allow every child to enroll in classes offered by the school, not only those students who are financially able to afford the cost of taking AP courses (Brimstein, Milgate, O'Donaghue, & Yunker, 2000).

AP Financial Assistance

The U.S. Department of Education does offer on-line AP courses and payment for AP exam fees in economically disadvantaged school districts (Curry, MacDonald, & Morgan, 1999). To increase the number of low-income students enrolling in AP classes, U.S. Department of Education supports low-income students enrolled in AP classes by enabling states to pay all or a portion of AP fees (U.S. Department of Education, n.d.). As far back as 1965, the College Board recognized the underrepresentation of minority students; to remedy that factor, they held workshops at Hampton Institute in Virginia to encourage participation. Recently, they have

adopted initiatives to pay for exam fees for low-income students, provide funds for teachers to participate in the AP Summer Institute; they partner with teacher unions to increase access to courses offered (College Board, n.d.). The most prevalent incentive for encouraging students to take AP exams is the AP exam fee exemption. Research indicates this has led to an increase in the number of disadvantaged AP students taking the exam. Performance-based incentives have not been shown to increase the participation in taking the exam (Jeong, 2009).

AP Participation

Despite various incentives, African-American participation in taking AP courses continues to decline. The number of African-Americans taking AP exams surged in the 1990 with 34,514. In 1995, African-American participation in the AP exam dropped to 3.8% of test takers although they represented 10% of all SAT test takers (“College Bound African-American Students are Making Gradual Inroads in Advanced Placement Tests“, 1998) In 1997, the number of African-Americans taking AP exams increased by 9%, whites by 16%, Asians by 19%, and Hispanics by 24% (College Board, 1995, 1997). Some states offer financial aid for AP tests. The College Board offers \$22 t to low-income students desiring to take an AP exam. Some states also offer incentives for students taking AP exams (College Board, 2008).

AP Scores

The number of 2011 students scoring a 3 or higher on AP exams in Missouri was only 8.2%. This score is far below the United States average of 18.1, and Maryland, for instance, which had the greatest number of students scoring 3 or higher at 27.9% (College Board, 2012). On average, African-American student scores are far below white student scores. The average for white students is 3.03 compared to African-American students’ average of 2.21 (“College

Bound African-American Students are Making Gradual Inroads in Advanced Placement Tests“, 1998).

Reasons Students Enroll in AP Courses

Research suggest students enroll in AP courses to escape the chaos, having the best teachers, and be considered a serious student. Students participating in their schools AP program did not have negative comments relative to their participation (Casserly, 1986).

Another reason students enroll in AP courses is that they make it easier for students considering a double major or minor in college to obtain the degree in the shortest time possible. Advanced Placement courses allow students to substitute general college courses for credit. Additionally students know they are taking college level rigorous coursework, which improves their academic skills and chances of success in college. Advanced Placement courses also increase students' opportunity to earn scholarships. According to an article published by the U.S. Department of Defense, approximately 31% of colleges consider AP courses when making decisions regarding scholarship awards. Additionally, research confirms that 85% of selective colleges consider AP courses taken in high school when making admissions decisions (U.S. Department of Defense, n.d.).

Teachers who do not have high self-efficacy or possess deficit thinking may adversely affect students' opportunity to enroll in AP courses. One of the requirements to enroll in AP courses is usually a teacher recommendation. Deficit thinking teachers subscribe to the idea that students' failure occurs due to lack of intelligence or dysfunctional families (Donnell, in press). Teachers' efficacy beliefs about students are significantly related to educational outcomes. Additionally, teachers' beliefs can benefit students' self-efficacy and confirms that student outcomes of achievement (Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L.,

& Pascal, A., et al.,1976) motivation and students self-efficacy are affected by teacher efficacy (Anderson, 1988).

Teacher Efficacy and the Rand Measure

Historical Perspective on Teacher Efficacy

Teacher efficacy is defined as a teacher's belief in his or her capabilities to bring about desired outcomes of student engagement and learning, even among difficult or unmotivated students (Armor et al., 1976; Bandura, 1997). Teacher Efficacy concept is rooted in Rotter's (1966) Locus of Control theory. His questionnaire measures expectancies for internal versus external control of reinforcements. Teachers with an internal locus of control believe their own actions determine the rewards they obtain. Teachers with an external local of control do not believe their behavior accounts for their rewards; rewards occur by chance and are outside of their control. Rotter's questionnaire has 13 items with scores ranging from 0-13. Teachers who earn a low score generally have internal locus of control; a high score indicates a teacher who has an external locus of control (Rotter, 1976). Teachers possessing external locus of control may not believe they have the ability to ensure the academic success of African-American students because of their perception that it's out of their control; thus, recommending African-American students with behavioral or socio-economic issues for AP courses may be difficult for teachers possessing the external local of control perspective. Rotter asked teachers two questions to determinewhether a teacher had an external or internal locus of control. The resulting score on the two questions was called teacher efficacy (Tschannen-Moran & Woolfolk Hoy, 2001).

Rand item 1. "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment."

Rand item 2. “If I really try hard, I can get through to even the most difficult or unmotivated students.”

Guskey (1981) developed a 30-question instrument to measure teachers’ *responsibility for student achievement* (RAS). Participants were asked to distribute 100 percentage points between two alternatives: one question suggested the event or activity was a result of the teacher’s action, and the other was due to events outside the control of the teacher. The initial instrument was cumbersome for teachers to complete; for that reason, the questionnaire was reduced to 10-questions. The RAS measured how much the teacher took responsibility for their actions (Guskey, 1981). Guskey (1981) compared the RAS scores with teacher efficacy and found a significant positive correlation between teacher efficacy, responsibility for student success, indicated by (R+), and student failure, indicated by (R-). Guskey surmised that teachers assumed greater responsibility for student positive results than for negative results; thus, they were more confident in their ability to influence positive outcomes than to prevent negative outcomes (Guskey, 1984).

Rose and Medway (1981) composed a 28-question instrument around the same time Guskey was developing the RSA. Their instrument was called the *teacher locus of control* (TLC) measure. Teachers assigned responsibility for student success or failures to two possible reasons. Half the items on the survey described student successes and the other half student failures. The TLC was found to be a better predictor of teacher behaviors than Rotter’s internal-external scale (Rose & Medway, 1981). Around the same time researchers introduced the RSA and TLC instruments, another group of researchers introduced the Webb scale as an attempt to expand the Rand efficacy questions to increase reliability. Teachers scoring high on the Webb efficacy scale

experience tended to be more patient with students and slower to anger (Ashton, Olejnik, Crocker, & McAuliffe, 1982).

The earlier efficacy research was mostly grounded in Rotter's social learning theory, but more recent research is grounded in Bandura's social cognitive theory and the construct he proposed for self-efficacy. Bandura (1977) defined perceived self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3) Efficacy researchers have confirmed that self-efficacy beliefs influence emotions and thought patterns that enable teachers to face adversity, have more control over events impacting their lives, and rebound from setbacks (Bandura, 1986, 1993, 1997). Bandura developed a 30-question instrument with seven subsets. He was attempting to provide a multifaceted view of teacher's efficacy beliefs without the focus being too narrow. The seven subsets Bandura used included the following: efficacy to influence decision-making, efficacy to influence school resources, instructional efficacy, disciplinary efficacy, efficacy to enlist community involvement, efficacy to enlist community involvement, and efficacy to create a positive school climate. He used a 9-point Likert scale to measure each subset (Tschannen-Moran & Woolfolk-Hoy, 2001, p. 791).

Gibson and Dembo (1984) developed a 30-question instrument to measure teacher efficacy, building on Rand studies and Bandura's social cognitive theory and reflecting the two expectancies of Bandura, self-efficacy and outcome expectancy. Gibson and Dembo modified Bandura's self-efficacy concept as personal teaching efficacy (PTE) and outcome expectancy as teaching efficacy (GTE) (Gibson & Dembo, 1984). They wrote:

If we apply Bandura's theory to the construct of teacher efficacy, outcome expectancy would essentially reflect the degree to which teachers believed

that environment could be controlled, that is, the extent to which students can be taught given such factors as family background, IQ, and school conditions. Self-efficacy beliefs would be teachers' evaluation of their abilities to bring about positive student change (Gibson & Dembo, 1984, p. 570).

A major concern of some researchers was confirming the reliability and validity of Bandura's 30-point questionnaire (Tschannen-Moran & Woolfolk Hoy, 2001, p. 791). A group of researchers selected items from the Bandura scale that they believed were relevant in representing important tasks teachers engage in during their daily activities. Additionally, the researchers came up with 8-10 items to address teaching areas that were not included in Bandura's questionnaire. The group came up with over 100 items; many were duplications and overlaps. After discussing and deleting duplications and similar items, the group ended up with 52 items that addressed the full range of activities teachers engage in daily. Of the 30 items on Bandura's questionnaire, 23 questions were retained. The 7 questions not retained were:

1. How much can you influence the class sizes in your school?
2. How much can you do to get community groups involved in working with the school?
3. How much can you do to get churches involved in working with the school?
4. How much can you do to get local colleges and universities involved in working with the school?
5. How much can you help other teachers with their teaching skills?
6. How much can you help other teachers with their teaching skills?

7. How much can you do to enhance collaboration between teachers and the administration to make the school run effectively?

The other 19 items not included on Bandura's questionnaire were related to assessments, adjusting the lesson to individual needs, working with students having learning difficulties, repairing students' misconceptions, and motivating student engagement and motivation. The researchers used a 9-point Likert scale to measure each item (Tschannen-Moran & Woolfolk Hoy, 2001, p. 796).

The new instrument created as a result of the researchers' work was named the *Ohio State Teacher Efficacy Scale*). This instrument was tested in three different studies. After the first study, the 52-item questionnaire was reduced to 32, and then further reduced to 18 after the second study, with three subscales. The third study produced 18 more questions. After the three studies, two forms of the questionnaire were realized: a 24-item questionnaire called the long form, and a 12-item questionnaire called the short form. Researchers believe the new instrument has been effectively tested for reliability and validity for teachers (Tschannen-Moran & Woolfolk-Hoy, 2001, p. 796).

Tschannen-Moran and Woolfolk-Hoy (2001) indicated that teacher efficacy is significantly related to educational outcomes that can benefit students' self-efficacy; those outcomes include persistence, enthusiasm, commitment, and instructional behaviors. Their research also confirmed that student outcomes of achievement (Armor et al., 1976; Ashton & Webb, 1986; Moore & Esselman, 1992; Ross, 1992), motivation (Midgley, Feldlaufer, & Eccles, 1989) and students' self-efficacy beliefs are affected by teacher efficacy (Anderson, Green, & Loewen, 1988).

Teacher Self-Efficacy

Tschannen-Moran, Woolfolk-Hoy, and Hoy (1998) defined teacher self-efficacy as the teacher's belief in his or her abilities to bring about valued outcomes of engagement and learning among students, including difficult and unmotivated students. Research suggests there is a correlation between students' socio-economic status (SES) and teachers' perceptions of support (Woolfolk-Hoy & Spero, 2005). Teachers assigned to classrooms of students with higher SES felt more supported than teachers assigned to lower SES classrooms; additionally, teachers assigned to higher SES found that their teaching assignment was less difficult. Hoy (2002) found that SES, family characteristics, and urbanity influenced student achievement. Bandura (1997) lamented that self-efficacy depends on the teacher's ability to communicate the subject matter and his or her ability to maintain the classroom discipline, establish a climate of learning, and support parents' efforts to support learning.

Collective Efficacy

Bandura (2000) purported that teachers' self-efficacy is influenced by the collective confidence faculty and school have in effectively supporting student outcomes. Teacher self-efficacy varies based on the level of collective efficacy (Goddard, 2001). Collective efficacy is defined as the shared perceptions of teachers in a school that the efforts of the faculty as a whole will have positive effects on students (Hoy).

Teachers who do not have a high sense of self-efficacy in teaching African-American students and subscribe to CRT adversely affect the performance of low-income students as well. Low-income students are more often than not characterized as Black or Hispanic students. There have been instances where teachers would sternly reprimand White students for misbehaving, but give Black students another chance when they misbehave, believing this will send a message

that they (teachers) care. The teachers' belief about the ability of Black students to follow rules set up different expectations and may have a negative impact on student achievement (Ladson-Billings, 2009).

Winfield (1986) categorized teacher's beliefs about inner city students into four categories: seeking improvement versus doing maintenance, and assuming responsibility versus shifting responsibility. There are four possible teacher behavior patterns resulting from Winfield's model listed below (Winfield, 1986).

Tutors believe that students can improve and that it is their responsibility to help them do so.

General Contractors believe that improvement is possible, but they look for ancillary personnel like aides and resource teachers to provide academic assistance instead of on the responsibility themselves.

Custodians do not believe that much can be done to help their students, but they do not look for others to help them maintain the students at these low levels.

Referral Agents do not believe that much can be done to help their students improve either, but they shift the responsibility to other school personnel by sending them off to the school psychologist or the special education teacher. Below is Winfield's diagram of "Teacher Beliefs toward Academically At-Risk Students attending Inner Urban Schools' model."

