IMPLEMENTING A CULTURALLY RELEVANT PEDAGOGY TO ENHANCE STUDENT ACHIEVEMENT IN SCHOOL DISTRICTS WITH A PREDOMINANTLY AFRICAN AMERICAN POPULATION

By;

Glenda A. Riley

Dissertation submitted to the Faculty

Division of Ph.D. studies in Global Leadership

College of Professional Studies

in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
in Global Leadership

Indiana Institute of Technology
(Indiana Tech)

April 26, 2013

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

This dissertation written by: Glenda Riley

Under the guidance of a Faculty Committee approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

April 26, 2013

Faculty Committee

Dr Kenneth Rauch

Kenneth Rauch, Ed.D. – Committee Chairperson
Director of Ph.D. in Global Leadership
Indiana Institute of Technology

Dr. Marc W. Barnes

Marc Barnes, Ph.D. – Committee Member
Associate Professor
Indiana Institute of Technology

Dr. Lillian Schumacher

Lillian Schumacher Ph.D. – Committee Member
Professor – Dean of School of Business
Tiffin University

ABSTRACT

This study examines a cultural pedagogy relating to race, culture, and improving student achievement, as well as the extent to which teachers' critical and reflective practices influence how they deliver classroom instructions. When teachers' practices are critical and reflective they can re-assess their current teaching practices while attempting to improve their teaching pedagogy (Morton, 2009; Hatzipanagos & Lygo-Baker, 2006). This study seeks to determine the relationship between student achievement and teachers' use of a cultural pedagogy. Research for this study considers three styles of pedagogy: culturally responsive pedagogy, culturally relevant pedagogy, and critical pedagogy. This study is intended to contribute to the body of research that focuses on student achievement in school districts with a predominantly African American student population. Information gained from this study should be of interest to most education administrators, practitioners, and counselors.

DEDICATION

This dissertation is dedicated to my loving "maw," now resting in peace, who would always ask, "Are you back in school?" A class here, a class there, and I have finally achieved the degree traditionally known as the highest credential in the academic community.

ACKNOWLEDGEMENTS

Thank you Lord for your everlasting Grace and Mercy, which continues to sustain me through all things. I thank my church family for their unending words of encouragement, support, and prayers.

I offer my heartfelt thanks to my peers who put up with my "thinking I knew it all" when I actually knew nothing. I especially thank my Skype study buddies for staying awake into the wee hours of the morning regardless of time zone differences.

I would like to thank the principal and the teachers who participated in this study. Without your involvement I would not have reached this point of completion. I hope you continue to provide a quality education to students with their well-being in mind.

Thank you, Dr. Kenneth Rauch, my dissertation chair, for guiding me through this sometimes difficult process. I also appreciate the support and feedback of my dissertation committee members Drs. Marc Barnes and Lillian Schumacher (Dr. Lil). Additionally, I would like to thank all the professors and administrative staff who continue to work diligently in the program to make it the success it is.

Last but certainly not least, I thank God for my husband David. I appreciate him putting up with me when no one else would. I am grateful he would not settle for less from me and supporting me from the first day "we" stepped foot on Indiana Tech campus. You are known by some as the husband who came to the first immersion weekend with his wife. You are truly the best!

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1

Introduction and Theoretical Framework

Examining a teachers' pedagogical method that relates to race, culture, and improving student achievement and the extent to which these methods influence African American students' scores on the state assessment is the focus of this study. Across the United States, there are changes in student demographics and socioeconomic division among public school students population. These differences are significant in that, rather than confronting dangerous minds, teachers who instruct urban students of color are teaching in dangerous times (Ladson-Billings, 1998). Because the United States has been slow in adopting a curriculum based on 21st century skills and addressing the changes in demographics, the United States school systems has fallen behind those of other countries (Teaching, 2009). With the inability of the United States schools to keep pace with demographic changes, students are at a disadvantage in competing in the global economy.

A teacher's pedagogy is important with regard to addressing each student's learning needs (Klotz, 2006; Stender, 2010; Buendia, Gitlin, & Doumbia, 2003). As Taylor (2009) explained, "The case for pedagogy lies in the educational discipline of curriculum and instruction" (p. 315). Starks and Lattuca (1997) stated:

> The framework for the development of a curriculum emphasis that focuses on emotional intelligence, cultural competency, and education is one that enhances student-learning strategies, draws on students' experiential and contextual intelligences, promotes reflection and practice, and helps students make better use of the tools they already have for approaching and solving problems (as cited in Taylor, 2009, p. 315).

Teachers must use a pedagogy that helps students acquire a quality education. The content of the curriculum should be relevant and appropriate for students (Zippay, 2010). With classrooms containing students with diverse cultural backgrounds and learning styles as well as teachers with access to diverse pedagogical methods, determining a curricula that is relevant and appropriate could be challenging. Fostering cultural competence among students is difficult because many teachers in the United States possess a limited understanding of culture—their own or anyone else's (Ladson-Billings, 1998). To meet the challenge, learning a specific method such as cultural pedagogy can benefit both students and teachers. As Gay (2000) explained, "Teachers must understand, facilitate, and appreciate pedagogy that is culturally responsive and responsible by creating educational environments that offer safe, welcoming, and caring communities of learners for all of their students" (as cited in Gallavan, 2005, p. 36).

The way teachers think about educating their students makes a critical difference in how students perform in the classroom (Ladson-Billings, 1994), and student performance in the classroom is a result of their academic achievement. Research conducted by Au & Raphael (2000), Banks (2007), Darling-Hammond (2004), Flint (2008), Gay (2000), Ladson-Billings (1994), Nieto (1999), and Villegas & Lucas (2002) (as cited in Zippay, 2010) postulated that in the last quarter century, much research was conducted about the affect teachers' pedagogy had on the academic achievement of white students and those of diverse backgrounds. However, regardless of a teacher's pedagogical method, Taylor (2009) noted that minority students who are below grade level at the beginning of the school year do not perform well as the students who represent the dominant culture who come into that classroom with advanced knowledge

about the curriculum. One way to exam how a teacher's pedagogical method affects students' academic achievement is by collecting data on students' knowledge and skills with pre-test and post-test data. Examining a teacher's pedagogical methods is useful in determining its influence on student achievement.

US educators need to prepare their students with a quality education in order for students to succeed in a competitive and ever-changing global society (Thurman, 2009). Such an education must effectively teach a broad variety ethnic range of students and address the cultural capital they need to compete globally. Young adults need to acquire an education that allows them to make appropriate decisions as active citizens in a multicultural democracy (Merryfield & Kasai, 2004). Students should gain knowledge or experiences in economic, political, and military interests beyond those of their own country. This cultural awareness, better known as Cultural Intelligence (CQ), could be beneficial to students because it "refers to what a person can do to be effective in culturally diverse settings" (Ang & Van Dyne, 2008, p. 8). Thus, a teacher's pedagogy should include CQ to engage students in culturally diverse learning processes. When pedagogy employs CQ, teachers function more effectively in situations in which cultural diversity exists. By utilizing such techniques, leaders such as administrators, principals, and teachers will pave the way for students to succeed in the 21st century.

Statement of the Problem

This study examines how teachers who work with a predominantly African American student body develop and apply a culturally relevant pedagogy. Teachers who are working in school districts with a high proportion of African American students need to incorporate into their pedagogy an understanding about their students' culture.

Utilizing CQ may assist teachers in understanding their students, which may then help them improve student achievement. The techniques teachers employ should enhance the students' knowledge. Unfortunately, teachers may not understand the cultural background of their students and, therefore, the pedagogy they employ in the classroom may not exemplify CQ for their students. However, a deficiency exists in the perception of how critical pedagogy and reflective thinking skills relates to culture, but "culture is integral to the learning process" (Colbert, 2010, p. 15). That said, according to Hefflin (2002) culturally relevant pedagogy allows teachers to modify their instructions to fit the textual, social, cultural, and personal lives of their students by allowing them to experience pedagogy through the models and practices of the students they teach.

Purpose of the Study

The current study examines the implementation of a cultural pedagogy that focuses on race, culture, and improving student achievement, and the extent to which the teachers' critical and reflective practices influence how they deliver classroom instruction. Additionally, this quantitative method research study examines whether the teachers' believe that their students' cultural background influences the way their students think and act as well as the teachers' awareness of, comfort with, and sensitivity to issues of cultural pluralism in the classroom. Finally, this research study investigates whether employing a cultural pedagogy affects the teachers' CQ, student achievement, and academic success in the classroom and on the Benchmark examination (standardized tests administered to students in the state of Arkansas).

Significance of the Study

Webb-Johnson and Bridgest (2003), using research by Boykin and Bailey (2000) and Ellison, Boykin, Towns, and Stokes (2000), posited that "African American students' chances of school achievement increase when they, like their non-African American schoolmates, experience education with teachers who understand their sociocultural knowledge and take into account cultural factors when designing, implementing, and evaluating instruction" (p. 49). This could indicate that, to combat underachievement in predominantly African American populated high schools in which teachers do not exercise a cultural pedagogy that enhances students' learning, school district officials face the challenge of teaching teachers how to deliver a cultural pedagogy that meets the educational needs of students. Dove, Pearson, and Hoover (2010) suggested that academic achievement could be measured with test scores as well as report card grades.

The intention of this study is to gain an understanding of African American students' achievement and gauge whether teachers who use a culturally relevant pedagogy enhance their students' learning. Information gained from this study should be of interest to most education administrators, practitioners, and counselors because of the importance of student achievement. In the United States, student achievement is usually measured using testing instruments developed and mandated at the state level. The scores from these assessments measure student learning in the content area(s) each test covers. The levels are usually defined as advanced, proficient, basic, and below basic. As Brown and Conley (2007), Roach, Niebling, and Kurz (2008), and Schneider (2003) suggest, student achievement on these assessments is important because it can help students become more productive citizens.

Research Questions

The overarching research questions proposed for investigation in the current quantitative method study are:

Research Question 1 (RQ1): Are there significant differences in the mean score between 11th grade African American students' benchmark scores and a teachers' cultural awareness?

Research Question 2 (RQ2): Are there significant differences in the mean score between 11th grade African American students' benchmark scores and a teachers' cultural intelligence?

Based on the research interest of the study, evidence was evaluated and potential differences studied.

Limitations and Delimitations

This study focuses on a single high school in order to discover whether implementing a cultural pedagogy increases student achievement among African American students. These findings may not be generalizable to other school districts with different social, cultural, or economic conditions. The delimitations for this study are school districts with predominantly African American student populations that use the Benchmark Criterion Reference Test (CRT) to assess student achievement and school districts with predominantly African American student populations with teachers who do not use a culturally relevant pedagogy. A limitation of this study is students enrolled at the high school grade levels 9, 10, 11, and 12, and the small number of students enrolled at the high school that was studied. Additionally, this study is limited to students in southeast Arkansas, in the county of Jefferson. Another limitation is the small number of

teachers who teach courses at the high school level. Additionally, this study is limited to the extent to which one can measure CQ using a teacher survey with a restricted number of questions, specifically 20.

Definition of Terms

Augmented Benchmark Examination (Benchmark Examination): Standardized tests administered to students in the state of Arkansas. Current law and Arkansas State Board of Education regulations require the administration of criterion-referenced tests (CRTs) and norm-referenced tests (NRTs). The Benchmark Examinations' CRT component measures student performance on items specifically developed by Arkansas teachers and the Arkansas Department of Education. The CRT aligns with the Arkansas Mathematics and English Language Arts Curriculum Frameworks and the NRT component of the exam. The NRT component covers a broader range of content that focuses on rank-ordering student performance as compared to students across the nation and contains items that cover reading comprehension, math problem solving, and language (Arkansas Department of Education, 2010).

Critical pedagogy: Pedagogy that considers how education can provide individuals with the tools to better themselves and strengthen democracy, to create a more egalitarian and just society, and thus to deploy education in a process of progressive social change (Darder, 1995, p. 5).

Critical thinking: Thought process characteristics of creativity, criticism, and logic in literature, arts, sciences, and other disciplines; divergent thinking (International Reading Association and National Council of Teachers of English, 1996, as cited in Thurman, 2009, p.6).

Cultural Intelligence (CQ): A person's ability to learn more about and understand diverse cultures as well as the ability to gradually shape thinking to be more sympathetic to various cultures so that one's behavior is more fine-tuned and appropriate when interacting with people from other cultures (Thomas & Inkson, 2005; Ang & Van Dyne, 2008).

Cultural Intelligence Scale (CQS): A 20-item self report CQ assessment developed from the four factor model of CQ: cognitive, metacognitve, motivational, and behavioral (Ang &Van Dyne, 2008).

Culturally relevant pedagogy: A pedagogical approach that "empowers students intellectually, socially, emotionally, and politically by using cultural referents to impart knowledge, skills, and attitudes" (Ladson-Billings, 1995, p. 18).

Culturally responsive pedagogy: A practice that explicitly highlights issues of race, ethnicity, and culture as central to teaching, learning, and schooling (Stairs, 2007). When teachers employ a teaching practice that is culturally responsive, a creative learning environment exists in which students feel as if they will receive the best academic opportunities to achieve regardless of their culture (Frye & Vogt, 2010).

Culture: According to Zion and Kozleski (2005), the system of shared beliefs, values, customs, behaviors, and artifacts those members of a society use to interact with their world and one another (as cited in Moore, 2010).

Pedagogy: The art of teaching; the methods and skills that teachers use to impart their content and knowledge of their subject matter to students (Alexander, 2001).

Race: According to Dutro, Kazemi, Balf, and Lin (2008), the model through which individuals identify themselves and others, an unpreventable and unchanging

model (as cited in Leonard, Napp, and Adeleke, 2009). Race is operationally defined as the color of one's skin, which is unchangeable.

Reflective practices: Practitioners engage in a continuous cycle of self-development and self-awareness of (professional) knowledge to understand the appropriateness of their actions or reactions (Forrest, 2008), establish an assessment of professional practices, and observe and refine one's professional practices (Leshem & Tafford, 2006).

Student achievement: The quality and quantity of a student's work (Achievement, 2012).

Summary

Chapter 1 has introduced and identified the theoretical framework and discussed the context for the study, examined the research questions, and offered definitions of terms used within the study. In chapter 2, the key research and viewpoints pertaining to culturally relevant pedagogy are reviewed. Cultural pedagogy's diverse claims will be examined by reviewing studies that present its effectiveness in facilitating the academic achievement of culturally diverse students. In chapter 3, the methodological procedures employed in this study are discussed. The findings of the research are presented in chapter 4. Then, chapter 5 provides the analysis and interpretation of the findings in relation to the research regarding culturally relevant pedagogy, offers conclusions of this study, and highlights areas for further research.

CHAPTER 2

Review of the Literature

Sternberg, Lipka, Newman, Wildfeuer, and Grigorenko (2007) showed "that when children are taught in a way that better matches their culturally acquired knowledge, their school performance improves" (as cited in Ang and Van Dyne, 2008, p. 313). As noted in chapter 1, this study examines pedagogical methods relating to race, culture, and improving student achievement and the extent to which these methods affect African American students' scores on the state assessment. A review of available literature illustrates several pedagogical approaches and how each can be used to enhance student achievement.

The pedagogical methods that will be addressed in this literature review are interchangeable in the cultural form, such as culturally responsive and culturally relevant. Also, addressed is how these pedagogical methods can enhance student achievement in a school with a high proportion of African American students. To understand how cultural pedagogy enhances African American students' achievement, it is necessary to research several forms of cultural pedagogy, such as culturally responsive pedagogy, critical pedagogy, and culturally relevant pedagogy. Additionally, to understand how African American students' achievement draws from cultural pedagogy, it is necessary to research issues associated with cultural studies such as cultural intelligence (CQ), race (primarily African American), poverty, and student achievement. These issues are important to study because they share cultural indications.

Pedagogy

Pedagogy enables one to perform functions that provide academic instructions

through lectures, study guides, presentations, examinations, or technological tools. Livingston (2010) stated that pedagogy influences an individual's learning ability to align with the school's goal by enlightening the students and helping them to excel. Students can excel when pedagogy is effectively disseminated. Kemp, Blake, Shaw, and Preston (2009) affirmed that when students absorb knowledge and show academic achievement, instructors disseminated pedagogy successfully.

Pedagogy promotes the processing of information. Teachers who apply effective pedagogical approaches in their classrooms often demonstrate higher levels of student achievement. The study of pedagogy also recognizes the interrelations between content and processes in teaching—that is, how the manner in which one teaches shapes and limits what is taught and vice versa (Sinclair, 2005). Kemp et al. (2009) found that when teachers fail to deliver academic instructions, students often struggle with the content because they cannot successfully process the materials. An important question is: How can teachers redefine their pedagogy to enhance student achievement? Research has shown that it is possible to redefine pedagogy, but only if teachers are willing to change how they disseminate knowledge to their students.

Miller, Drill, and Behrstock (2010) stated that, when considering research that discusses redefining classroom pedagogy, teachers are more likely to accept research that supports their current instructional methods than research that may involve changing their existing practices. This is because some teachers would rather continue to use a pedagogy they are comfortable with rather than change to one which is less familiar. If teachers are asked to change their pedagogical methods, there should be an effective method supported by research diagramming how the change should occur. The following

points relate to the different methods of pedagogy, such as culturally responsive pedagogy, critical pedagogy, critical reflective practices, and culturally relevant pedagogy. The critical pedagogy will reflect upon critical thinking and problem-solving skills.

Culturally Responsive Pedagogy

Due to the rising number of students from diverse backgrounds in US schools, the need to provide a culturally responsive education is of increasing importance (Klotz, 2006). Delpit (1995), Gay (2000), and Ladson-Billings (1995) illustrated how teacher education curricula must include culturally responsive pedagogy so that teachers are adequately prepared to respond in culturally appropriate ways to the growing diversity in US schools (as cited in Nero, 2009). Wallitt (2008) noted that a culturally responsive pedagogy lends itself to creating an inclusive environment. When teachers employ a culturally responsive pedagogy, they exhibit a genuine belief in students' abilities and a commitment to structure content, instruction, and assessment in a manner that encourages the students' best academic performance (Howard, 2001). Frye and Vogt (2010) agreed that culturally responsive pedagogy requires teachers to create a learning environment in which students feel as if they will receive the best opportunities to achieve regardless of the color of their skin. In interviews with Cambodian students, Wallitt (2008) found that whether or not their teachers used a culturally responsive pedagogy played a crucial role in their sense of academic belonging, engagement, and affirmation versus a sense of omission, invisibility, or humiliation.