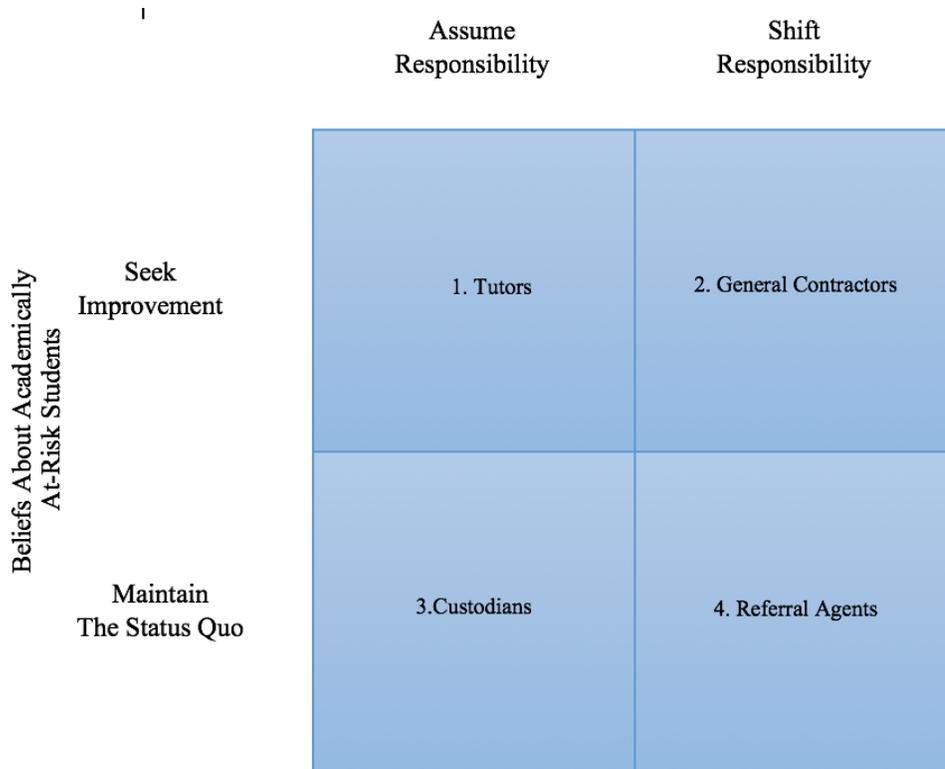


Figure 3. Behaviors toward Academically At-Risk Students (*The Urban Review*, 1986, 18(4), 253-267).

Another teaching factor that can influence academic achievement is teachers subscribing to the assimilationist perspective. These teachers believe their role is to ensure that students “fit into” society. Ladson-Billings suggested that if these teachers have low-expectation of low-income students, then they will also believe these students “fit into” the lower rungs of society (Ladson-Billings, 2009).

Ladson-Billings (2009) provided the following example of teachers possessing an assimilationist perspective. A kindergarten teacher has internalized an idea that African-American students must be controlled in order to be taught; therefore, she works very hard to control the students. The teacher ignores Asian-American students exhibiting the same behaviors. Since the teacher has pre-determined societal categories of where the students fit into,

she engages in assimilationist teaching behaviors. This example demonstrates the deficit thinking of teachers and how it can affect their perceptions of African-American student achievement. Not setting high expectations for all students limits the teacher's ability to recommend African-American students to AP classes and potentially prevent high level engagement or those students. Ladson-Billings (2009) also purported that some teachers may not demand excellence from African-American students because of their beliefs that African-American students are incapable of meeting rigorous standards of behavior; therefore their response is sympathy.

Student Engagement

Teacher's efficacy beliefs regarding their ability to successfully teach African-American student's are critical to closing the academic achievement gap, student engagement, and inspiring African-American students to enroll in rigorous coursework. The CDT model illustrates that teachers' negative beliefs of African-Americans and low-income students can be a factor of students failing in school. Teachers' processing deficit thinking or negative assumptions about non-White and poor students who may come to school with deficits, can have an impact on teachers recommending students to Advanced Placement courses (Oakes & Lipton, 2007).

Student engagement is defined as being alert, completing assignments, and being curious and passionate (Corso, Bundick, Quaglia, & Haywook, 2013). Scholars in the field of engagement argue that engagement comprises three interrelated modes: engagement in thought, engagement in feeling, and engagement in action (Fredricks, Brumfield, & Paris, 2004). According to Fredricks, Brumfield, and Paris (2004), the interrelated modes of engagement can be described as follows:

- 1 *Engaged in thought* refers to a psychological investment in learning and mastery of academic material, as well as the desire for challenge. Planning, monitoring, and

evaluating one's thinking, along with self-control, are indicators that one is engaged in thought.

- 2 *Engaged in feeling* refers to students' emotions regarding their relationships with others in the school environment (teacher and peers) and the general sense of belonging in school that comes from such relationships. Engaged in feeling also refers to students' sense of connectedness to, interest in, and passion for academic content. This is often accompanied by a strong sense of confidence regarding academic abilities.
- 3 *Engaged in action* refers to various activities and involvements in school that are directed toward learning and academic tasks. Signs of active engagement include attending and contributing to class, following school rules, completing assignments, studying, and concentrating on academic tasks.

Teachers with high efficacy tend to have greater control over their classrooms, thus reinforcing teachers' ability and confidence to deliver quality instruction. Students in low-track schools tend to come to school with a variety of learning deficits that can pose different challenges for teachers relative to student engagement. These challenges can undermine the teachers' self-efficacy and limit the academic success of students. Corso, Bundick, Quaglia, and Haywood (2013) claimed that the way students think, feel, or act engaged in school play an important role in student's social and academic success. The article also indicated that engagement in high schools generally remains low.

Klem and Conell (2004) have shown that higher engagement in thought, feeling, and action in the classroom relies on the teacher's ability to do the following (Corso et al., 2013, p. 57):

1. Deliver quality instruction

2. Create a caring, structured learning environment
3. Have high expectations of students
4. Involve students in meaningful tasks with real-world implications
5. Allow students to share knowledge with each other

Engagement in Thought

Brophy (1998) suggested teachers operate as socializing agents for students and can influence the quality of students social and intellectual experiences because they have the opportunity to instill motivation to learn, by providing classroom context that would inspire students to take an interest in learning (Brophy, 1998). Ladson-Billing would consider this context as culturally relevant teaching (CRT). Culturally relevant teaching is defined as a pedagogy that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills, and attitudes (Ladson-Billings, 2009, p. 20). Finn (1993) suggested that feeling identification with school is also related to participation; participation is related to achievement, and levels of achievement were predictor of the difference in reading and math achievement for at-risk students.

Research indicates that too many students are bored, unmotivated, uninvolved, and disengaged from participating in academic and social aspects of school life (Appleton, Christenson, & Furlong, 2008). Academic engagement manifests itself through factors such as time on task, credits earned toward graduation, and homework completion. Implementing strategies to address students' boredom and lack of motivation may affect academic achievement. Tapping into the creativity of students could be a strategy to address the boredom and lack of motivation. Research suggest that educated parents are more likely to engage their children in stimulating creative activities, to encourage intellectual activities, and tap into the

expression of students' characteristics conducive to creativity (Dai, Tan, Marathe, Valtcheva, & Pruzek, 2012). The same researchers found that there is a creativity gap between upper-middle class suburban school districts and lower to middle-class school districts. Teachers must teach students the skill of divergent thinking, which is the ability to generate ideas relative to the task being worked on by the student, which allows students to be creative in their thinking (Dai et al.).

Engagement in Feeling

Teachers building relationships with students is necessary for the students' development because of the "affordance value" of such relationships, defined as the extent to which adults bring the relationship resources to support a child's intellectual, social, and emotional development that would have otherwise been unavailable (Davis, 2003).

Four themes emerged in Davis's research (Davis, 2003, p. 208-209):

1. Child relationships influence social and cognitive outcomes as early as preschool and continue to influence students' social and intellectual development throughout childhood and adolescence.
2. Attachment perspectives findings suggested that student-teacher relationships might be influenced by students' beliefs about adults, about teachers, about themselves, and about the nature of adult-child interaction.
3. Motivational perspective studies indicate the quality of relationships between students and teacher is influenced by teachers' motivations, interpersonal skills, instructional practices, and attempts to socialize the motivation to learn.
4. Findings from the social cultural perspectives indicate the quality of students' relationships with teachers may reflect the interpersonal culture of classrooms and

schools, as well as their opportunities to invest in alternative relationships and the abilities of students and teachers to connect with each other as well as with the material.

Poor relationships with high school students' may influence the teacher's recommending students to AP classes. From the attachment perspective, student-teacher relationships can facilitate or impede learning (Davis, 2003). In Voelkl's (1997) research, students' participation influenced the relationship between school warmth, how students feel about the school, and academic achievement (Voelkl, 1997).

Engagement in Action

Data in 2003 indicated that 3.5 million students, ages 16-25, dropped out of school without earning a high school diploma. This may be due to numerous reasons; however, student engagement is one of the factors necessary for high school completion (Barton, 2004). Research suggests there are three elements of the classroom environment that affect engagement, referred to as the "instructional core" (City, Elmore, Fiarman, & Teitel, 2009). The "instructional core" includes one or more learners, a teacher, and the content being learned. Along with the "instructional core," there are three classroom factors that have the most bearing on engagement: a student's personality traits, a student's interactions with others, and academic content (Corso et al., 2013).

The personality traits in this context refer to the students' orientation towards learning, confidence, self-discipline, persistence, willingness to be challenged, sociability, and conscientiousness. Students' interaction with others refers to the relationships between students, peers, and teachers. It is a crucial question whether a student feels respected, supportive, and capable of competing with his or her peers academically and whether a student feels the classroom is a positive learning environment.

Students who perceive the teacher as being available, concerned, impartial, and respectful tend to have higher engagement. Students benefit when teachers devote time and energy to ensure students are engaged (Corso et al., 2013). Students who answer the above questions in the negative are more likely to have attendance issues, lower classroom participation, and lack of participation in extracurricular activities, all variables that are considered behavioral engagement indicators (Appleton et al., 2008). Finn (1989) argued that engagement is a useful construct in understanding the gradual process by which students disconnect from school. Engaged students perceive a higher level of support from teachers and their peers (Osterman, 1998, April).

Summary

In chapter two, the researcher provided a review of the literature through the lens of CRT. The chapter included information on the three major reforms that have affected education in the past thirty years. Next, it contained a discussion of the three pillars of the study, accountability and testing, teacher efficacy and student engagement. In chapter 3, the researcher will describe the methodology used to conduct the study. Chapter four contains the analysis of the results of the study using Discovering Statistics for Social Sciences computer software (Fields, 2009). Chapter five includes the findings, conclusions, and recommendations for future study.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

A fundamental right of American children is to have an equal opportunity to a quality education regardless of race, class, or economic status (United Nations Educational, Scientific and Cultural Organization, 2008). Benefits of a quality education include the ability to compete for good jobs after college graduation, attending college of your choice after high school, attaining academic or athletic scholarships, and the ability to choose a career that provides students financial security in life. College graduates are less likely to live in poverty and have greater earning potential. The College Board is a non-profit organization that connects students to college success. Their equity statement states, “Enfolding equity and access in the overall learning environment happens when educators treat all students as intellectuals, instead of treating some as being intellectually challenged.” The College Board recommends making equitable access a guiding principle and allowing all students willing and academically prepared to enroll in AP courses. It is important that teachers do not subscribe to deficit thinking of having negative beliefs and assumptions regarding the ability, aspirations, and work ethic of African-American students. Chapter three contains a description of the methodology used for this research, including the statement of the problem, purpose of the study, research questions and null hypotheses. Additionally, it includes sub-sections on the research population, instrumentation used to conduct the research, data collection methods, and data analysis procedures.

Statement of the Problem

The main problem in this study is equity and access for African-American students to engage in rigorous coursework. The underrepresentation of students in AP courses creates equity

issues and long-term disadvantages that may influence students throughout their adult lives. Attewell and Domina (2008) purported that a rigorous curriculum promotes higher order thinking, engages students, reduces discipline problems, and builds students' capacity to learn. AP courses are considered rigorous coursework. Rigorous coursework provides students a competitive advantage on standardized tests, college admissions, and has significant financial implications.

Purpose of the Study

The purpose of this quantitative study is to add to the body of research on teacher efficacy beliefs in student engagement. The first goal is ascertain if teachers' efficacy beliefs in engagement create difficulties in recommending African-American students to Advanced Placement coursework. The second purpose of the study is to ascertain if Advanced Placement teachers' efficacy beliefs in engagement are different compared to teachers not teaching Advanced Placement coursework.

Research Questions and Null Hypotheses

This study was designed to address the following research questions and their accompanying null hypotheses:

1. What are the descriptive summary statistics of teachers' opinions from The Ohio Teacher Efficacy survey of the eight engagement questions that may create difficulties for teachers' in their school activities?
2. What are the descriptive summary statistics of Rand 1?
3. What are the descriptive summary statistics of Rand 2?
4. Is there a difference in the perceived levels of efficacy beliefs for student engagement among AP teachers compared to those of general education teachers?

Ho4: There is no difference in the perceived levels of self-efficacy beliefs for student engagement among AP teachers compared to general education students.

Research Design

The researcher chose a quantitative study approach for the study because it allows to investigate the efficacy beliefs of high school teachers to ascertain the factors that create difficulties in recommending African-American students to enroll in AP. A quantitative research design allows the researcher to test objective theories and analyze the data using statistical procedures (Creswell, 2009). A case study approach was used to gain further insight into the efficacy beliefs of teachers. A case study approach is used when a researcher explores a bounded system; the bounded system refers to a process or activity of the perceptions of teachers during the fall of 2013.