Critical Pedagogy

"Critical pedagogy considers how education can provide individuals with the tools to better themselves and strengthen democracy, to create a more egalitarian and just society, and thus to deploy education in a process of progressive social change" (Darder, 1995, p.5). Critical pedagogy happens when teachers employ methods that are relevant and appropriate while delivering academic materials and as a result students process it in ways that assist them in academic success. Teachers who utilize a critical pedagogy help students achieve the goals set before them. To provide students with the opportunity to acquire a balanced world view, it is critical that teachers employ an effective cultural pedagogy (Drainville, 2003).

In critical pedagogy, power and position in society are linked to social class and race (Leonard et al., 2009). Bourassas (2010) declared that when teachers do not understand how critical pedagogy relates to minority students' achievement and do not use such approaches in their classes, students often underachieve. Given that race is associated with culture and culture affects a person's beliefs and understanding, teachers' cultural pedagogy permits them to assess their students' cultural knowledge, which enables them to better serve their students. According to Zimmerman (2009), "critical pedagogy examines and questions competing visions of what 'legitimate' knowledge is, and what constitutes 'good' education and 'serious' schooling" (p. 46). With a critical pedagogy, teachers can employ a variety of teaching methods that support the active learning of course content, relate new knowledge to prior experiences, encourage academic success, and foster the development of critical thinking skills (Morey, 2000).

Critical reflective practices. According to Schneider (2010) "teachers' perceptions are extremely consequential in the day-to-day lives of the students they teach and influence the professional decisions they make," (p. 420). Zeichner and Liston (1987) and Valli (1992) demonstrated that reflective practice methods in teacher education are one reform effort that is prevalent in the education community (as cited by Pedro, 2005). When teachers implement reflective practices they use past experience in handling certain situations to determine the best current course of action. Rogers (2001) believed it is good practice for educators to work with students who are specifically challenged in areas the educators can relate to from their own experiences. Teachers who exercise reflective practices can sometimes predict certain outcomes or help encourage more positive results from their students.

Forrest (2008) believed critically reflective teachers should use critical inquiry and self-reflection. He recommended three essential practices for critical reflection:

1. Set aside time for solitary reflection and keep a journal to ensure this is carried out on a daily basis. A reflective teacher takes time for self reflection to recall daily processes and acknowledge areas of improvement.
2. Become a perpetual problem solver; bring new insights and perspectives to enable re-evaluation and consideration. A reflective teacher thinks outside the box, creating new ideas and practices for resolving problems.
3. Question the status quo or conventional wisdom and be open to examining the assumptions that underlie teaching practices. A reflective teacher will challenge personal beliefs despite general practices.

Understanding the purposes of using critical reflective practices plays an important role in reflecting on one's pedagogy and how the reflection might influence student's academic success.

Teachers can encourage students to develop reflective practice skills that may enhance independent learning, while teaching them a responsibility of learning through another learning tool (Fehring, 2005). If students possess critical thinking, problem-solving, and technological skills, their knowledge of applying reflective practices to their past negative experiences might provide solutions to achieving positive results.

Critical thinking. Teachers who critically think about adopting a culturally relevant pedagogy may positively influence their students' learning experiences. Sezer (2008) concluded that "once critical thinking skills and accompanying behaviors are defined; one can look at the importance of critical thinking in education" (p. 350). Critical thinking and problem-solving skills are central to the student success in the 21st century (Kaye & Honey, 2006). Furthermore, students often learn to be critical thinkers from teachers who facilitate critical thinking. Czarnecki (2009) documented that students taught by critical thinkers will acquire the ability to plan and perform research, manage projects, solve problems, and make informed decisions. Being exposed to teachers who are critical thinkers implies that students may be more successful in the classroom and in their careers, especially those that require them to travel to other regions or countries.

Typically, in the United States, standards define the academic content students must learn at each stage of the education process. However, often these standards fail to define the skills that contribute to success, such as critical thinking and problem-solving, which is necessary for social, academic, and professional achievement (Silva, 2009;

"Skills," 2009). As social and economic practices become more widely employed, Black (2009) pointed out that it stands to reason there will be an affiliated shift in the sort of skills and abilities, such as critical thinking, needed to work and socialize in culturally diverse environments. This shift will result from teachers employing cultural pedagogy to teach critical thinking skills that help students engage in culturally diverse communities. Critical thinking skills are an asset for student's performance inside or outside the classroom. Wiggan (2008) confirmed that the students in his study believed that when teachers' engaged and encouraged them to think critically, their thought processes improved.

Arnold (2007) stressed that "secondary schools must ensure that all students leave high school with the skill and training to enable them to keep up with technological advances" (p. 7). Teachers must make certain their cultural pedagogy can sufficiently display critical thinking skills to implement a successful outcome. The International Society for Technology in Education, State Educational Technology Directors Association, and Partnership for 21st Century Skills (2007) noted there are initiatives significant to production of technology-based assessment for critical thinking and problem-solving skills. Partnership for 21st Century Skills (2009) addressed the fact that 21st century skills implementation cannot move forward unless students understand the core academic subjects (e.g., English, Math, Science). Therefore, students who think effectively and communicate critically must acquire core academic subject knowledge in the classroom. If students lack proficiency in basic skills or factual knowledge, teachers should focus their attention on conceptual understanding and critical thinking skills (Snider & Roehl, 2007). Kay and Honey (2006) stated that with suitable assessment of

21st century skills, teachers would have the opportunity to cover this critical area in their classrooms. Partnership for 21st Century Skills (2009) indicated that state-of-the-art scientific and technological instruments can support students' using critical thinking skills as they relate to the curricula. Use of instruments other than students' knowledge allows them to rely on something other than their understanding.

The ability to acquire critical thinking skills is important outside of the classroom also. Critical thinking skills are necessary in the workforce as well as in a global economy. Hart (2006) found that employers identified the following skills as vital to their employees' success: 1) teamwork skills, 2) critical thinking and analytical reasoning skills, and 3) communication skills (See Figure 2.1). Additionally, recent graduates recognized how these skills affected employment acquisition (Hart, 2006). Of the seven skills assessed in Hart's study, teamwork skills ranked highest by employers (44%) as well as by recent graduates (38%). However, critical thinking/reasoning skills ranked second for employers (33%) but were ranked equally with oral/written communication by recent graduates (37%).

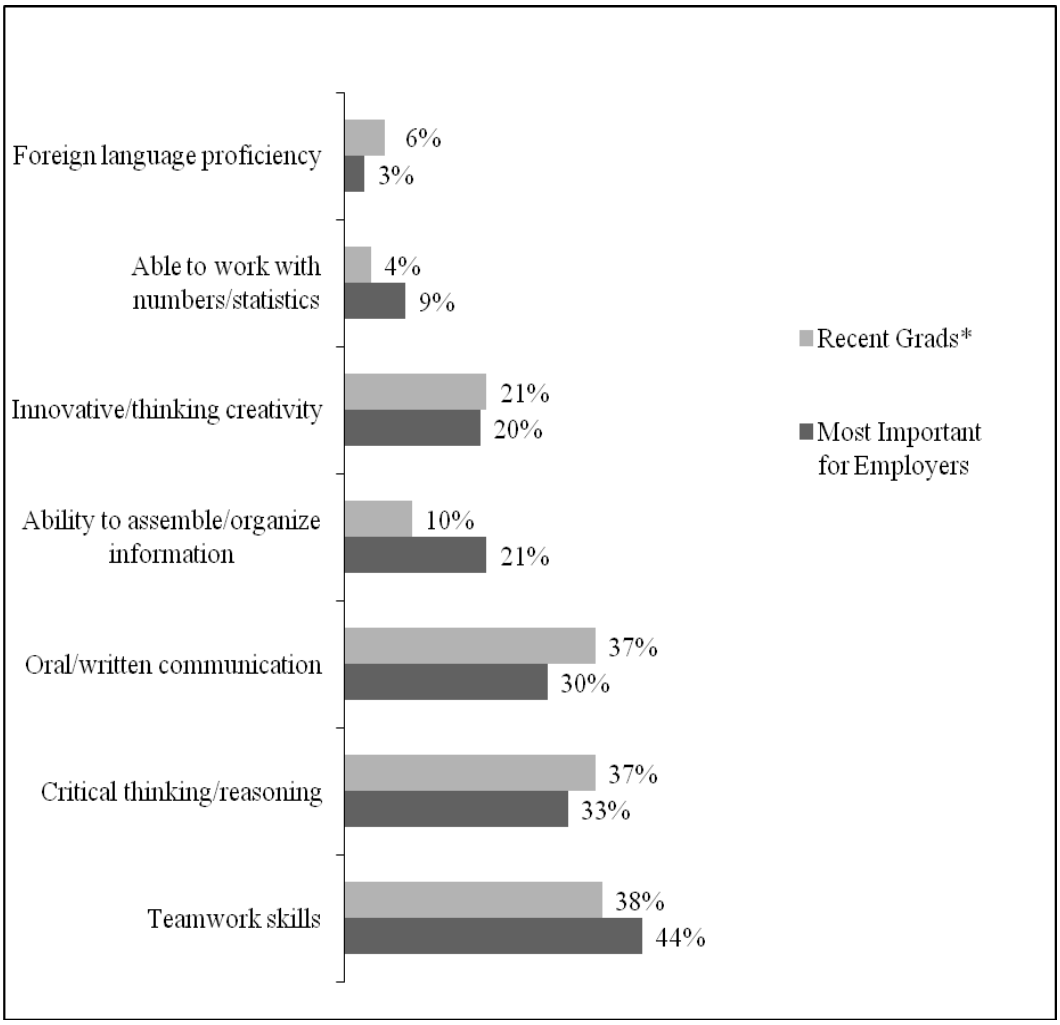

Figure 2.1. Most important skills employers look for in new hires.