This research is bounded by both time and place. It is bounded by time because the data will be gathered from teachers during the spring of 2014. The study is also bounded by place because the survey will be sent to junior and high school teachers only in the Midwestern school district. The instrument used to analyze the data was the IBM Statistical Package for the Social Sciences (SPSS) version 21. Quantitative research allows researchers to limit the biases, control for alternative explanations, and replicate findings (Creswell, 2009).

T-test

A t-test will be used to test if there is a statistical significance of the variables, or if there is a difference between the two variables. For the purpose of this study, the two variables the t-test will measure are teacher efficacy beliefs in student engagement and whether the efficacy beliefs of AP teachers are different from those of general education teachers not teaching AP

courses. The closer the t-test is to 0, the more likely there is not a significant difference. Field (2009) suggested there are four assumptions associated with the t-test:

- 1 One variable is continuous and the other variable is dichotomous
- 2 The two distributions have equal variances (homogeneity of variance)
- 3 The scores are independent (because they come from different people)
- 4 The two distributions are normally distributed

The t-test analyses were used to determine the significance of the variables for AP teachers compared to teachers who do not teach AP coursework. The strategy of inquiry used in this quantitative research was a non-experimental design using surveys to ascertain data. The survey allowed the researcher to collect data on teachers' efficacy beliefs in student engagement, instructional practices, and classroom management. Student engagement was another element analyzed in this study using the Ohio State Efficacy Survey to collect data and analyze the data by running a t-test. The survey reliability and validity have been tested by previous researchers investigating efficacy beliefs of teachers (citation).

The philosophical worldview used in this research is postpositive, which is sometimes referred to as scientific research. Creswell (2009) purported that problems studied using post-positivist paradigms reflect the need to identify causes influencing outcomes. The researcher sought to examine if teachers' beliefs about efficacy create difficulties in recommending AP coursework for African-Americans. Knowledge is based on careful measurements and observations of objective reality that exists in the world and that can be duplicated. Post-positivist researchers using scientific methods begin by identifying a theory, collecting data to support or refute the theory, and then making appropriate revisions before engaging in additional tests (Creswell, 2009).

Instrumentation

Three instruments were used to answer the research questions in this study: the Calculus AB Teacher Questionnaire sanctioned by the College Board (2002) to answer demographic questions, The Rand Measure, and The Ohio State Teaching Efficacy Survey (OSTES) to measure teacher's efficacy beliefs in student engagement and ascertain if teachers' beliefs create difficulties in recommending African-American students to Advanced Placement coursework. The researcher also sought to understand if the efficacy beliefs of Advanced Placement teachers are different compared to those of general education teachers.

Background of Instruments

Three instruments were utilized in this study. The Rand Measure and The Ohio State Teaching Efficacy Survey (OSTES) survey measure teachers' efficacy beliefs relative to their own capabilities (Tschannen-Moran & Wolfolk-Hoy, 2001) and the kinds of issues that create difficulties for them in their school. Additionally, the instruments helped examine if their efficacy beliefs affect students being recommended for AP courses. The third instrument contains questions adopted from the Calculus AB Teacher Questionnaire sanctioned by the College Board (College Board Research Report, 2002).

The Rand Measure

The Rand Corporation, a non-profit think tank, defines teacher efficacy as the extent to which teachers believe they can control the reinforcement of their actions, that is, whether control of reinforcement lay within them or in the environmen (Armor, 1976; Rotter, 1966)t. This concept is premised on the simple idea that a teacher's perceptions of his or her own capabilities are important. Teachers' beliefs about the power of these external factors compared to the influence of teachers and schools have since been labeled general teaching efficacy (GTE)

(Ashton, Olejnik, Crocker, & McAuliffe, 1982). Teachers' sense of efficacy has also been related to student outcomes such as achievement (Armor, 1976; Ashton & Webb, 1986; Moore & Esselman, 1992; Ross, 1992). Researchers used two statements to measure efficacy, named Rand 1 and 2. The Rand Measure uses self-reported responses marked on a five point Likert scale.

Rand item 1: "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment." Strong agreement with this statement indicates that, in the teacher's view, environmental factors overwhelm any power that teachers can exert in schools.

Rand item 2: "If I really try hard, I can get through to even the most difficult or unmotivated students." Teachers who agree with this statement indicate confidence in their abilities as teachers to overcome factors that could make learning difficult for a student.

The Ohio State Teacher Efficacy Scale (OSTES)

The OSTES was developed by two researchers and graduate students at The Ohio State University (Tschannen-Moran & Woolfolk-Hoy, 2001). They conducted three separate studies that resulted in the efficacy survey. After analyzing the items, the researchers reduced the scale to 18 items, deleting the lowest loadings within the three factors, item on one or more factors and redundant factors. The three factors that emerged from the varimax rotation accounted for 51% of the variance. Those factors included efficacy for student engagement (8 items), efficacy for instructional strategies (7 items), and efficacy for classroom management (3 items). After another study, the survey was reduced to a short 12-item survey (Tschannen-Moran & Woolfolk-Hoy 2001). In this study, the researcher used the full 24 questions survey, consisting of the following categories: Efficacy in Student Engagement (8 items), Efficacy in Instructional

Strategies (8 items), and Efficacy in Classroom Management (8 items). The study focused specifically on Efficacy in Student Engagement.

AP Calculus AB Teacher Questionnaire

The College Board conducted a study of a schools identified as serving a significant number of African-American and Hispanic students in AP Calculus AB. The study aimed at learning more about their AP program and focused on the underrepresentation of African-American and Hispanic students in AP courses. There were four parts to the survey they used:

1. Teacher Background Information
2. Mathematics Preparation
3. Mathematics Instruction Information
4. Policies and Practices for AP

In that study, the demographic information and four questions relative to African-American and Hispanic students were extrapolated from the AP Calculus AB Teacher Questionnaire (Burton, Whitman, Yepes-Baraya, Cline, & Myung-in Kim, 2002).

Study Participants

Participants for this study consist of ninth to twelfth grade high school teachers in this suburban Midwest school district. The school district is comprised of two high schools, grades 9-12. Approximately, 220 teachers are available to participate in the survey, but only data from were extrapolated for the purpose of this study of whom 34 teach AP classes. Some AP teachers teach at both schools. This school district serves over 11,600 students. First, this school district was selected because it is considered a high performing school district by the state of Missouri. However, approximately 15 percent of the high schools' student bodies are considered

marginalized students and are underrepresented in AP classes. Second, this is a school district the researcher is familiar with due to being employed there for eight years. Finally, the researcher is familiar with the school, which means this is a convenience sampling opportunity. Fink (2009) defined convenience sampling as one where participants are available and willing to participate in the survey.

According to the Missouri Department of Elementary and Secondary Education (MO DESE), this school district's student population has increased every year since 2007 (MO DESE, 2013a). During the past ten years, the African-American and free/reduced lunch population continues to increase while the White population has slightly decreased. Additionally, students qualifying for free/reduced lunch have increased every year since 2003 (see Figure 4).

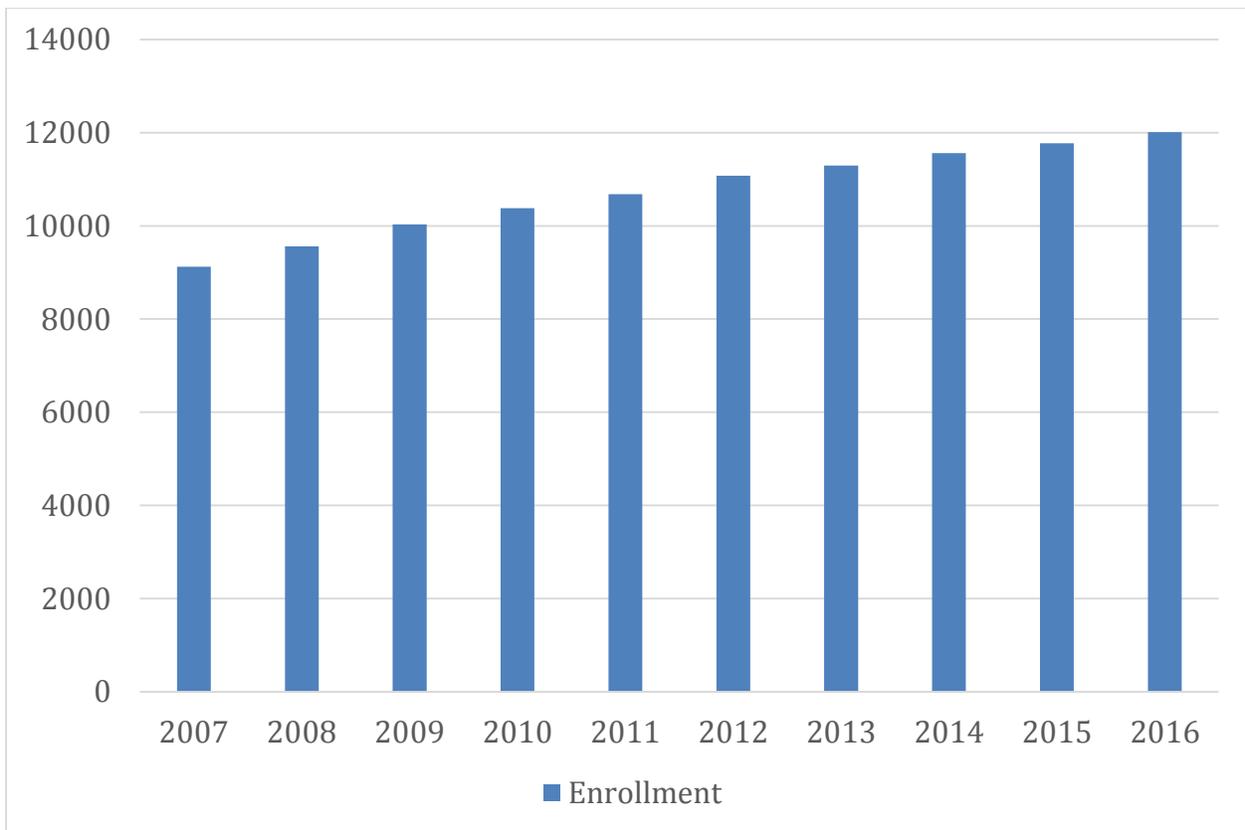


Figure 4. Midwest School District Student Enrollment.



Figure 5. Midwest School District White, Minority and Free/Reduced Lunch Percent.

Data Collection Procedures

The researcher used an on-line survey tool to administer the survey to teachers in this Midwest school district. On-line survey tools are becoming very popular because they are convenient for participants and allow researchers to obtain data quickly and analyze the survey results (Mertens, 2005). In this survey, the researcher constructed the survey using items from the OSTES. The demographic questions were obtained for the College Board Advanced Placement survey (Burton et al., 2002). Additionally, the researcher included two questions from the Rand Measure. The Rand Measure researchers conceived teacher efficacy as the extent to

which teachers believed that they could control the reinforcement of their actions, that is, whether control of reinforcement lay within them or in the environment (Armor, 1976; Rotter, 1966).

Mertens (2005) suggested an email should be sent to participants before administering the survey. The researcher sent an email request to 220 teachers along with an explanation of the purpose of the survey and link to the survey (Appendix A). Using the on-line link ensured the confidentiality of participants. After allowing participants two weeks to respond to the survey, the researcher sent participants a reminder email (Appendix B), requesting they complete the on-line survey if they had not already done so. The researcher provided refreshments in each school's break room to express gratitude for teacher participation.

The researcher allowed participants two weeks to complete the on-line survey. Afterwards, the researcher printed the results from the on-line data source. Since the teachers agreed to participate in the on-line survey, there was no need to shred or discard the results.

Human Subjects Protection and Other Ethical Considerations

The researcher adhered strictly to the University of Missouri's Institutional Review Board (IRB) guidelines. Prior to administering the on-line survey, the researcher requested permission through the University of Missouri's IRB process and received the appropriated permission to move forward with the research. The researcher ensured that the anonymity of the participants was protected by not requiring personal demographic information. Participation was voluntarily. Along with receiving the on-line survey, the participants received an informed letter of consent explaining that if they completed the survey, they were giving implied consent. Fink (2009) suggested forwarding the letter of consent is in keeping with best practices.

Data Analysis

The aim of the study was to examine teacher's efficacy beliefs in student engagement to ascertain the kinds of issues that create difficulties for teachers in recommending African-American students to enroll in AP courses. Additionally, the goal was to ascertain if AP teachers have different efficacy beliefs than regular education teachers. The researcher used Discovering Statistics using SPSS (Fields, 2009) to conceptualize data analysis and IBM SPSS version 23 to analyze data.

The descriptive statistics data was downloaded into an excel spreadsheet and then copied to SPSS for analysis. The researcher created visual charts to illustrate teacher's responses to the things that create difficulties for them in the classroom and to demonstrate whether their efficacy beliefs can potentially affect African-American students being recommended for AP courses.

Summary

Chapter three contained a description of the research design and methodology of this study. The research design chosen is a quantitative case study approach used to examine the efficacy beliefs of high school teachers to ascertain the factors that may create difficulties for them in recommending African-American students to Advanced Placement coursework, and determine if the efficacy beliefs of Advanced Placement teachers are different from those of teachers not teaching Advanced Placement courses. The researcher also explained the problem of equity and access for African-American students engaging in rigorous coursework and presented the four research questions and null hypotheses. Factors from three instruments were used to answer the research questions: the AP Calculus AB Teacher Questionnaire, The Ohio State Teaching Efficacy Scale, and The Rand Measure.

The chapter also contained a description of study group characteristics of the Midwest school district. Chapter 4 comprises sections on data collection and analysis. Additional data collected is discussed in Chapter five, along with conclusions, recommendations, and suggestions for future research.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

This study examines teacher efficacy beliefs in engagement through the lens of the Cultural Deficit Theory. This theory asserts that African-American and low-income students often fail in school because teachers may perceive them as culturally deprived, lacking the ability to perform well in school as a result of living in poverty (Irizarry, 2009), lacking intelligence or coming from dysfunctional families (Donnell, 2010).

There is a significant academic achievement gap between low-income and higher income students in the United States. Strong-Leak (2010) asserted that one of the most important goals of a modern American high school is to prepare students for college. Obama went further to claim that every child graduating high school should be prepared for college (Politifact, n.d.). Enrolling in Advanced Placement courses would help African-American students close the academic achievement gap and be prepared for college. Noguera (2008) suggested that African-American and Latino students are more likely to be absent from courses such as talented programs, Advanced Placement, honors, gifted and international baccalaureate programs.

Teachers must have a strong sense of teacher efficacy in engagement if the achievement gap is to be closed for African-American students. Teachers must believe that African-American students can be successful in rigorous coursework such as Advanced Placement classes. Teachers' beliefs in African-American students will encourage engagement, increased recommendations to Advanced Placement coursework, and college choice.

Study Design

The researcher collected quantitative data from surveys distributed to two midwestern high schools in the state of Missouri. Data from three instruments were used to answer the

research questions to this study. The Calculus AB Teacher Questionnaire sanctioned by the College Board (2002) provided answers to five demographic questions. The Ohio State Teaching Efficacy Survey (OSTES) contained eight items designed to measure teachers' efficacy beliefs in engagement. The Rand measure consisted of two questions to measure efficacy, Rand 1 and Rand 2. For the purpose of this study, a self-reported Likert scale (1-4) was used to collect responses.

The researcher collected quantitative data from the three instruments, and then analyzed it to determine if there was a difference in the perceived levels of efficacy beliefs for student engagement between Advanced Placement teachers as compared to teachers not teaching Advanced Placement courses. Descriptive statistics were collected for the eight efficacy engagement questions, and Rand 1 and 2.

Research Questions

Through the analysis of data, the researcher aimed to answer the following research questions:

1. What are the descriptive summary statistics of teachers' efficacy beliefs from The Ohio Teacher Efficacy Survey of the eight engagement questions that may create difficulties for teachers' in their school activities?
2. What are the descriptive summary statistics of Rand 1?
3. What are the descriptive summary statistics of Rand 2?
4. Is there a difference in teacher efficacy beliefs for student engagement between AP teachers compared to regular education teachers?

Null Hypotheses

Ho4: There is no difference in teacher efficacy beliefs for student engagement between Advanced Placement teachers and teachers not teaching Advanced Placement courses.

Descriptive Findings

Survey Questions Scales

The teachers at the two Midwestern high schools participating in this study were asked to provide demographic information about their gender, years teaching, highest degree completed, and ethnicity. The teachers answered eight questions about their efficacy beliefs using a Likert scale ranging from 1 to 9. The teachers answered two questions, Rand 1 and Rand 2, using a forced Likert scale ranging from 1 to 4, in which there was no neutral option (or 3) available. The average total of “N” from the 15 survey questions was 87 respondents.

Table 2

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
											Std. Error
Gender	96	1	1	2	1.56	.499	.249	-.256	.246	-.1976	.488
Years Teaching	95	4	1	5	2.93	1.142	1.303	-.072	.247	-.640	.490
Highest Degree	96	3	1	4	1.54	.951	.904	1.493	.246	.807	.488
Ethnicity	96	5	1	6	1.31	1.029	1.059	3.479	.246	11.466	.488
Get through to most difficult students	91	6	3	9	6.79	1.457	2.123	-.112	.253	-.447	.500
Help students think critically	89	5	4	9	7.38	1.211	1.466	-.228	.255	-.341	.506
Motive students with low interest	90	6	3	9	6.49	1.455	2.118	.168	.254	-.364	.503
Get students to believe they can do well	90	5	4	9	7.26	1.395	1.945	-.268	.254	-.717	.503
Help students value learning	90	6	3	9	7.10	1.366	1.866	-.239	.254	-.253	.503
Foster student creativity	90	6	3	9	6.99	1.525	2.326	-.447	.254	-.098	.503
Improve student understanding	90	5	4	9	6.96	1.389	1.931	.004	.254	-1.046	.503
Assist families to help their children	90	6	3	9	6.34	1.623	2.633	.019	.254	-.553	.503
Teacher can't do much when it comes down to it	89	3	1	4	3.35	.841	.707	-.973	.255	-.190	.506
If you try really hard you can get through to difficult students	89	3	1	4	2.07	.889	.791	1.056	.255	.685	.506
Valid N (listwise)	87										

Gender

The teachers were asked to provide their gender, man or woman. A total of 96 teachers participated in the survey, 42 men (43.8%) and 54 women (56.3%).

Table 3

Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	42	43.8	43.8	43.8
Female	54	56.3	56.3	100.0
Total	96	100.0	100.0	

Years Teaching

There were 95 teachers who responded to the demographic question of number of years teaching. The minimum statistic was 1, while the maximum statistic was 5 years teaching. The mean statistic for years of teaching was 2.93.

Table 4

Years Teaching

Years	Frequency	Percent	Valid Percent	Cumulative Percent
Fewer than 5	13	13.5	13.7	13.7
6-10	18	18.8	18.9	32.6
11-20	35	36.5	36.8	69.5
20-30	21	21.9	22.1	91.6
30+	8	8.3	8.4	100.0
Total	95	99.0	100.0	
System	1	1.0		
Total	96	100.0		

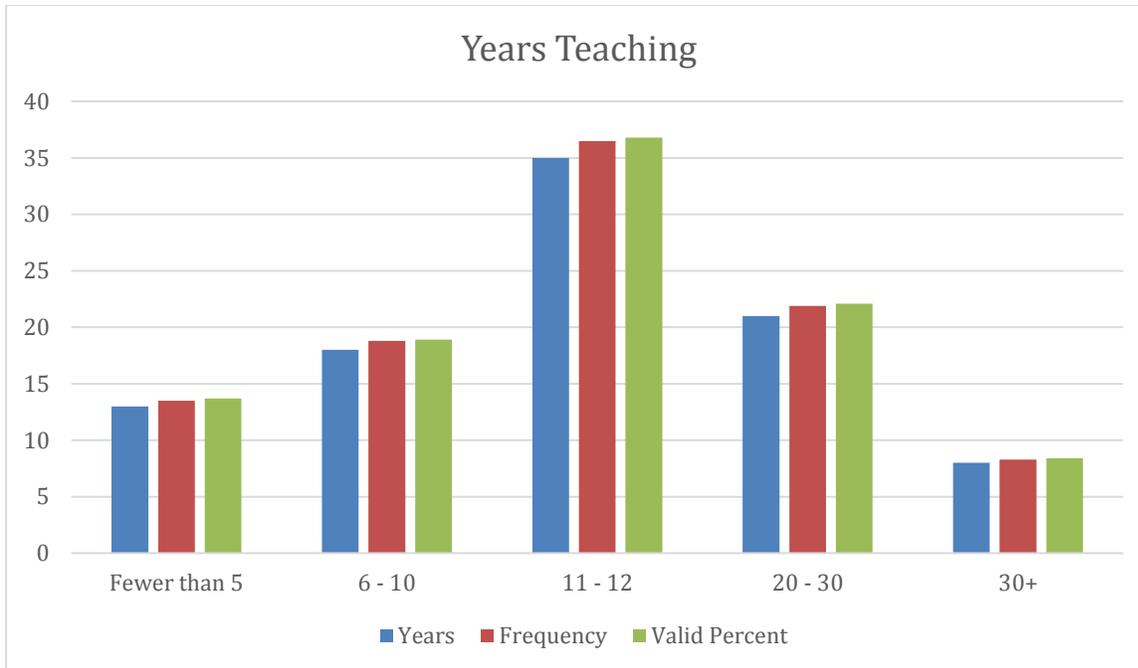


Figure 6. Years Teaching.

Highest Degree

There were 96 teachers who responded to the question of highest degree earned. The majority of teachers (69) have earned a Master's degree, this is 71.9% of the respondents. 19.8% of respondents have earned a Specialist or Ed.D./Ph.D.

Table 5

Highest Degree Earned

Degree	Frequency	Percent	Valid Percent	Cumulative Percent
Bachelor	8	8.3	8.3	8.3
Masters	69	71.9	71.9	80.2
Specialist	13	13.5	13.5	93.7
Ed.D./Ph.D.	6	6.3	6.3	100
Other	0	0	0	
Total	96	100.0	100.0	

Ethnicity

There were 96 teachers who responded to the question of ethnicity. The majority of teachers responding to the survey ethnicity identified as White (89.6%).

Table 6

Ethnicity

Ethnicity	Frequency	Percent	Valid Percent	Cumulative Percent
White	86	89.6	89.6	89.6
Biracial	2	2.1	2.1	91.7
African-American/Black	2	2.1	2.1	93.8
Hispanic/Latino	2	2.1	2.1	95.8
Native American/American Indian	2	2.1	2.1	97.9
Prefer not to disclose	2	2.1	2.1	100.0
Total	96	100.0	100.0	

Getting through to the Most Difficult Student

A total of 91 teachers responded to the efficacy engagement question of, “How much can you do to get through the most difficult student?” The self-reporting Likert scale ranged from 1 – 9, with “1” indicating a teacher perceives he or she cannot do much, and “9” indicating a teacher can do a great deal to get through the most difficult student. The minimum statistic was a 3. The mean statistic was a 6.79 (Table 2), which suggests that teachers, on the whole, feel they can get through quite a bit to the most difficult student.

Table 7

How Much Can You Do to Get through to the Most Difficult Student?

Minimal Statistic	Frequency	Percent	Valid Percent	Cumulative Percent
3	2	2.1	2.2	2.2
5	18	18.8	19.8	22.0
6	17	17.7	18.7	40.7
7	28	29.2	30.8	71.4
8	10	10.4	11.0	82.4
9	16	16.7	17.6	100.0
Total	91	94.8	100.0	
Missing System	5	5.2		
Total	96	100.0		

Help Students Think Critically

A total of 89 teachers responded to the efficacy engagement question of, “How much can you do to help students’ think critically?” The self-reporting Likert scale ranged from 1 – 9, with “1” indicating a teacher perceives he or she can’t do much, and “9” indicating a teacher believes he or she can do a great deal to help students think critically. The minimum response was a 4. The mean statistic was a 7.38 (Table 8), an indication that teachers feel they can do quite a bit to help students’ think critically.

Table 8

How Much Can You Do to Help Your Students Think Critically?

Minimal Statistic	Frequency	Percent	Valid Percent	Cumulative Percent
4	1	1.0	1.1	1.1
5	5	5.2	5.6	6.7
6	10	10.4	11.2	18.0
7	39	40.6	43.8	61.8
8	11	11.5	12.4	74.2
9	23	24.0	25.8	100.0
Total	89	92.7	100.0	
System	7	7.3		
Total	96	100.0		

Motivate Students with Low Interest in School Work

A total of 90 teachers responded to the efficacy engagement question of, “How much can you do to motivate students’ with low interest?” The self-reporting Likert scale ranged from 1 – 9, with “1” indicating a teacher perceives he or she can’t do much, and “9” indicating a teacher believes he or she can do a great deal to motivate students with low interest. The minimum statistic was a 3. The mean statistic was a 6.49 (Table 2), an indication that teachers feel they can do quite a bit to motivate students with low interest.

Table 9

How Much Can You Do to Motivate Students Who Show Low-interest in School Work?

	Minimal Statistics	Frequency	Percent	Valid Percent	Cumulative Percent
	3	2	2.1	2.2	2.2
	4	2	2.1	2.2	4.4
	5	20	20.8	22.2	26.7
	6	24	25.0	26.7	53.3
	7	23	24.0	25.6	78.9
	8	6	6.3	6.7	85.6
	9	13	13.5	14.4	100.0
	Total	90	93.8	100.0	
Missing	System	6	6.3		
	Total	96	100.0		

Get Students to Believe They Can Do Well in School

A total of 90 teachers responded to the efficacy engagement question of, “How much can you do to get students to believe they can do well in school?” The self-reporting Likert scale ranged from 1 – 9, with “1” indicating a teacher perceives he or she can’t do much, and “9” indicating a teacher can do a great deal to get students to believe they can do well in school. The minimum statistic was a 4. The mean statistic was a 7.26 (Table 10), an indication that teachers feel they can get through quite a bit to get students to believe they can do well in school.

Table 10

How Much Can You Do to Get Students to Believe They Can Do Well in School?

	Minimal Statistics	Frequency	Percent	Valid Percent	Cumulative Percent
	4	2	2.1	2.2	2.2
	5	10	10.4	11.1	13.3
	6	10	10.4	11.1	24.4
	7	35	36.5	38.9	63.3
	8	7	7.3	7.8	71.1
	9	26	27.1	28.9	100.0
	Total	90	93.8	100.0	
Missing	System	6	6.3		
	Total	96	100.0		

Help Students Value Learning

A total of 90 teachers responded to the efficacy engagement question of, “How much can you do to help your students value learning and get students to believe they can do well in school?” The self-reporting Likert scale ranged from 1 – 9, with “1” indicating a teacher perceives he or she can’t do much, and “9” indicating a teacher can do a great deal to help their students value learning. The minimum statistic was a 3. The mean statistic was a 7.10 (Table 2), an indication that teachers feel they can help their students’ value learning quite a bit.