Uchida, Cetron, and McKenzie (1996) noted that, to succeed in the global economy, students must be able to assess, reflect, and reason more effectively. One concern with critical thinking in education, according to Popkewitz and Fendler (1999), is that critical thinking is a broader scope of determining logical solutions when it comes to educating students. The broader scope should include employing a global mindset to determine solutions as a critical thinker. Using a global mindset includes critically thinking about solutions to problems through a culturally diverse view, not only one's own cultural mindset.

Critical thinking positively affects higher order thinking skills (Prawat, 1992). Teachers play a critical role for their students in the development of higher order thinking skills. When teachers emphasize critical thinking, students collaborate and employ these skills as they participate in classroom assignments (Bell, 2010). When students use this higher order learning of critical thinking they are more likely to transfer these behaviors to their studies (Prawat, 1992). Furthermore, the utilization of critical thinking skills enhances another skill such as problem-solving.

Problem-solving skills. Problem-solving processes are closely associated with critical thinking. Ogilvy (1994) acknowledged that it is essential that problem-solving skills are taught to students (as cited in Kolb and Stuart, 2005). Harper, Freuler, and Demel (2007) stated that if students realize that there is a correlation between problem solving and achievement, students are more likely to learn these skills. When students learn problem solving skills, it may become easier for them to understand their course of study.

Harper et al. (2007) discussed the positive impact of teachers teaching problem solving skills to students. Sezer (2008) agreed that positive results can come from knowing about problem solving. Learning strategies about solving particular problems is a determinant on learning to control problems. According to Compas, Banez, Malcarne, and Worsham (1991), when teachers can control a problem in the classroom, the act helps teach students how to improve their problem-solving skills (as cited in O'Hearn and Gatz, 2002). Problem solving is not about expert knowledge or expected outcomes, but more about strategizing to improve problem solving abilities (Sezer, 2008). Ruggiero's (2009) conclusions from a study of students' problem solving abilities revealed two categories of

problem solvers: good and poor. His analyses of the differences between good and poor problem solvers are shown in Table 2.1. Students need problem solving skills in addition to critical thinking skills to enhance their academic achievement and preparation for the workforce. Although problem solving skills are not enough, students should attain those listed in Table 2.1. These findings are relevant to cultural pedagogy and student achievement because it shows an alignment between effective pedagogy and preparing students as critical thinkers and good problem solvers that equates with student success. Therefore, through an effective cultural pedagogy relevant to problem solving skills, students gain a concept of how problem solving is relevant to academic success.

Table 2.1
Distinguishing Between Good and Poor Problem-Solvers.

Good Problem Solvers	Poor Problem Solvers
Read a problem and decide how to begin attacking it.	Cannot settle on a way to begin.
Bring their knowledge to bear on a problem.	Convince themselves they lack sufficient knowledge (even when that is not the case).
Go about solving a problem systematically-for example, trying to simplify it, puzzling out key terms, or breaking the problem into sub problems.	Plunge in, jumping haphazardly from one part of the problem to another, trying to justify first impressions instead of testing them.
Tend to trust their reasoning and to have confidence in themselves.	Tend to distrust their reasoning and to lack confidence in themselves.
Maintain a critical attitude throughout the problem-solving process.	Lack a critical attitude and take too much for granted.

Note. One important study of students' problem-solving processes revealed some interesting differences between good and poor problem solvers. Adapted from Ruggiero, V. R. (2009). *The art of thinking: A guide to critical and creative thought* (9th ed.). New York, NY: Pearson Longman.

Culturally Relevant Pedagogy

The term culturally relevant pedagogy was first coined by Gloria Ladson-Billings (1995). Culturally relevant pedagogy maximizes learning for racially and ethnically diverse students. Culturally relevant pedagogy is used interchangeably with several phrases like culturally responsive, culturally appropriate, culturally congruent, and culturally compatible to describe effective pedagogy in culturally diverse classrooms. Durden (2008) posited that culturally relevant pedagogy empowers students' intellectual, social, emotional, and political understanding to illustrate their knowledge of cultural

skills, and attitudes about race. Researchers Ponterotto, Baluch, Greig, and Rivera (1998) found that, in order to provide students with a multicultural education, teachers must be culturally aware and demonstrate cultural sensitivity in and through their pedagogy. In general, culturally relevant pedagogy identifies race and culture as important concepts in teaching and learning.

Leonard et al. (2009) studied the use of a culturally relevant pedagogy in a culturally diverse mathematics class in which such pedagogy was not familiar to the teachers or students. The findings from this study revealed that teaching for cultural relevance is a complex enterprise. The teacher's beliefs about what the mathematic concepts accounted for their mathematics identity and their enactment of culturally relevant pedagogy were off base. Although the teachers exhibited characteristics consistent with caring and culturally responsive teachers, their initial thoughts about the nature of mathematics, mathematics reform, high-stakes testing, and adherence to school policy limited their ability to perform culturally relevant pedagogy in an after-school program. Leonard et al.'s (2009) findings are relevant to the current study, which seeks to answer whether African American students who receive classroom instructions from a teacher who employs a culturally relevant pedagogy perform better academically than those African American students who do not. These findings support the benefit of implementing a culturally relevant pedagogy in school districts with predominantly African American students to enhance student achievement. The cultural competence of using such pedagogy should display through higher levels of student performance.

Hefflin (2002) believed that a culturally relevant pedagogy would enhance academic performance when methods that encourage students to use current cultural

knowledge to acquire new cultural knowledge, cultural skills, and cultural dispositions are used in the classroom. In his initial approach in planning and teaching using a culturally relevant pedagogy, he found that asking general questions to encourage higher-order thinking did not produce thoughtful, reflective discussions. Hefflin sought responses from the students in his literature classroom concerning how they personally connected with literary characters. Since Hefflin did not receive the type of responses he believed would increase their cultural knowledge, he learned three key theoretical principles to assist in student progress: (1) the literature must tap into the students' lives by being culturally sensitive to students' specific culture; (2) the pedagogical method must foster into the home and community culture of the students; and (3) the way to cultivate the method and the materials is to develop a culturally relevant pedagogy. The goal of culturally relevant pedagogy is to heighten students' academic performance through the use of culturally sensitive materials in the classroom, thereby encouraging students to use current knowledge to gain new knowledge (Hefflin, 2002). With this theory in mind, Hefflin developed a culturally relevant pedagogy framework (Table 2.2).

Table 2.2

Culturally Relevant Pedagogy Framework
Cultural Patterns

		Textual: Cultural conscious	Social: Call and response	Cultural: Communal connection	Personal: Individual linkage
Pedagogical tools	Methods	How can the methods I use tap into the culturally conscious themes of the literature?	How can the methods I use integrate call-and-response interaction patterns? How can my reading aloud the story prompt call and response interactions?	How can the methods I use draw on my student's community, home, culture, and history?	How can the methods I use create opportunities for students to link their personal lives to the literature?
	Materials	What children's literature reflects the best elements of culturally conscious literature?	What children's literature invites call-and-response interaction during read aloud? What children's literature invites call-and-response interaction patterns in its dialogue and/or narrations?	What children's literature describes an accurate, appropriate, and realistic account of African-American community, home, culture and history?	What children's literature invites students to make strong personal connections between the literature and their personal lives?

Similarly, Hastie, Martin, and Buchanon (2006) found that, for a culturally relevant pedagogy to be effective, teachers must provide activities that students consider meaningful and relevant. To fully understand culturally relevant pedagogy, Enyedy and Mukhopadhyay (2007) conceptualized nurturing and supporting cultural competence while developing community membership and pride. Howard (2001) suggested that creating a school environment that is similar to the student's cultural background can be critical to an effective culturally relevant pedagogy. If the students achieve academic success by experiencing a cultural pedagogy, their social development in the larger community could possibly improve.

Culturally relevant pedagogy could be a key component in assisting educators to be effective when teaching students from cultures other than their own. Bodur (2003) posited "teachers need to acquire rich repertoires of culturally sensitive and responsive instructional examples to use in teaching culturally diverse students" (p. 18). Jones and Baker (2005) identified the chance to focus on classroom practices that improve student achievement as a benefit of a cultural pedagogy. Snider and Roehl (2007) confirmed that teachers who are willing to alter their current classroom practices to meet the student's learning style and develop eclectic instructions for smaller class size help underperforming students reach achievement goals.

Bodur (2003) believed that teachers need cultural knowledge about their students as well as knowledge of the subject matter taught. In the current study, African American students are the target population, and therefore, teachers might consider connecting their curriculum to African American history and culture as appropriate. For example, if the students are studying the food chain, examples could be of African plants,

animals, and foods (Wallitt, 2008). These topics are culturally relevant to African American students and using a culturally relevant pedagogy might enhance students' psychological connection to multiculturalism.

Research by Howard (2001) revealed that students were more comfortable with teachers who utilized a culturally relevant pedagogy method in their communication, interaction, and overall awareness. The data from Howard's study proposed that a key component in aiding the success of African American students is teachers understanding the various cultural and learning styles students bring to the classroom. Bondima (2004) noted that pedagogical equality reflecting culturally sensitive instructional strategies is a precondition for and a means of achieving maximum academic outcomes for culturally diverse students. According to Howard (2001) to develop a culturally relevant pedagogy, for African American students teachers need to do the following: (1) abandon the negative thinking about the cognitive capacity, sociocultural backgrounds, and overall learning potential of African American students; (2) modify their current pedagogy to better align with students' ways of understanding, modes of communication, and lifestyle; and (3) foster a boldness to gain knowledge about the culture of African American people. Teachers possessing a culturally relevant pedagogy must demonstrate their belief in their students' abilities and align their course content, instruction, and assessment in a manner that encourages student to perform at their absolute highest potential (Bondima, 2004).

Developing Culturally Relevant Pedagogy

A culturally relevant pedagogy does not come into existence through a philosophy—it begins with a plan of action. The plan should include cultural

competency issues such as incorporating new cultural curricula and addressing cultural competence as an ethical responsibility. Developing a culturally relevant pedagogy should also provide plans for developing teachers' knowledge of cultural teaching. The plan should start with cultural competence, professional development, and cultural intelligence.

Cultural Competence

Although it may be significant for teachers to illustrate cultural competency, students should also understand cultural competency. Zippay (2010) believed that teachers who employ explicitly on the cultural and social dimensions of differentiations will develop culturally competent students. Teachers expect students will achieve academic success while maintaining cultural integrity through the educational process (Ladson-Billings, 1995). Administrators and teachers could encourage students to display their cultural competency to their peers in hopes they may have a better understanding of their culture. Klotz (2006) suggested that principals at culturally competent schools should encourage their teachers to understand and respect cultural diversity and attempt to attain exceptional educational standards and achievement for all students.

Professional Development

Klotz (2006) asserted that professional development for staff is essential to creating a culturally competent school environment. Staff development opportunities are good for all teachers because they give teachers the opportunity to gain new knowledge that could influence students' ability to learn. Klotz (2006) also held that staff development opportunities should be culturally sensitive and inclusive. Additionally, steps to better deliver the curriculum should be included in the professional development.

If school districts use the standards, curriculum and instruction, professional development and administration as recommended by American Association of School Librarians (AASL), there should be visible improvement in students' results by teachers' performance. Professional development strategies associated fully with the standards implemented by states make it easier for teachers to create curriculum guides that align with state curricular requirements as well as teacher's pedagogy.

Cultural Intelligence (CQ)

Earley and Ang (2003) Hwang (2009), and Crowne (2009) stated that culturally intelligent individuals understand multiple cultures and can interact in appropriate ways in different cultural milieus. Teachers should possess a level of intelligence about their student's cultures in order to provide a cultural pedagogy that is conducive to their students' diverse learning styles. Byrd (2007) acknowledged that "even with the work done to provide educators with some tools to obtain CQ, the studies in culture did not offer much in the way of educating teachers about how to systematically prepare to do so" (p.20). Ponterotto et al. (1998) found that there is a great need for multicultural training of teachers to assist students in academic success, but very little empirical attention exists on how these training efforts can be evaluated for accountability. Merryfield and Kasai (2004) stated that many teachers lacks cultural intelligence and have no exposure to culture topics before attending college. Teacher education programs must provide significant culture content for pre-service teachers to increase their CQ, and apply it to their pedagogy before entering any classroom.

CQ involves acquiring knowledge about the world and allows individuals to think from a cultural perspective (Merryfield, 1993). One factor that influences an individual's

CQ is culture awareness, which involves extensive examination of many cultural backgrounds and beliefs (Flowers, 2004). Once an individual establishes a personal cultural awareness level, that individual will possess a better understanding of other cultures. To measure teachers' CQ levels, Ponterotto et al. (1998) developed the Teacher Multicultural Attitude Survey (TMAS) that assesses multicultural awareness, appreciation, sensitivity, and tolerance of cultural diversity. Joseph (2010) evaluated the TMAS's reliability in assessing teachers' cultural sensitivity, and the study's findings confirmed that "ethnic identity, empathy and multicultural sensitivity are associated with the tendency to evaluate oneself or others favorably or unfavorably, rather than with the depletion of emotional resources in teachers working with students from diverse cultural backgrounds" (p. 64). Amerson (2010) noted that cultural competence is a continual process of developing knowledge and proficiency to work with diverse populations. Ang and Van Dyne (2008) maintained that individuals with a high level of CQ can work more effectively with multinational workforces and adjust to global assignments. Therefore, teachers who possess a high level of CQ can adapt to an array of cultural diversity in their classrooms. Larson (2006) believed that because teachers create the classroom climate, their students' academic achievement is affected by how teachers administer their pedagogy in diverse classrooms (as cited in Moore, 2010).

Dimensions of CQ

There are three dimensions of CQ: mental (cognitive and metacognitive), motivational, and behavioral. Cognition and metacognition are defined simultaneously as the mental dimensions, whereas motivational and behavioral are seen as separate scopes. These four factors of CQ can be measured using Ang and Van Dyne's (2008) 20-item

Cultural Intelligence Scale (CQS). Ang, Van Dyne, and Koh (2006) used the CQS in their research to assess CQ from the 20-item inventory composed of four items for metacognitive CQ, six items for cognitive CQ, five items for motivational CQ, and five items for behavioral CQ.

Cognitive and Metacognitive CQ

The cognitive and metacognitive processes are the strategies researchers use to understand an individual's culturally diverse experiences. Griffer and Perlis (2007) indicated that individuals utilize their metacognitive and cognitive processes and capabilities to acquire cultural information that can be used to resolve situations in culturally diverse groups. Ang and Van Dyne (2008) posited that metacognitive CQ happens when an individual is conscious of the cultural differences of people with whom they interact. Cognitive CQ, according to Griffer and Perlis (2007), concerns the mental ability to learn about cultural similarities and differences such as the values and beliefs that define specific cultural groups. Ang and Van Dyne (2008) further clarified cognitive CQ as the knowledge of best practices relating to different cultures that individuals learn through educational and personal experiences. Crowne (2008) indicated that certain types of experiences with other cultures and the level of those experiences increase CQ. When CQ increases, using the cognitive and metacognitive elements of CQ can enhance understanding of another person's mindset and thought processes.

Motivational CQ

Ang and Van Dyne (2008) identified motivational CQ as a "critical component of CQ because it is a source of drive" (p.6). Motivational CQ is the energy that individuals allocate to learning more about multiculturalism and the different values and beliefs of

other cultures. Individuals are more confident and open to new experiences with people from different cultures through motivational CQ (Griffer & Perlis, 2007). Teachers who demonstrate motivational CQ in the classroom may have a positive affect in encouraging students to perform above their normal academic performance level.

Behavioral CQ

Behavioral CQ is how an individual reacts in interactions with people from different cultures. Griffer and Perlis (2007) and Ang and Van Dyne (2008) defined behavior CQ as an individual's ability to modify behaviors (verbal and nonverbal) as they relate to culturally related circumstances. For example, an individual who exhibits behavioral CQ uses suitable verbal and nonverbal measures when interacting with individuals from different cultures. A teacher who comprehends behavioral CQ would react differently to a student who does not understand the behaviors of a particular culture.

Cultural Intelligence, Globalization, and Students

Personality can influence how one reacts to globalization and cultural diversity (Bücker & Poutsma, 2010). Ang et al. (2006) evaluated the relationship between personality traits and the components of CQ. For example, openness to experience as a personality trait is significantly correlated to the global leadership CQ component. Teachers who display a high degree of CQ could be more open to multicultural teaching. CQ, as defined by Thomas and Inkson (2005) (as cited by Ang and Van Dyne, 2008), is being skilled and flexible about understanding different cultures, displaying a willingness to learn increasingly more about them, gradually shaping one's thinking to be more sympathetic to other cultures. Additionally, it involves fine tuning one's behavior to be

more appropriate when interacting with people from other cultures. Ponterotto and Pedersen (1993) stated that "teachers who possess high levels of multicultural awareness are believed to view cultural diversity as an asset and deem their responsibilities to include addressing multicultural issues in the learning process and curriculum" (as cited in Turner, 2007, p. 29).

To truly understand globalization and the elements associated with the different cultures, individuals should acquire a global mindset. An individual possessing a global mindset understands the socio-cultural themes that influence the evolution of a culturally intelligent leader. A global mindset includes having cultural knowledge of other countries, understanding that different cultures may exist, and the ability to adapt to most situations that may occur. These are items that could be used to define CQ. In educational settings, Haynes (2008) conceived that identifying CQ provides valuable insights to improve the overall awareness and understanding of cultural competence and the impact it has on teachers, administrators, students, and the overall governance of the system. A global mindset enables leaders with high CQ rates to look beyond their own cultures and to provide effective teaching to individuals of a different culture.

Examining students' scores on the state assessment to cultural competencies of effective educators is also a global concern. Take for example Japan, a country in which the educational system utilizes standardized examinations to examine how teachers' cultural knowledge affects student progress (Yamamoto & Brinton, 2010). Moore (2010) noted that "improving professional learning for educators is a crucial step in transforming schools and improving academic achievement" (p. 40). Ōmae (2002) posited that cultural activities influence students' academic ability to attain educational mastery. This

study's focus aligns with the Japanese theory that teacher's should acquire and utilize cultural knowledge to assist students academic achievement on state assessments.