Table 11

How Much Can You Do to Help Your Students Value Learning?

	Minimal Statistics	Frequency	Percent	Valid Percent	Cumulative Percent
	3	1	1.0	1.1	1.1
	4	1	1.0	1.1	2.2
	5	8	8.3	8.9	11.1
	6	19	19.8	21.1	32.2
	7	30	31.3	33.3	65.6
	8	11	11.5	12.2	77.8
	9	20	20.8	22.2	100.0
	Total	90	93.8	100.0	
Missing	System	6	6.3		
Total		96	100.0		

Foster Student Creativity

A total of 90 teachers responded to the efficacy engagement question of, “How much can you do to foster student creativity?” The self-reporting Likert scale ranged from 1 – 9, with “1” indicating a teacher perceives he or she can’t do much, and “9” indicating a teacher can do a great deal to foster student creativity. The minimum statistic was a 3. The mean statistic was 6.99 (Table 12), which demonstrates that generally teachers feel they can help foster student creativity quite a bit.

Table 12

How Much Can You Do to Foster Student Creativity?

Minimal Statistics	Frequency	Percent	Valid Percent	Cumulative Percent
3	3	3.1	3.3	3.3
4	1	1.0	1.1	4.4
5	10	10.4	11.1	15.6
6	18	18.8	20.0	35.6
7	26	27.1	28.9	64.4
8	12	12.5	13.3	77.8
9	20	20.8	22.2	100.0
Total	90	93.8	100.0	
Missing System	6	6.3		
Total	96	100.0		

Improve Student Understanding

A total of 90 teachers responded to the efficacy engagement question of, “How much can you do to improve the understanding of a student who is failing?” The self-reporting Likert scale ranged from 1 – 9, with “1” indicating a teacher perceives he or she can’t do much, and “9” indicating a teacher can do a great deal to improve the understanding of a student who is failing. The minimum statistic was a 3. The mean statistic was 6.96 (Table 2), demonstrating that teachers feel they can improve the understanding of a student who is failing quite a bit.

Table 13

How Much Can You Do to Improve the Understanding of a Student Who is Failing?

Minimal Statistics	Frequency	Percent	Valid Percent	Cumulative Percent
4	1	1.0	1.1	1.1
5	16	16.7	17.8	18.9
6	17	17.7	18.9	37.8
7	25	26.0	27.8	65.6
8	14	14.6	15.6	81.1
9	17	17.7	18.9	100.0
Total	90	93.8	100.0	
Missing System	6	6.3		
Total	96	100.0		

Assist Families to Help Their Children

A total of 90 teachers responded to the efficacy engagement question of, “How much can you do to assist families in helping their children do well in school?” The self-reporting Likert scale ranged from 1 – 9, with “1” indicating a teacher perceives he or she can’t do much, and “9” indicating a teacher can do a great deal to assist families in helping their children do well in school. The minimum statistic was a 3. The mean statistic was 6.34 (Table 2), which shows that teachers feel they can assist families in helping their children do well in school quite a bit.

Table 14

How Much Can You Assist Families in Helping their Children Do Well in School?

	Minimal Statistics	Frequency	Percent	Valid Percent	Cumulative Percent
	3	5	5.2	5.6	5.6
	4	2	2.1	2.2	7.8
	5	25	26.0	27.8	35.6
	6	16	16.7	17.8	53.3
	7	22	22.9	24.4	77.8
	8	7	7.3	7.8	85.6
	9	13	13.5	14.4	100.0
	Total	90	93.8	100.0	
Missing	System	6	6.3		
Total		96	100.0		

Rand 1

Rand 1 states, “When it comes right down to it, a teacher really can’t do much because most of a student’s motivation and performance depends on his or her home environment.” A teacher who expresses strong agreement with this statement believes that environmental factors overwhelm any power that teachers can exert in schools.

A total of 89 teachers responded to Rand 1. The self-reporting forced Likert scale ranged from 1 – 4, with “1” indicating strong agreement with the statement that environmental factors overwhelm any power that teachers can exert in schools. Teachers selecting a “4” disagree with

this statement; in other words, they believe students’ motivation and performance can come from other places, like schools. The minimum statistic was a 1. The mean statistic was 3.35 (Table 2), an indication that most teachers in this midwestern school district disagreed with the statement.

Table 15

Rand 1

	Minimal Statistics	Frequency	Percent	Valid Percent	Cumulative Percent
	1	2	2.1	2.2	2.2
	2	15	15.6	16.9	19.1
	3	22	22.9	24.7	43.8
	4	50	52.1	56.2	100.0
	Total	89	92.7	100.0	
Missing	System	7	7.3		
Total		96	100.0		

Rand 2

Rand 2 states, “If I really try hard, I can get through to even the most difficult or unmotivated students.” “Teachers who agree with this statement demonstrate confidence in their abilities as teachers to overcome factors that could make learning difficult for a student.

A total of 89 teachers responded to Rand 2. The self-reporting forced Likert scale ranged from 1 – 4, with “1” indicating strong agreement with the statement that teachers can get through to even the most difficult or unmotivated student if they really try hard. Teachers selecting a “4” disagree with this statement; they can get through to even the most difficult or unmotivated students if they try hard. The minimum response was 1. The mean statistic was 2.07 (Table 2), an indication that most teachers in this midwestern school district agreed with the statement.

Table 16

Rand 2

	Minimal Statistics	Frequency	Percent	Valid Percent	Cumulative Percent
	1	20	20.8	22.5	22.5
	2	55	57.3	61.8	84.3
	3	2	2.1	2.2	86.5
	4	12	12.5	13.5	100.0
	Total	89	92.7	100.0	
Missing	System	7	7.3		
Total		96	100.0		

Group Statistics

The researcher analyzed data by running an independent samples t-test (Fields, 2009). The group statistics are broken out by Rand 1 and 2, and by the 8 engagement questions. The two independent variables used to run the t-test were the responses of Advanced Placement teachers compared to non-Advanced Placement teachers. The researcher sought to ascertain if there was a difference in their engagement efficacy beliefs. The group statistics indicated that N = 52 for teachers that do not teach Advanced Placement courses and N = 31 for teachers teaching Advanced Placement courses.

Rand 1 and 2

Teachers not teaching Advanced Placement courses had a higher efficacy belief in engagement (M = 1.3462, SE = .18602) for the Rand 1 and 2 questions than Advanced Placement teachers (M = 1.0322, SE = .23865). However, the difference is not significant $t(81) = 1.035, p > .05$ (Table 2).

Efficacy Engagement

Teachers who do not teach Advanced Placement courses also had a higher efficacy belief in engagement (M = 6.8137, SE = .14703) for the 8 efficacy engagement questions than

Advanced Placement teachers ($M = 6.8024$, $SE = .18647$). In this case, the difference is significant $t(82) = 0.47$, $p < .05$ (Table 2).

Table 17

Group Statistics

		N	Mean	Std. Deviation	Std. Error Mean
Rand 1 and 2	Not AP	52	1.3462	1.34142	.18602
	AP	31	1.0323	1.32876	.23865
Engagement	Not AP	53	6.8137	1.07042	.14703
	AP	31	6.8024	1.03821	.18647

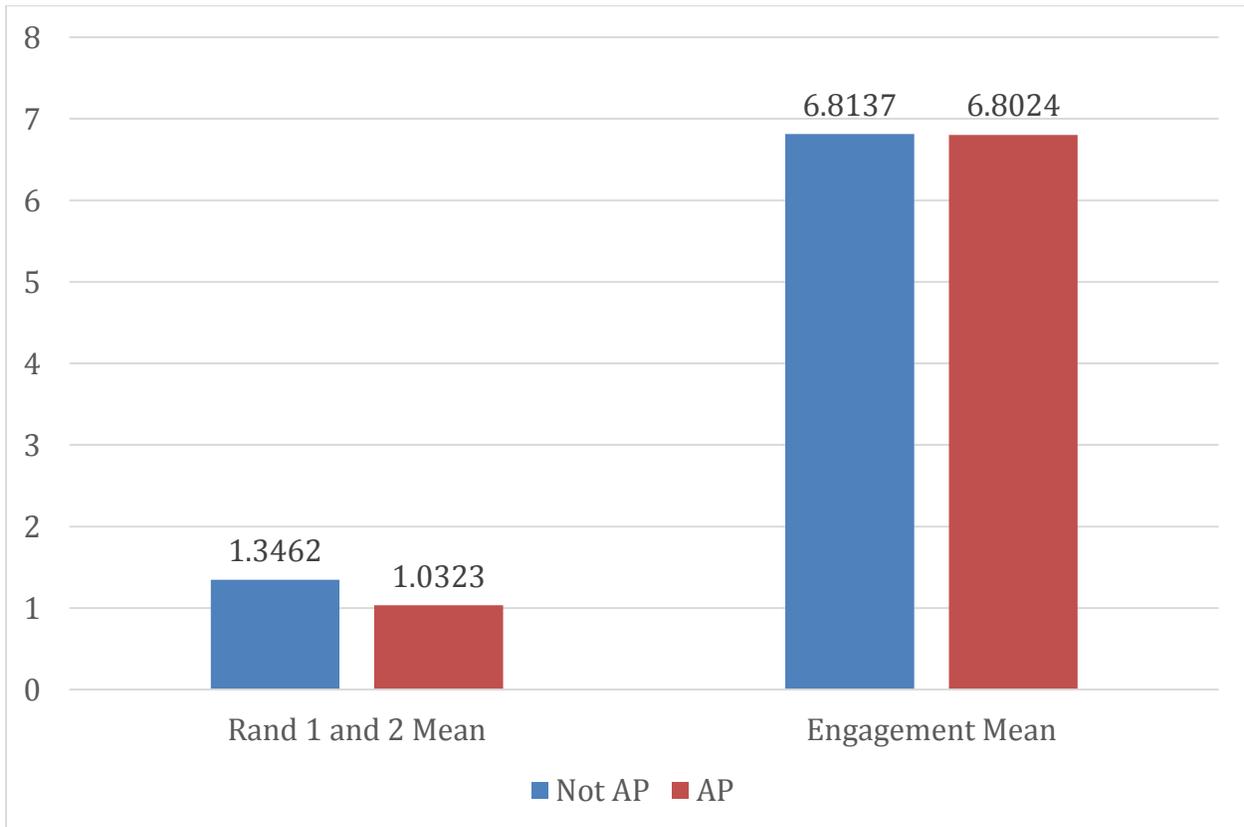


Figure 7. Group Statistics

Table 18

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Rand 1 and 2	Equal variances assumed	.093	.761	1.035	81	.304	.31390	.30332	-.28962	.91741
	Equal variances not assumed			1.037	63.697	.303	.31390	.30259	-.29064	.91844
Engagement	Equal variances assumed	.151	.699	.047	82	.963	.01126	.23940	-.46497	.48749
	Equal variances not assumed			.047	64.514	.962	.01126	.23747	-.46306	.48558

The independent t-test indicated the difference is significant $t(82) = .047, p < .05$ for the eight efficacy engagement questions.

The independent t-test indicated there was not a significant difference $t(81) = 1.035, p > .05$ for Rand 1 and 2.

Hypotheses Testing

The study had one central hypothesis: there is no difference in teachers' efficacy beliefs for student engagement between Advanced Placement teachers compared to teachers not teaching Advanced Placement courses. Teachers who do not teach Advanced Placement courses had a higher efficacy belief in engagement ($M = 6.8137, SE = .14703$) for the 8 efficacy engagement questions than Advanced Placement teachers ($M = 6.8024, SE = .18647$) (Table 2). The difference was significant $t(82) = .047, p < .05$ (Table 18).

After running an independent t-test, the null hypothesis was rejected for Rand 1 and 2 engagement questions. Teachers not teaching Advanced Placement courses had a higher efficacy belief in engagement ($M = 1.3462$, $SE = .18602$) for the Rand 1 and 2 questions than Advanced Placement teachers ($M = 1.0322$, $SE = .23865$) (Table 2). The difference was not significant $t(81) = 1.035$, $p > .05$ (Table 18).

Summary of Findings

The researcher used two instruments to measure teacher efficacy beliefs in engagement, The Ohio State Teaching Efficacy Survey and The Rand Measure. The OSTES consisted of 8 engagement questions, and The Rand Measure comprised 2 questions, called Rand 1 and 2. A summary of the findings from the independent t-test relative to the 8 efficacy engagement questions indicated there was not a significant difference between teachers who do not teach Advanced Placement courses and teachers teaching Advanced Placement courses.

Conversely, the t-test indicated there was a significant difference for teachers who do not teach Advanced Placement courses compared to teachers teaching Advanced Placement courses for Rand Measure 1 and Rand Measure 2 questions. The difference could have occurred due to random chance.

After examining the data from the 8 efficacy engagement questions and Rand 1 and 2 questions, both tests indicated the teachers who do not teach Advanced Placement courses had higher engagement efficacy beliefs compared to Advanced Placement teachers. This data point is based on the mean scores in the group statistics (Table 17). The mean score for engagement for the 8 efficacy engagement questions was slightly higher for teachers who do not teach AP courses (Not teaching AP, 6.8137; teaching AP, 6.8024). The mean score for Rand 1 and 2 for teachers who do not teach AP was slightly higher as well. (Not teaching AP, 1.3462; teaching

AP, 1.0322). A Likert scale ranging from 1 to 9 was used to collect data for the 8 efficacy questions. A Likert scale ranging from 1 to 4 was used to answer Rand 1 and 2, in which no neutral option was available. Based on the mean scores of teachers in this school district, teachers appear to have high efficacy beliefs in their ability to engage African-American and marginalized students.