Cultural Pedagogy for Students' Academic Achievement

Today, many opportunities exist for academically successful students; however, educators must provide students with the necessary skills to do so (Enyedy & Mukhopadhyay, 2007). Although teachers face many limitations such as "teaching to the test" and standardized curricula, it is still possible to implement culturally relevant pedagogy in the classroom (Wallitt, 2008). Because different cultures exist in school environments, teachers need to deliver curricula from diverse cultural points of view. Planel (2008) stated that it is culturally relevant that teachers' pedagogy meets the needs of students whose personal or familial experience in education is from a different culture than the teacher. Leonard et al. (2009) found that "while teachers are encouraged to bring the culture of the community into the classroom to improve achievement; it is difficult to change teacher pedagogy without causing teachers to reflect upon their beliefs and identity" (p.4). Ponterotto et al. (1998) showed that conducting a post-test of the Teacher Multicultural Attitude Survey (TMAS) can assess how teachers advance in their awareness and understanding of ethnic diversity and how much effort they apply to fostering supportive multicultural classroom processes and climates that are sensitive to multicultural interactions.

An examination of school achievement along racial lines underscores clear divisions about who is benefiting from school and who is not (Ladson-Billings, 1995). According to the literature, African Americans are one of the largest ethnic groups in US schools and defined as underachievers in academics. Cultural pedagogy can allocate for

the division of academic achievement gaps along racial lines. A study conducted by Howard (2001) revealed that African American students who were academically successful stated that teachers who integrated attributes of the students' cultural capital into their pedagogical practices assisted them in their academic achievement through their roles as culturally relevant teachers. Culturally relevant teachers are culturally sensitive and knowledgeable as to how minority students can succeed in an academic environment.

Frye and Vogt (2010) challenged educators to form appropriate pedagogical responses to minority students' underachievement so as to ensure fair representation of African American students at all levels of education by using culturally responsive pedagogy. Just by holding high expectations for their students, teachers demonstrate a core element of culturally responsive pedagogy (Howard, 2001). Wiggan (2008) believed that understanding the experiences of high achieving African American students may be a solution for improving achievement levels and for reducing school failure rates among African American students.

Culture diversity, for this current study of predominantly African American students, meaning African and Caucasian American among students can affect academic performance. Zippay (2010) supported the claim that teachers are unable to connect and guide student academic performance when they are from different cultures than their students and no attempt made to understand their students' culture. This may happen when teachers are unaware of their own beliefs and their cultural history is unknown so they cannot validate self (one's character or beliefs.) Sealey-Ruiz (2007) examined research on culturally relevant adult education with African American students in which

learners validate self and identify with groups while utilizing cultural knowledge to facilitate transformative learning experiences. This transformation included understanding one's own culture and the cultures of others to gain knowledge about different cultures.

Research on field independent students conducted by White (1992) showed that students who are field independent—those who understand how to establish outcomes by connecting classroom lessons with other parts of the lesson—receive higher grades because of their exposure to diverse cultures while being a field independent student. It was determined that most African-American students have no field independency experience, which ultimately places them at a disadvantage at some levels of academic achievement. The disadvantage is they lack the ability to distinguish details from other information surrounding it. The indication is that African Americans are primarily auditory and tactile learners rather than visual learners and, regrettably, vast amounts of academic information are transferred visually in American society (White, 1992). It would be beneficial for teachers to develop their pedagogy to assist in transforming student learning.

According to Tharp et al. (2000), there are five standards for acquiring an effective pedagogy which are critical for improving academic achievement for minority or African American students:

> The first standard facilitates learning through joint productive activity in which teachers and students work together on a common product or goal and have opportunities to converse about their work during the activity. The second standard promotes language and literacy development across the curriculum; that

> is; teachers use this standard to develop competence in the language of instruction and in the academic disciplines through extended, connected reading, writing, and speaking activities. The third standard contextualizes instruction by connecting new information to students' prior knowledge and experience from home, school, or community. The fourth standard promotes complex thinking by engaging students in activities that require the elaboration of new content to achieve an academic goal. Teachers use the fifth standard for dialogic teaching by using planned, goal-directed instructional conversations between themselves and a small group of students (as cited by Doherty and Hillberg, 2007, p. 24).

The five standards for an effective pedagogy are important in bringing core socio-cultural standards into a regular classroom. The standards allow teachers to perform an array of cultural activities in the classroom that relates to the student's culture.

Student Achievement in High School for College Transition

The links between secondary and postsecondary institutions do not provide sufficient support for students in their transition to college. Kirst (2009) mentioned that although the policy agendas in some states focus more on the college-transition problems, some policy makers have developed solutions to the problem. However, few of the solutions deal with the issue of transitioning from high school to college effectively. Due to poor academic achievement in high school, some students have to take additional courses before entering postsecondary educational institutions and pre-assessment tests often find that remediation courses are necessary.

Academic talent and preparation in secondary education undoubtedly influences postsecondary education completion rates. In recent years, many educators inquired

about the role of remedial courses in postsecondary institutions. Why do so many college freshmen require remediation? Many college-bound high school graduates do not meet placement standards for college-level work. The Pathways to College Network (2007) study found that 60% of students enrolling in two-year colleges need to complete remedial coursework, compared to 40% of students entering four-year colleges. Kirst (2009) also found that more than 60% of recent high school graduates take at least one remedial course when entering a community college. Pathways to College Network (2007) stressed that remedial courses increase the time and cost of earning a college degree, and other research shows that 70% of students who took one or more remedial reading courses did not attain a college degree or certificate within eight years of enrollment. Thus there is little proof that taking remedial courses is conducive to college graduation outcomes.

Somerville and Yun (n.d.) contended that, as a result of misalignment, one in two college students has to take courses that are identified as remedial. The credits in remedial college-level courses cannot count toward degree requirements and usually cover topics that students should have mastered in high school such as reading, writing, and mathematics. Mastering these courses is important not only to complete high school but for a smoother transition to college. In addition to mastering course content in high school, students must also pass mandated state assessments such as those instituted under the No Child Left Behind (NCLB) act.

No Child Left Behind

According to Durden (2008), the NCLB act mandated that schools across the nation prove that they provide equal education to all students. This law was mainly

targeted toward students who were deemed "at risk," disadvantaged, and minority. Wiener and Hall (2004) explained further that "prior to NCLB, the state accountability system's requirements for school districts were based on overall averages, averages that could hide achievement gaps between groups or distort improvement targets that often set lower goals for previously low-achieving students" (p. 18).

The Purpose of NCLB

NCLB is relevant to student achievement as its' relationship to the state assessments and state mandates for students' academic success. In the 21st century, the American education system must ensure that economically disadvantaged students are educated and prepared to meet the challenges and opportunities of the future. NCLB was designed to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and at a minimum, meet proficient levels in state academic achievement standards and assessments (Duffy, Giordano, Farrell, Paneque, & Crump, 2008). NCLB was meant to improve the quality of education all children receive, but the law has failed to achieve these goals and has created a number of unintended negative consequences that actually harm the students the law is meant to help. The negative consequences affect students, but according to McMillian (2003) under the NCLB teachers' and administrators' rewards and sanctions rely on annual progress of individual school districts decreasing the achievement gap by 2014. Teachers and administrators play a key role in ensuring students meet the mandates under NCLB.

High-stakes testing is the instrument used to assess a school's Adequate Yearly Progress (AYP) toward meeting NCLB accountability standards. For this study, the researcher examined the academic achievement of 11th grade students in a school in

Arkansas as measured by the Benchmark testing instrument. Dove et al. (2010) published data showing that Arkansas schools struggled to meet academic achievement goals, which places many in the "School Improvement" category due to inadequate AYP. School improvement status labels the institution as a failing school. The measure for AYP looks at the percent gain in the combined categories of "Proficient" and "Advanced," and assesses the differences across each school (Dove et al., 2010). Scoring Proficient and Advanced on the state assessment suggests good academic performance that is in compliance with NCLB standards. Harrison-Jones (2007) concluded that NCLB's design was to improve the academic performance of children in America's public schools and to ensure that children were not trapped in a failing school.

According to Tucker (2001) "school performance based on results of state or national assessment is a very important part of an accountability system," (p. 38). However, should the state's accountability system be based on student achievement or on student progress? Hart and Winston (2005) reported that achievement assesses students' performance against an established standard; whereas progress is the change in test scores over the course of a marking period. However, the reports display that student academic progress is more important than students' academic achievement as measured by the state assessment (Figure 2.2).

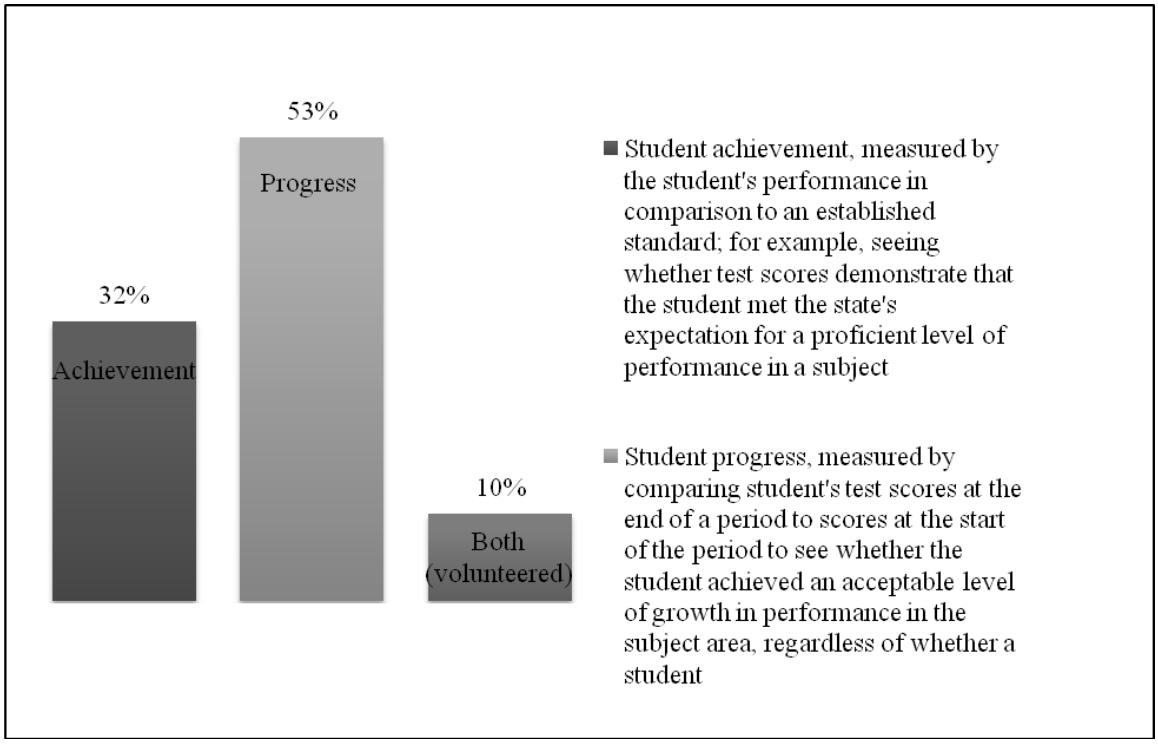

Figure 2.2. Progress and achievement should be taken into account.

Not everyone agrees with the NCLB as an adequate assessment to measure student achievement. The opinions of adults, parents, high school administrators, and high school teachers' on the implementation of NCLB are divided (Figure 2.3). The primary goal of NCLB is to provide a quality education for all students and to close the achievement gap between minority and non-minority, disadvantaged and advantaged, and lower and upper socioeconomic status public school students. Although NCLB currently applies primarily to K-8, most high school teachers (75%) have a very unfavorable impression of the law. Only one in five (19%) view NCLB favorably. Forty-eight percent of high school administrators, on the other hand, view NCLB favorably, though only 8% feel very favorable toward it and 43% of administrators view it unfavorably. The majority of the participants in Hart and Winston's 2005 study believed the NCLB was not a good analysis to assess student achievement.

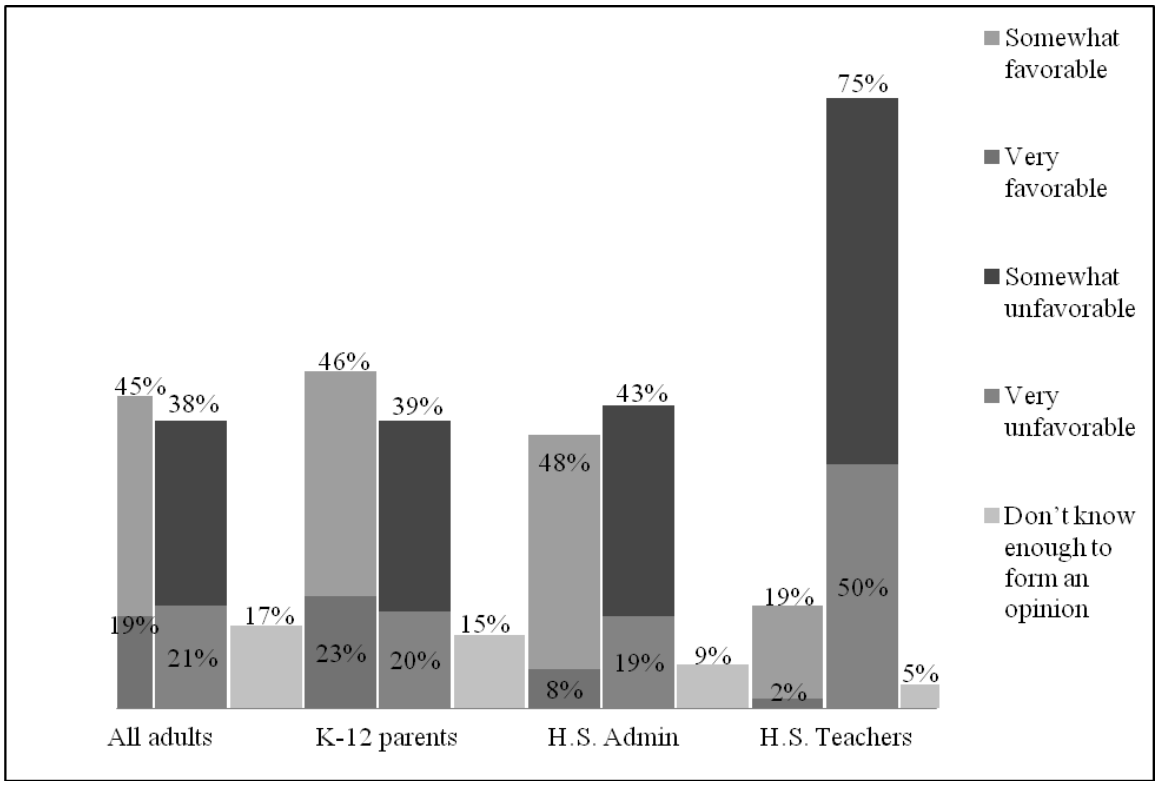

Figure 2.3. Divided views of No Child Left Behind. This figure is without descriptions of NCLB.

School Reform

When school districts fail to meet NCLB mandates, process for school reform is implemented. The process includes a state initiative for school districts to improve their academic learning standards and assessment outcomes. Tucker (2001) noted that many organizations and commissions called for reform in American high schools. Brown and Conley (2007), Roach et al. (2008), and Schneider (2003) indicated that the primary purpose of these standards and assessments is to ensure that all students are prepared for postsecondary education and can become economically productive citizens. In a world of continuously expanding knowledge, students need to be able to expand knowledge and skills constantly (Schneider, 2003). Roach et al. (2008) and Schneider (2003) posit that

the elements of school reform such as content of instructional programs, state standards, and assessments that are supposed to help students actually contradict each other. The content increased levels of stress and pressure for educators and students. This discussion goes back to a previous statement about the pressure for schools to focus on the students, who are most important, while handling the pressure to keep their school afloat and not have State government confiscate their school? No school wants to be taken over by the state government and categorized a failing school. Figure 2.4 shows that because of the NCLB's inactment of school reform, there is an increase from 2001 to 2005 in the awareness of school quality and the need for school reform.

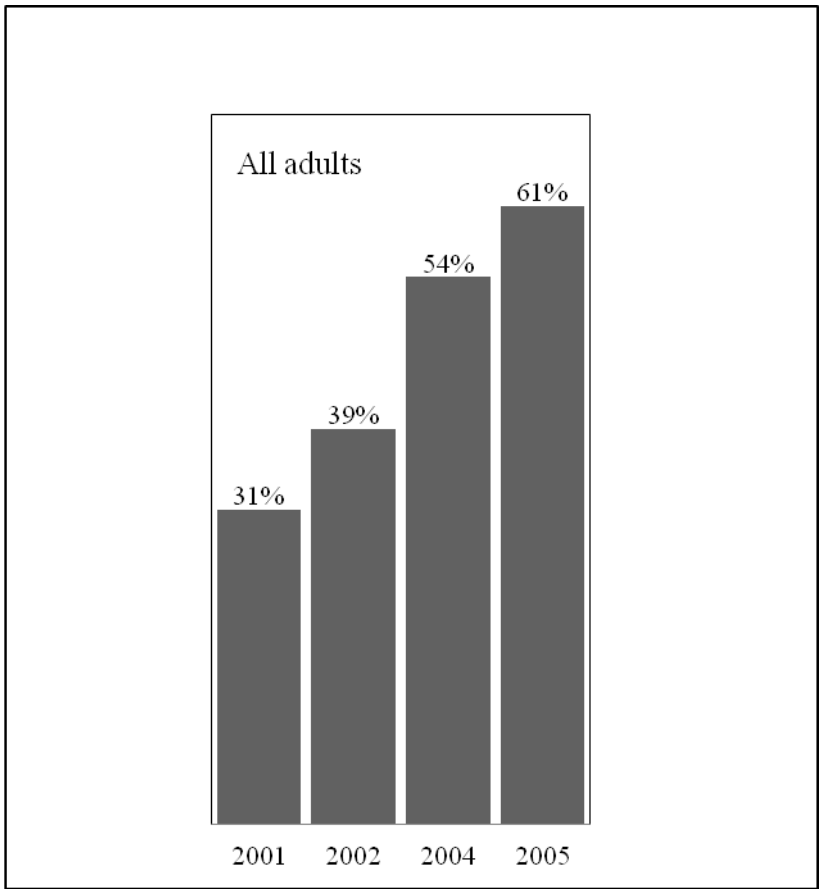

Figure 2.4. Increasing awareness of school reform.

School districts with students who are failing academically on the state mandated assessments are typically the schools that fall under the guidelines for school reform.

Chapter Summary

Fifty-eight years ago, the Supreme Court ruled in Brown v. Board of Education of Topeka, Kansas (1954) that schools in the United States must provide an equal education to all students. Although this ruling signified all students, according to Remaley and Wadsworth (2007) (as cited by Moore, 2010) major differences in African American student's educational experience still exists. As the literature has revealed, there is a need for teachers to acquire a cultural pedagogy that facilitates an improvement of student achievement among African American students. To begin to resolve this issue it is important for schools to implement a cultural pedagogy strategy that instills in teachers a level of cultural intelligence, cultural awareness, and sensitivity to the cultural diversity of their students to improve academic achievement.