CHAPTER 5

DISCUSSION OF FINDINGS

Introduction

Every child attending high school in the United States should have the opportunity to acquire a quality education. A quality education affords students an opportunity to earn Advanced Placement courses to defray college tuition fees, the opportunity to select a college of their choice, earn scholarships to defray the cost of college, and choose a career that is rewarding emotionally and financially (Becker et al., 2010). Furthermore, research suggests that college graduates are less likely to live in poverty (U.S. Department of Education, 2014). Payne (1996) posited that education is the key to getting out and staying out of generational poverty (Payne, 1996, p. 61).

There is a significant achievement gap between African-American students and their White counterparts. Boykin and Noguera argued that Black and Latino students are performing significantly lower than their White counterparts (Boykin & Noguera, 2011). Gaps in math and reading achievement are two measures researchers have identified as early as in kindergarten students, and the gap in these measures widens over the year (Barbarin, 2002). The gap widens for students of the same cohort in third grade with respect to higher order skill domains such as deriving meaning from text, drawing inferences beyond the literal text, and understanding rate and measurement in mathematics (Early Childhood Longitudinal Study (ECLS: K-Third Grade), 2004). Additionally, over time, the Black-White achievement gap continues to widen for 9, 13, and 17-year-old adolescents in reading, mathematics, and science (National Assessment of Educational Progress (NAEP), 2005). This achievement gap influences students financially and emotionally and contributes to encouraging a particular culture to be marginalized. Strong-

Leak's assertion that one of the most important goals of American high schools is to prepare students for college (Strong-Leak, 2010) must become a mantra for all educators.

Not only is embracing this mantra important to closing the academic achievement gap, but also teachers must be confident in their efficacy beliefs in engagement; they should strive to engage the most difficult, unmotivated, unsupported, and uninterested students, and believe it is possible for African-American students to succeed regardless of their socio-economic condition, family history, or deficits students bring to school.

Friend and Caruthers (2012) purported that if individuals surround themselves with negative and distorted images about cultural differences, then the prejudice can influence their experiences with people from those cultures. They suggested these become dangerous memories, which are defined as mental models of deficit thinking about cultural diversity; they may affect behaviors and practices of educators and cast culturally diverse students as others. For the purpose of Friend and Caruthers' research, "other" is defined as, "To experience how the dominant meanings of a society render the particular perspective ones' own group invisible at the same time as they stereotype ones' group and mark it out as other" (Friend & Caruthers, 2012, p. 369). Thus, teachers' efficacy beliefs about marginalized students are an important factor in determining whether students will be recommended to AP classes.

Research Design

Overview of Study

The purpose of this quantitative study was to add to the body of research regarding teacher efficacy beliefs in student engagement. The first goal was to ascertain if teachers' efficacy beliefs in engagement create difficulties in recommending African-American students to

Advanced Placement coursework. The second aim was to ascertain if Advanced Placement teachers' efficacy beliefs in engagement are different compared to teachers not teaching Advanced Placement coursework.

The population for this study consisted of Advanced Placement and regular education teachers from two high schools in a midwestern school district. The high schools serve students in grades 9 – 12. The average salary of teachers in this Midwestern school district is \$52,009, the average number of years teaching is 13.2 years, and 74.3% of teachers have Master's degrees (Missouri Department of Elementary and Secondary Education, n.d.). The average number of students per class is 19, with the student per teacher ratio being 15:1 (Missouri Department of Elementary and Secondary Education, n.d.). To assure the validity of the survey, the schools included had to have a minimum of 30 Advanced Placement teachers and 30 teachers who do not teach Advanced Placement respond to the survey instrument.

Three survey instruments were used to measure teacher efficacy beliefs in engagement. The Calculus AB Teacher Questionnaire sanctioned by the College Board (2002) contained responses five demographic questions. The Ohio State Teaching Efficacy Survey (OSTES) is comprised of eight items designed to measure teachers' efficacy beliefs in engagement. The survey used a self-reported Likert scale ranging from 1 (Nothing) to 9 (A Great Deal). The Rand measure consisted of two questions to measure efficacy in engagement, Rand 1 and Rand 2. For the purpose of this study, a self-reported Likert scale (1-4) was used to collect responses for Rand 1 and 2. Teachers selecting a 1 indicate they strongly agree with Rand 1 and 2 questions. Teachers selecting 4 indicate they Disagree with Rand 1 and 2 questions.

The quantitative data was collected from the three instruments, then analyzed to determine if there was a difference in the perceived levels of efficacy beliefs for student

engagement between Advanced Placement teachers compared to teachers not teaching Advanced Placement courses. The researcher also collected descriptive statistics for the eight efficacy engagement questions, and Rand 1 and Rand 2.

Research Questions

1. What are the descriptive summary statistics of teachers' efficacy beliefs from The Ohio Teacher Efficacy Survey of the eight engagement questions that may create difficulties for teachers' in their school activities?
2. What are the descriptive summary statistics of Rand 1?
3. What are the descriptive summary statistics of Rand 2?
4. Is there a difference in teacher efficacy beliefs for student engagement between Advanced Placement teachers compared to regular education teachers?

Null Hypotheses

Ho4: There is no difference in teacher efficacy beliefs for student engagement between Advanced Placement teachers compared to teachers not teaching Advanced Placement courses.

Summary of Findings

Descriptive Results

The results of this study consist of data for five demographic question, adopted from the Calculus AB Questionnaire sanctioned by the College Board, eight efficacy engagement questions from The Ohio teacher Efficacy Survey, and two engagement questions from Rand 1 and Rand two. Teachers from this suburban Midwestern school district completed survey items from three different instruments.

The demographic data included teacher's position, gender, number of years teaching, highest degree held, and ethnicity of the teacher. Altogether, 96 teachers responded to all demographic questions, except one who did not respond to the number of years teaching.

To the question "What is your position?", 32.3% of respondents shared that they taught Advanced Placement courses while 67.71% of the respondents did not teach an Advanced Placement course. To the question of gender, 43.8% of respondents identified as male, and 57.3% of respondents identified as female. In terms of the number of years teaching, 67.4% of respondents have been teaching for over 11 years; 32.7% of respondents have been teaching for less than 10 years. With respect to the highest degree held, 91.7% of respondents held a master's degree or higher. To the question of ethnicity, 89.6% of respondents were White, the remaining respondents (10.4%) were African-American, Hispanic/Latino, Native American, and Biracial or preferred not to disclose their ethnicity.

The data from the eight efficacy engagement questions and Rand 1 and 2 questions indicated the teachers who do not teach Advanced Placement courses had slightly higher engagement efficacy beliefs compared to Advanced Placement teachers. This data point is based on the mean scores in the group statistics (Table 17). The mean score for engagement for the

eight efficacy engagement questions was 6.8137 for those not teaching AP and 6.8024 for those teaching AP. The mean score for Rand 1 and 2 was 1.3462 for those not teaching AP and 1.0322 for those teaching AP. The difference was significant for the eight engagement questions, but not significant for Rand 1 and 2.

Hypothesis Testing

Null Hypothesis

The study's one hypothesis is that there is no difference in teachers' efficacy beliefs for student engagement between Advanced Placement teachers compared to teachers not teaching Advanced Placement courses. Teachers who do not teach Advanced Placement courses had a higher efficacy belief in engagement ($M = 6.8137$, $SE = .14703$) for the eight efficacy engagement questions than Advanced Placement teachers ($M = 6.8024$, $SE = .18647$) (Table 2). The difference was significant $t(82) = .047$, $p < .05$ (Table 18). The null hypothesis was rejected for the eight efficacy engagement questions. This could have occurred due to random chance.

The results of an independent t-test for Rand 1 and 2 engagement questions indicated that teachers not teaching Advanced Placement courses had a higher efficacy belief in engagement ($M = 1.3462$, $SE = .18602$) for the Rand 1 and 2 questions than Advanced Placement teachers ($M = 1.0322$, $SE = .23865$) (Table 2). The difference is not significant $t(81) = .1035$, $p > .05$ (Table 18).

Discussion

Findings from the t-test confirmed there was not a significant difference for the eight engagement questions between Advanced Placement teachers and teachers not teaching Advanced Placement courses. The findings also confirmed there was a significant difference between Advanced Placement teachers and teachers not teaching Advanced Placement courses

for the Rand 1 and 2 questions. The difference could have occurred due to random chance; meaning if the same test was run again the researcher may obtain a different result.

Rand Item 1 Question

“When it comes right down to it, a teacher really can’t do much because most of a student’s motivation and performance depends on his or her home environment.”

A teacher who expresses strong agreement with this statement believes that environmental factors overwhelm any power that teachers can exert in schools. Teachers from this Midwest school district generally disagreed with Rand 1 statement. Eighty-one percent of respondents indicated they disagreed by selecting a 3 or 4 on the survey (24.7 selected 3, 56.2 selected 4) (Table 15), thus indicating most of these teachers have a high sense of efficacy and believe that school has more of an impact on a student achievement than students’ home environment.

Rand Item 2 Question

Rand item 2 –“If I really try hard, I can get through to even the most difficult or unmotivated students.”

Teachers who expressed agreement with this statement show confidence in their abilities as teachers to overcome factors that could make learning difficult for a student. Teachers from this Midwest school district agreed with Rand 2 statement. Eighty-four percent of respondents indicated they agreed with the statement by selecting a 1 or 2 on the survey (22.5 selected 1, 61.8 selected 2) (Table16), thus indicating the teachers in this Midwest school district have a high sense of efficacy and believed they could get through the most difficult or unmotivated student if they really try hard.

Implication of Findings

Education Reforms

There are three education reforms significantly affecting education the past thirty years, including the 1983 report, *A Nation at Risk*, former President Bush's 2001 initiative *No Child Left Behind*, and former President Obama's reauthorization of ESSA, which was a springboard to implement his White House Scorecard and *Race to The Top* education initiatives. These reforms had the common goal of holding school's accountable for academic results through a more comprehensive rigorous curriculum and higher academic standards.

One of the challenges facing educators is to ensure that all students have an opportunity to engage in rigorous coursework such as Advanced Placement courses, honors courses, and talented programs. All students who are academically ready for the challenge of AP coursework have a right to engage in rigorous coursework (College Board, 2014). Research has shown that African-American and Latino students are well behind their White peers academically (Boykin & Noguera, 2011). One strategy to ensure students have an opportunity to engage in rigorous coursework is to enroll qualified students into Advanced Placement coursework. Advanced Placement courses help schools in closing the achievement gap because students scoring a 3 or higher on the AP examination tend to earn higher grades in college and their graduation rates at 4-year colleges are higher compared to those of students not participating in AP classes (Hargrove, Godin, & Dodd, 2008).

Teachers unintentionally engaging in cultural deficit thinking can prevent African-American students from enrolling in Advanced Placement coursework. Most high schools have prerequisites for enrolling students in Advanced Placement courses, the recommendation of the teacher being one of them. Teachers who exhibit processing deficit thinking tend to have low-

efficacy beliefs regarding the abilities of African-American students. However, some studies demonstrate that students are likely to demonstrate competence when they are treated as competent (Ladson-Billings, 2009). According to the literature, deficit-thinking teachers believe students are not capable of academic rigor based on students' socio-economic status, ethnicity, language, or the deficits students bring to school. Some of these deficits may be caused by the schools African-American students attended before enrolling in high school. Kozol (2005) claimed that some of the schools African-American and Latino students attend do not have the same infrastructure or resources as White suburban schools.

Educational Reforms are Necessary to Closing the Achievement Gap

There is an academic achievement gap between African-American students and their White counterparts (Boykin & Noguera, 2011; Hollins et al., 1994). The intent of educational reforms, such as ESSA and NCLB, is to hold states and schools accountable for students' success. The reauthorization of ESSA builds on the requirements of NCLB to ensure students are making progress toward high standards regardless of race, income, zip code, disability, home language, or background (U. S. Department of Education, n.d.). States are required to implement accountability measures to educators, families, students, and communities in the form of what we refer to as report cards which assess the students' and schools' academic standing compared to other schools (U. S. Department of Education, n.d.). Chichester warned that lower test grades by minority students would result in adverse social consequences and opportunities like low-wage jobs and increased prison population, which causes more resources to be spent investing in the prison population than in the education of our children (Wilson, 2000).

Additionally, another consequence of report cards is the stigma that schools with majority African-American and Latino populations are poor performing schools. Thus, somehow African-

American and Latino students are not academically gifted and teachers and administrators must not be as competent as high performing schools. One of the NCLB strategies is to allow students in failing schools to transfer to more successful schools. Unfortunately, according to Kozol (2005), this strategy has taken us back to a level of segregation America has not seen since 1968. Many of these students have not had an opportunity to know or attend a school with White students (Kozol, 2005).

The Ohio State Teacher Efficacy Survey (OSTES)

The findings indicate there is a significant difference between teachers who do not teach Advanced Placement courses and Advanced Placement teachers for the eight efficacy engagement questions based on the mean scores from the data. The results of the data support the claim that this school district is aware that efficacy beliefs in engagement are important to the success of their students. The mean scores for teachers who do not teach Advanced Placement was $M = 6.8137$, compared to $M = 6.8024$ for Advanced Placement teachers. The score ranges were 1-9, with “1” indicating a teacher believes he or she can do nothing, and “9” indicating a teacher can do a great deal.

How Much Can You Do to Get Through to the Most Difficult Students?

This Midwest school district’s teachers had relatively high efficacy belief that they could get through the most difficult students ($M=6.79$, Table 7). Engaging the most difficult students could lead to desirable academic and life outcomes (National Research Council and Institute of Medicine, 2004). Also, engaging students has been linked to reducing student dropout rates and encouraging them to attend post-secondary education (Corso et al., 2013).

How Much Can You Do to Help Students Think Critically?

This Midwest school district's teachers showed high efficacy belief in their ability to help students think critically (M=7.38). Research shows that students possessing the skill of critical thinking are able to work independently, experience higher academic performance, analyze and critique ideas while making connections across disciplines, effectively control their emotions, and work with others in a team environment (Elder & Paul, n.d.). Kunjufu (2002) stated, "In high-achieving classes, students are being prepared to become employers and critical thinking skills are valued; in the low-achieving classes, students are being prepared to become employees (Kunjufu, 2002, p. 12). Teaching students how to think critically affects their future far beyond high school.

How Much Can You Do to Motivate Students Who Show Low Interest in School?

The teachers of this Midwest school district had relatively high efficacy beliefs in their ability to motivate students who show low interest in school (M=6.49, Table 2). Bandura (1997) argued that teachers with high efficacy have the ability to bring about desired outcomes of student engagement and learning, even students that may be difficult or unmotivated. Motivational studies indicate the quality of relationships between students and teacher is influenced by teachers' motivations, interpersonal skills, instructional practices and attempts to socialize the motivation to learn (Davis, 2003, p. 208-209).

How Much Can You Do to Get Students to Believe They Can Do Well in School?

This Midwest school district's teachers had high efficacy beliefs that they can get students to do well in school (M=7.26, Table 10). This finding is very significant because some parents and educators believe that the achievement gap cannot be closed due to the attitudes and beliefs regarding the ability of underperforming children to perform at high levels. Schools are

attempting to implement “race neutral” policies, but these beliefs become obstacles to eliminating racial disparities in academic outcomes (Boykin & Noguera, 2011, p. 7).

How Much Can You Do to Help Students Value Learning?

The teachers of this Midwest school district had high efficacy beliefs that they can help students’ value learning ($M=7.1$), Table 11. This finding is significant because it suggests the school district does not subscribe to the idea that some teachers may not demand excellence from African-American students because of teachers’ belief that African-American students are incapable of meeting rigorous standards of behavior; therefore, teachers’ response is sympathy (Ladson-Billings, 2009).

How Much Can You Do to Foster Student Creativity?

This Midwest school district’s teachers had relative high efficacy beliefs that they can foster creativity in students ($M=6.99$), Table 12. Research suggests that high SES schools provide an idea of how school, home, and neighborhood environments potentially influence creative potential in terms of fluent, flexible, and original ideation during adolescence (Dai, Tan, Marathe, Valtcheva, & Pruzek, 2012). Thus, the researchers identified a creativity gap between upper middle class suburban districts and lower middle class districts. These two Midwest schools can build on their efficacy beliefs that they can foster creativity for students by teaching students the skill of divergent thinking which will tap into their creative traits, defined as motivational, attitudinal and behavioral tendencies (Dai et al., 2012).

How Much Can You Do to Improve the Understanding of a Student Who is Failing?

This Midwest school district’s teachers had relatively high efficacy beliefs that they can improve the understanding of a student who is failing ($M=6.34$). Teachers with strong efficacy exhibit a higher level of planning and organizing and willing to try new teaching methods to

impact teaching and learning (Berman et al., 1977). Educators refer to one of these strategies as differentiated or small group instruction aimed at addressing different learning styles (Bender, 2009).

How Much Can You Assist Families in Helping Their Children Do Well in School?

This Midwest school district's teachers had relatively high efficacy beliefs in believing they can assist families in helping their children do well in school ($M=6.34$). This is an indication that teachers have a sense that parental involvement is important to the success of their students. Thus, the relationship between students and the school will affect which classes students enroll in. It may also create higher quality of guidance counseling to guide students on college choice.

Rand Measure 1

Teachers at this Midwest school district disagreed with Rand Measure 1 statement, "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment,". Eighty-one percent of respondents indicated they disagreed by selecting a 3 or 4 on the survey (24.7 selected 3, 56.2 selected 4) (Table 15), thus indicating the teachers have a high sense of efficacy and believe school has more of an impact on a student achievement than students' home environment. Gibson and Dembo (1984) claimed "self-efficacy beliefs would be teacher's evaluation of their abilities to bring about positive student change" (p. 570).

Teachers' efficacy beliefs allow them to overcome challenges and be less critical of students when errors are made and have more (Ashton & Webb, 1986) and give them patience to work with students through their challenges (Gibson & Dembo, 1984). The data clearly indicated most of the teachers in this Midwest district (81%) believe they can influence student

achievement regardless of students' home condition. As a result of the strong efficacy beliefs of these teachers, the researcher can deduct that teachers' in this Midwest school, whether teaching AP or not, possess the necessary efficacy beliefs to recommend African-American students to AP coursework. The data indicated there is not a significant difference between teachers who do not teach Advanced Placement courses and Advanced Placement teachers for Rand 1. The mean scores were similar between teachers not teaching Advanced Placement ($M = 1.3462$) and those who teach Advanced Placement ($M = 1.0322$).

The Rand 2 Measure

This Midwest school district agreed with Rand Measure 2 statement, "If I really try hard, I can get through to even the most difficult or unmotivated students." Eighty-four percent of respondents indicated they agreed by selecting a 1 or 2 on the survey (22.5 selected 3, 61.8 selected 4) (Table 16), thus indicating the teachers have a high sense of efficacy and believe they can get through to the most difficult or unmotivated student if they try hard. Tscannen-Moran and Woolfolk-Hoy confirmed that student outcomes of achievement (Armor et al., 1976; Ashton & Webb, 1986; Moore & Esselman, 1992; Ross, 1992), motivation (Midgley, Feldlaufer, & Eccles, 1989) and students' self-efficacy beliefs are affected by teacher efficacy (Anderson, Green, & Loewen, 1988). Therefore, high teacher self-efficacy allows them to get through the most difficult and unmotivated students. Teacher efficacy is defined as a teacher's belief in his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated (Armor et al., 1976; Bandura, 1977). Student engagement is defined as being alert, completing assignments, being curious and passionate (Corso et al., 2013). Students with low self-efficacy, not believing they can get through the most difficult or unmotivated student, may be a result of the teachers' deficit

thinking. Deficit thinking teachers can have an impact on their recommending students to Advanced Placement courses (Oakes & Lipton, 2007). Ladson-Billings (2009) argued that some teachers might not demand excellence from African-American students because of teachers' beliefs that African-American students are incapable of meeting rigorous standards of behavior; therefore, the teachers' response is sympathy. Students who are difficult or unmotivated are not engaged in action. Active engagement includes attending and contributing to class, following school rules, completing assignments, studying, and concentrating on academic task. Corso, Bundick, Quaglia, and Haywood (2003) showed that the way students think, feel or act engaged in school plays an important role in students' social and academic success. Research has shown that too many students are bored, unmotivated, uninvolved, and disengaged from participating in academic and social aspects of school life (Appleton et al., 2008). Teachers in this Midwest school indicate confidence in their abilities as teachers to overcome factors that could make learning difficult for a student.

The data indicated there is not a significant difference between teachers who do not teach Advanced Placement courses and Advanced Placement teachers for Rand Measure 1 and Rand Measure 2. The mean scores were similar between teachers who do not teach Advanced Placement ($M = 1.3462$) and those who do ($M = 1.0322$).

Limitations

The independent t-test was chosen because it allowed the researcher to compare two independent variables. Additionally, the t-test is valid with small samples of subjects. There were 96 respondents in the survey. Respondents had the option of not answering questions they may have felt uncomfortable responding to. The meaningfulness of answers to the survey was subject to the honesty and accuracy of participants' perceptions and self-reporting using a Likert scale.

There were two Likert scales used for this survey, one with a range from 1 – 9 for the eight efficacy engagement questions, the other with a range from 1-4, commonly referred to as a forced option scale where the option for a neutral answer is eliminated.

Due to the limited number teachers teaching Advanced Placement and/or Advanced Placement and non-Advanced Placement courses at both schools, the sample size of Advanced Placement teachers was limited to 33 teachers, of whom 32 responded to the survey. This study only included one midwestern school district.

Recommendations

The primary research question was: Is there a difference in teacher efficacy beliefs for student engagement between AP teachers compared to regular education teachers? The independent t-test confirmed there is not a significant difference for the Rand Measure 1 and Rand Measure 2 engagement questions. The independent t-test also confirmed there was a significant difference for the eight efficacy engagement questions. The difference could have been due to chance.

Based on the results of the engagement surveys, this school district believes teachers can engage students and influence students academically, motivate students to achieve, assist them in critically thinking, foster creativity in students, help them believe they can do well in school, help students believe they can value learning, understand students who are failing, and assist families in helping children do well in school. Therefore, it does appear that a negative belief about efficacy in engagement is a barrier to recommending African-American students to Advanced Placement coursework in this Midwestern school district.

Furthermore, teachers at this Midwest school district strongly disagree ($M = 3.35$) with Rand Measure 1: “When it comes right down to it, a teacher can’t do much because most of a

student's motivation and performance depends on his or her home environment." Based on the mean score, the percentage of teachers selecting a 3 or 4 (81%) indicates teachers in this Midwest school district disagree with Rand Measure 1 and have a high sense of efficacy beliefs in engagement. Teachers selecting a 3 or 4 disagree with Rand Measure 1 statement. Although there was not a significant difference between teachers who do not teach Advanced Placement courses and Advanced Placement teachers, this Midwest school district has an opportunity to build on the school culture efficacy beliefs by collaborating and supporting teachers who may not agree with Rand Measure 1 to the extent of the 81% of teachers selecting 3 or 4.

The mean score for Rand 2 ($M = 2.07$) indicates that teachers generally agree with Rand Measure 2: "If I really try hard, I can get through to even the most difficult or unmotivated student." Based on the mean score, and percentage of teachers selecting a 1 or 2, (84%), the results indicate teachers in this Midwest school district have a high sense of efficacy beliefs in engagement. Although there was not a significant difference between teachers who do not teach Advanced Placement courses and Advanced Placement teachers, this Midwest school district has an opportunity to build on their efficacy beliefs by collaborating and supporting teachers who may not agree with Rand Measure 2 to the extent of the 84% of teachers selecting 1 or 2.

The following recommendations are offered to educational practitioners in order to improve efficacy in engagement for recommending African-Americans to Advanced Placement courses.

Poverty

The results of the study clearly indicate that this school district has high efficacy beliefs toward all students, including African-American students. Possessing high efficacy indicates that teachers do not have reservations in recommending African-American students to AP

coursework. Although approximately 20% this school district's students are on free/reduced lunch and living in generational or situational poverty, it is not a hinderance to recommending students to AP coursework.

As educators we must understand the mindset of African-American students living in generational and situational poverty. Generational poverty is living in poverty for at least two generations, while situational poverty is having a lack of resources due to a particular event that changes your life, for example, death in the family, major illness, or divorce (Payne, 1996). Students living in poverty view education from a totally different lens than middle or upper class students. Payne (1996) referred to this phenomenon as the hidden rules among class. Understanding the hidden rules among classes provides educators with more information on how we can best inspire and encourage low-income African-American students to value education as a real reality for their lives. African-American students must be taught the value of rigorous coursework like Advanced Placement courses and the advantages it provides for college preparation, financial fulfillment (Becker et al., 2010), and confidence that African-American students can succeed academically. Educators' efficacy beliefs in engagement are critical to the success of low-income African-American students enrolling in Advanced Placement courses. Middle class African-American students tend to view education from the middle class perspective relative to the hidden rules among classes. The following is a comparison of how different classes view poverty toward education (Payne, 1996).

Table 19

Education Hidden Rules among Classes

Poverty	Middle Class	Wealth
Valued and revered as abstract but not reality	Crucial for climbing success ladder and making money	Necessary tradition for making and maintaining connections

Stereotyping

Educators must refrain from buying into the stereotypes regarding Black boys. Noguera (2008) lamented some of the stereotypes such as Black boys being too loud, too aggressive, too violent, too dumb, too hard to control, too streetwise, and focused on sports too often (Noguera, 2008). As educators, it is imperative that teachers believe there is genius in every child, in which can lead to more African-Americans being recommended to AP classes. Believing in the above stereotypes can be considered deficit thinking, especially if these stereotypes prevent students from attaining academic success and being recommended for Advanced Placement coursework. Noguera (2008) also purported that Black boys often are not viewed as smart. They are usually not enrolled in schools where the environment is nurturing, supportive, and disciplined, with empathy and love. An appropriate quote for all educators interested in engaging students is, “Students don’t care how much you know, until they know how much you care (Anonymous).”

Culturally Relevant Teaching

It is essential to make a meaningful effort to implement culturally relevant teaching in the curriculum and classrooms. Ladson-Billings defines culturally relevant teaching as a pedagogy that empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills, and attitudes (Ladson-Billings, 2009, p. 20). Students become more engaged in the lesson when they can connect to the standards being taught. The expectations of teachers using culturally relevant teaching pedagogy are to teach to the highest standard. There are teachers able to use cultural knowledge to overcome some of the

stereotypical negative messages associated with schools and society. Nieto (2004) purported that sometimes new teachers expect very little of students who are economically poor, thus having a deficit perspective regarding low-income students (Nieto, 2004). Making curriculum relevant to students is important to achieving academic gains (Fergus, Noguera, & Martin, 2014).

Diverse Learning Environment

Teachers should encourage diverse learning environments for all students. Colleges have often professed that diverse learning environments are important in challenging long-held beliefs about various subjects or cultures of people. Gurin (1999) argued that diverse classrooms benefited White students by providing a greater understanding that group differences are compatible with societal unity and gave them motivation to understand diverse perspectives (Gurin, 1999). Also, Gurin (1999) stated, “This is precisely why the diversity of the student body is essential to fulfilling higher education’s mission to enhance learning and encourage democratic outcomes and values” (p. 1). The negative efficacy beliefs of teachers will be difficult to change if they are not exposed to racial diversity within their educational institutions, secondary education, or elementary education. Many of our educators have attended secondary schools and colleges that have segregated classrooms. Unless teachers make a valiant effort to be exposed to other cultures or professional development exposing them to diverse cultures, they may not get the maximum academic results for students. Gurin (1999) also stated that “Diversity in all forms of a student body is crucially important in helping students become conscious learners and critical thinkers, and in preparing them for participation in a pluralistic, diverse society” (p. 1).

Role Models

Educators need to implement a role model program to encourage the idea that being smart is good. Providing positive role models is one method of encouraging students to value academic success. More specifically, exposing African-American males to positive role models with the character traits you desire to instill in African-American male students has the benefit of exposing them to a different vision of what masculinity looks like (Fergus et al., 2014).

Unfortunately, a significant number of low-income students fathers are absent from the home, and students are usually raised by single mothers; thus, exposing them to diverse “role models” can affect their efficacy beliefs about themselves.

Review Advanced Placement Policies and Requirement

Teachers should review policies and requirements for admitting students to Advanced Placement courses. One possible idea is to open Advanced Placement courses to all students desiring to work hard in a particular Advanced Placement course offering. Many school districts admit students to Advanced Placement courses based on standardized tests, school grades, and teacher recommendations. However, some teachers believe that students will not perform well academically due to their socio-economic condition, ethnicity or non-English speaking which constitutes deficit thinking. Teachers engaging in deficit thinking may unintentionally not recommend African-American students based on their experiences and deficit thinking.

Advanced Placement coursework helps students prepare for college; many students attending college do not necessarily have the opportunity to enroll in an Advanced Placement class.

Enrolling in Advanced Placement classes can reduce the cost of college while also better preparing students to succeed in college. Additionally, Advanced Placement coursework boosts students' confidence if they become successful in challenging work (College Board, 2008).

Conclusion

The efficacy beliefs of teachers are critical to recommending students to Advanced Placement classes. Teachers who believe that low-income students living in poverty or coming to school with deficits will not succeed academically due to lack of intelligence or dysfunctional families subscribe to the cultural deficit perspective (Donnell, 2010). Irizarry (2009) concluded that African-Americans often fail in school partially because teachers think they are culturally deprived. Teachers must learn to engage students in thought, feeling, and action if they are to feel comfortable recommending African-American students to Advanced Placement coursework.

Advanced Placement coursework has many benefits, such as engaging in rigorous coursework, college choice, financial benefits, improved standardized test scores, higher order thinking, reduce discipline issues, and a competitive advantage in obtaining job opportunities.

The findings indicate there is a significant difference between teachers who do not teach Advanced Placement courses and Advanced Placement teachers for the eight efficacy engagement questions. The results of the study confirm that this school district is aware that efficacy beliefs in engagement are important to the success of their students. The mean scores for teachers who do not teach Advanced Placement ($M = 6.8137$), compared to Advanced Placement teachers ($M = 6.8024$). The difference could have occurred due to random chance.

Teachers in this Midwest school district possess relatively high to high efficacy beliefs for the eight engagement questions they voluntarily answered using the OSTES. Teachers believed they could get through to the most difficult students ($M = 6.79$, Table 2). Research confirms that engaging students is associated with positive academic outcomes, including achievement and persistence in school (Fredricks, Blumenfeld, & Paris, 2004). Making the curriculum relevant to students is important to achieving academic gains (Fergus et al., 2014).

Additionally, engaging students has been linked to reducing student dropout rates and encouraging students to acquire a post-secondary education (Corso et al., 2013).

Teachers in this Midwest school district had high efficacy beliefs that they can help students think critically ($M = 7.38$, Table 8). Research confirms that students mastering the skill of thinking critically have the ability to work independently, experience higher academic performance, are able to analyze and critique ideas while making connections across disciplines, effectively control their emotions, and work with peers as a team (Elder & Paul, n.d.).

Teachers in this Midwest school district also had relative high efficacy beliefs that they can motivate students who show low interest in school ($M = 6.49$, Table 2). Motivational studies indicate the quality of relationships between students and teacher is influenced by teachers' motivations, interpersonal skills, instructional practices, and attempts to socialize the motivation to learn (Davis, 2003, p. 208-209).

Teachers in this Midwest school district had high efficacy beliefs that they can get students to do well in school ($M = 7.26$, Table 10). Nieto (2004) claimed that sometimes new teachers expect very little of students who are economically poor, thus having a deficit perspective regarding low-income students. Making curriculum relevant to students is important to achieving academic gains (Fergus et al., 2014).

Teachers in this Midwest school district had high efficacy belief that they can foster creativity in students ($M = 6.99$). Researchers have identified a creativity gap between upper middle class suburban districts and lower middle class districts. This Midwest school district can truly build on their efficacy beliefs of encouraging creativity in every child.

Teachers in this Midwest school district had relative high efficacy beliefs that they can improve the understanding of a student who is failing ($M = 6.34$). Teachers can build on their

belief by implementing strategies related to differentiated instruction to address various learning styles of students (Bender, 2009).

Teachers in this Midwest school district had relatively high efficacy beliefs that they can assist families in helping their children do well in school ($M = 6.34$). One of the initiatives supported through the reauthorization of ESSSA and signed by former President Obama was the adoption of better data systems to provide schools, teachers, and parents with information about students' progress (U.S. Department of Education, 2009).

The results of Rand Measure 1 and 2 indicated there was not a significant difference between teachers who do not teach Advanced Placement ($M = 1.3462$) courses and Advanced Placement teachers ($M = 1.0322$).

As educators, it is important we build relationships with students, having the goal of encouraging and inspiring students to believe in their academic abilities and strive for excellence. In Winnfield's (1986) behavior teacher model, he called these teachers tutors who are described as believing that students can improve and who believe it is their responsibility to help them do so.

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Appendix A

Informed Consent Letter

Preceding the Ohio Teachers' Efficacy and Rand Measure Surveys

Dear Fellow Educator,

My name is Eric C. Greely Sr. and I am a doctoral student at the University of Missouri-Columbia. For my dissertation, I am conducting research to add to the body of research regarding teacher efficacy beliefs in engagement to ascertain the kinds of things that may create difficulties for teachers in recommending students for rigorous coursework. Because you are a high school employee in the school district, I am inviting you to participate in this research study by completing the linked survey.

If you decide to participate, please complete the linked survey. It will take less than 5 minutes to complete. No benefits accrue to you for answering the survey, but your responses will be used to ascertain the kinds of things that may create difficulties for you in recommending students for rigorous coursework in your school district. Any discomfort or inconvenience to you derives only from the amount of time taken to complete the survey.

There is no compensation for responding nor is there any known risk. In order to ensure that all information will remain anonymous, please do not include your name. Copies of the project will be provided to my University of Missouri dissertation adviser. If you choose to participate in this project, please answer all questions as honestly as possible and submit the completed questionnaire promptly using the submit button at the end of the survey. Participation is strictly voluntary and you may refuse to participate at any time.

Thank you for taking the time to assist me in my educational endeavors. The data collected will provide useful information in examining the teachers efficacy beliefs. If you would

like a summary copy of this study please email me at eric.greely@jppss.k12.la.us. If you require additional information or have questions, please contact me at the number listed below. If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you choose) any complaints to Dr. Carol Edmonds at CAKE@nwmissouri.edu or the University of Missouri Campus Institutional Review Board at umcresearchcirb@missouri.edu or (573) 882-9585.

Sincerely,

Eric C. Greely Sr.

(504) 218-6455/ecgreely@sbcglobal.net

CAKE@nwmissouri.edu

Appendix B

Teachers' Sense of Efficacy Scale

Teachers' Sense of Efficacy Scale (Engagement)

Demographic Questions

Directions: Please choose one answer from the list of choices for each question (Questions adopted from the Calculus AB Questionnaire sanctioned by the College Board).

1. What is your position

- Advanced Placement Teacher
- Regular Education Teacher
- Special Education Teacher
- Advanced Placement and Regular Education Teacher
- Administrator

2. Gender

- Man
- Woman
- Neither
- Prefer Not to Disclose

3. Number of years teaching

- Fewer than 5 years
- 6 – 10 years
- 11 – 20 years
- 20 – 30 years
- More than 30 years

4. Highest degree held

- Bachelors
- Masters
- Specialist
- Ed.D/Ph.D
- Other

5. Ethnicity

- African-American/Black
- White/Caucasian
- Asian/Pacific Islander
- Hispanic/Latino
- Native American /American Indian
- Biracial
- Prefer Not to Disclose

Teachers' Sense of Efficacy Scale (Engagement)

Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential (Teacher Sense of Efficacy Scale Adopted from The Ohio State Teacher Efficacy Survey).

6. How much can you do to get through to the most difficult students?

Nothing (1)	(2)	Very Little (3)	(4)	Some Influence (5)	(6)	Quite A Bit (7)	(8)	A Great Deal (9)
<input type="radio"/>								

7. How much can you do to help your students think critically?

Nothing (1)	(2)	Very Little (3)	(4)	Some Influence (5)	(6)	Quite A Bit (7)	(8)	A Great Deal (9)
<input type="radio"/>								

8. How much can you do to motivate students who show low interest in school work?

Nothing (1)	(2)	Very Little (3)	(4)	Some Influence (5)	(6)	Quite A Bit (7)	(8)	A Great Deal (9)
<input type="radio"/>								

9. How much can you do to get students to believe they can do well in school?

Nothing (1)	(2)	Very Little (3)	(4)	Some Influence (5)	(6)	Quite A Bit (7)	(8)	A Great Deal (9)
<input type="radio"/>								

10. How much can you do to help your students value learning?

Nothing (1)	(2)	Very Little (3)	(4)	Some Influence (5)	(6)	Quite A Bit (7)	(8)	A Great Deal (9)
<input type="radio"/>								

11. How much can you do to foster student creativity?

Nothing (1)	(2)	Very Little (3)	(4)	Some Influence (5)	(6)	Quite A Bit (7)	(8)	A Great Deal (9)
<input type="radio"/>								

12. How much can you do to improve the understanding of a student who is failing?

Nothing (1)	(2)	Very Little (3)	(4)	Some Influence (5)	(6)	Quite A Bit (7)	(8)	A Great Deal (9)
<input type="radio"/>								

13. How much can you assist families in helping their children do well in school?

Nothing (1)	(2)	Very Little (3)	(4)	Some Influence (5)	(6)	Quite A Bit (7)	(8)	A Great Deal (9)
<input type="radio"/>								

Teachers' Sense of Efficacy Scale (Engagement)

Directions. Please select the number that best represents how you feel about each question.

14. When it comes right down to it, a teacher can't do much because most of a student's motivation and performance depends on his or her home environment.

Strongly Agree (1)	Agree (2)	Strongly Disagree (3)	Disagree (4)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. If I really try hard, I can get through to even the most difficult or unmotivated students.

Strongly Agree (1)	Agree (2)	Strongly Disagree (3)	Disagree (4)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix C

The Author's Permission to Use *Teachers' Sense of Efficacy Scale*



Anita Woolfolk Hoy, Ph.D.

Professor
Psychological Studies in
Education

Dear

You have my permission to use the *Teachers' Sense of Efficacy Scale* in your research. A copy of both the long and short forms of the instrument as well as scoring instructions can be found at:

<http://www.coe.ohio-state.edu/ahoy/researchinstruments.htm>

Best wishes in your work,

A handwritten signature in cursive script that reads 'Anita Woolfolk Hoy'.

Anita Woolfolk Hoy, Ph.D. Professor

VITA

Eric Greely Sr. was born and raised in Bogalusa, LA, where he graduated high school in 1980. Eric earned his Ed.D from the University of Missouri in Education Leadership (2017), a Specialist in Education from Northwest Missouri State (2008), a Masters of Arts in Urban Education from Southern University at New Orleans (2005) and Bachelors of Science in Business Marketing from Southern University Baton Rouge (1989).

Eric held the position of assistant principal in Liberty, MO after being relocated to Kansas City, MO in September 2005 as a result of Hurricane Katrina. Eric returned to his home state of Louisiana in 2014, where he held the position of principal at Miller McCoy Academy and Bogalusa City Schools. Eric is currently principal at Roosevelt Middle School located in Kenner, LA. Prior to entering the field of education, Eric worked in Corporate America for the Procter & Gamble Distributing Company and Coca-Cola USA.

Eric has been instrumental in developing and implementing programs for schools to include the A+ Program, ACT Prep Program, Minority Focus Dinner and started a chess program at Liberty High School. Eric also implemented effective After-School Tutoring Programs at every school he was employed.