This review of literature examined theories and research related to critical pedagogy, culturally responsive pedagogy, and culturally relevant pedagogy and the effect it has on improving student achievement. Research by Zippay (2010) encouraged critical thinking and problem solving, collaboration, and multiple viewpoint activities. Teacher educators should provide culturally relevant training during staff development that teachers, in turn, can use with their students. The evolution of thinking about a cultural pedagogy, from the early work of Ladson-Billings and Gay, was discussed through the educational lens of teachers adjusting their current pedagogy. As Moore (2010) stated "when teachers use a pedagogy based in the knowledge, traditions, and practices of African American culture, the connection to learning is deepened, and

student achievement increases," (p. 22). The final section of the literature review provided discussion of the research regarding state assessment affecting student achievement. The state mandated assessment is discussed in the literature review to be effective tool to measure student achievement as established by the No Child Left Behind Law (NCLB). NCLB specifically targets the student achievement of African American students. All of these research findings seem to support improving student achievement outcomes for students. Some of the findings, including the use of culturally relevant pedagogy, have implications for incorporating multicultural education in school curricula.

CHAPTER 3

Methodology: The Designs-Methods and Procedures

The purpose of this quantitative method research study is to determine if implementing a cultural pedagogy in a school district that has a high African American student population will improve student achievement. This section provides an overview of the methodology used in this study. Descriptions of the research design, sample participants, instruments, data collection, and data analyses are presented.

Research Questions

The overarching research questions proposed for investigation in this quantitative method study are:

Research Question 1 (RQ1): Are there significant differences in the mean score between 11th grade African American students' benchmark scores and their teachers' Teacher Multicultural Attitude Survey (TMAS) scores?

Research Question 2 (RQ2): Are there significant differences in the mean score between 11th grade African American students' benchmark scores and their teachers' Cultural Intelligence Scale (CQS) scores?

Hypotheses

Hypothesis $H0^1$ (Null Hypothesis): There will be no significant difference in the mean score between 11th grade African American students' benchmark scores and their teachers' TMAS scores.

Hypothesis HA^1 (Alternative Hypothesis): There will be a significant difference in the mean score between 11th grade African American students' benchmark scores and their teachers' TMAS scores.

Hypothesis $H0^2$ (Null Hypothesis): There will be no significant difference in the mean score between 11th grade African American students' benchmark scores and their teachers' CQS scores.

Hypothesis HA^2 (Alternative Hypothesis): There will be a significant difference in the mean score between 11th grade African American students' benchmark scores and their teachers' CQS scores.

Research Design

To address the research questions in this study, the quantitative method approach is appropriate. The data for this study was taken from student scores on the Benchmark exams. Additional data was gleaned from the TMAS and the CQS assessments their teachers completed. The TMAS measures kindergarten through twelfth grade teachers' awareness of, comfort with, and sensitivity to issues of cultural pluralism in the classroom (Ponterotto et al., 1998). The CQS assesses an individual's CQ from the four factor model of CQ: metacognition, cognition, motivational, and behavioral. The purpose of these surveys is to understand the level of teachers' cultural awareness and cultural intelligence and the effect it could have on student achievement.

Sampling

The primary sample was comprised of African American students in the Cardinal School District who took the Arkansas Benchmark Exam. The Cardinal School District is one of four public schools in the city of Pine Bluff, Arkansas in Jefferson County. The district houses over 2,000 students encompassing five active school campuses, three elementary, one middle, and one high school. The grade range for Cardinal High School is 9–12. The Cardinal School District has a minority student population of 92% and

employs 123 instructors. The secondary sample of study participants consisted of a cluster of 11th grade teachers who teach in the Cardinal School District.

Instruments

The instruments used to gather data for the study were the Benchmark Exam, TMAS, and CQS. One way to measure student achievement is through test results, the primary way student learning is assessed. Student test scores are used to determine grade level promotion, teacher and principal compensation increases, and superintendent performance bonuses (McNeil, 2000). The TMAS and CQS surveys were sufficient in measuring participant's level of cultural awareness and cultural intelligence.

Benchmark CRT

The quantitative student data was gathered from the Benchmark CRT exam. According to the Arkansas Department of Education (ADE) (2010):

> The CRT is an assessment instrument customized around the Arkansas Curriculum Frameworks. The Benchmark Exams are CRTs. In Arkansas, the test items are based on the academic standards in the Arkansas Curriculum Frameworks and are developed by committees of Arkansas teachers, with support from the Department of Education and the testing contractor. CRTs are administered in Grades 3–8, End-of-Course Exams in Algebra I and Geometry, and a Literacy Exam at Grade 11.

The data acquired from the Benchmark was relevant to this study because it displayed the scores for African American students of the teachers who participated in the study. The data from the Benchmark exam was used to assess the differences across the mean score for each teacher's class.

TMAS

One instrument the teachers completed was the TMAS. Ponterotto et al., (1998) described the TMAS:

> This survey design measures kindergarten through twelfth grade teachers' awareness of, comfort with, and sensitivity to issues of cultural pluralism in the classroom. The survey contains 20 items written to reflect general multicultural awareness, appreciation, and tolerance. Respondents indicate how strongly they agree or disagree with each of the items using five-point, Likert-type scale. The survey has been found to discriminate between teachers high and low in multicultural awareness. It may be used to study the effectiveness of the multicultural training teachers receive.

The TMAS was selected for this study after comparing it to the Multicultural Awareness-Knowledge-Skills Survey-Teachers Form (MAKSS-Form T) developed to measure teacher sensitivity to diversity related issues. The MAKSS-Form T is a two-section, self-administered test that was developed to measure teachers' level of multicultural competence. The first section gathers descriptive information about the individual completing the survey; the second section consists of 60 survey items designed to measure the teachers' multicultural education awareness, knowledge, and skills (D'Andrea, Daniels, & Noonan, 2003). Completing the MAKSS-Form T survey would be time consuming for the participants and it does not assess cultural diversity issues. The TMAS was much simpler to complete and most participants completed it in less than 10 minutes.

CQS

CQ can be measured with the 20-item, four factor CQS (Ang et al., 2006). As previously stated, there are several instruments that assess CQ competencies or cultural awareness, but the CQS with its 20-item four factor model is one of a few that assesses all four elements of CQ: meta-cognitive, cognitive, motivational, and behavioral. Since this study focuses on cultural pedagogy, cultural training, and cultural experiences, the CQS is appropriate in measuring individual's competencies of multiculturalism. When working with diverse cultures, it is important that individuals possess a high level of cultural intelligence in order to understand others' positions on their beliefs.

Reliability and Validity of the Instruments

The Augmented Benchmark Examinations include the CRT component, which focuses on measuring student performance using questions developed by Arkansas teachers and the Arkansas Department of Education that align with the Arkansas Mathematics and English Language Arts Curriculum Frameworks, and the NRT component, which is a rank-order system of student performance based on national norms which contains items in the subsections of reading comprehension, math problem-solving, and language (Arkansas Department of Education, 2010). The state of Arkansas uses the National Office for Research on Measurement and Evaluation System (NORMES) to assess and evaluate the Benchmark scores. The Educational Research Center (2011) acknowledged:

> NORMES addresses the immediate need for improved student assessment and evaluation practices in school systems. NORMES uses interactive technology to identify best educational practices and curriculum interventions that contribute to

> increased student achievement. NORMES provides an improved system for early detection of those students at-risk academically and the specific information necessary for educators to respond. NORMES transcends geographical obstacles in bringing educational resources to academically distressed and/or isolated school systems.

An extension of NORMES is the Office of Research, Measurement, and Evaluation (ORME) located at the University of Arkansas.

> The ORME is a student-centered system for collecting and reporting student data distributed via the internet to school systems in Arkansas. This system, the Educational Data Delivery System (EDDS), includes both public access and restricted access sites for reporting of educational data. The EDDS system, developed and operated by ORME for the Arkansas Department of Education (ADE), is the only data system in the U.S. that provides student level data on a restricted website as a mechanism for improving classroom instruction. The EDDS system was recognized in 2000 by the US Department of Education and the Council of Chief State School Officers as a model program for collection and dissemination of educational data. (Educational Research Center, 2011)

This information provided in reference to NORMES and the ORME is important because the data from the Benchmark is accessible by the public. Having this information is relevant to recognizing that these restrictions are in place to protect and maintain the validity of the data and ensure the data will be secure from tampering by individuals outside the EDDS system.

Lester and Bishop (2001) reported that the TMAS, compared to similar instruments, had higher reliability and was judged to have excellent construct and criterion validity in assessing a teacher's multicultural awareness and sensitivity to diverse cultures (as cited by Joseph, 2010). To determine reliability and validity of the TMAS, Ponterotto et al., (1998) reported that the revised 20-item survey must have a Cronbach coefficient alpha of .86 and a 3-week test-retest reliability coefficient of .80. Bücker and Poutsma (2010) used the TMAS to assess teacher's level of multicultural awareness and sensitivity to diverse cultures and revealed it was reliable and valid with a Cronbach alpha coefficient of .86. Joseph (2010) used the TMAS and discovered an alpha coefficient of .86. Additionally, Bodur (2003) used SPSS 11.0 to analyze his data from the TMAS and obtained an alpha coefficient of .82, which indicates high reliability. Reliability is important because it allows a researcher to accurately measure results to draw conclusions or make claims about information relevant to the research study; the concern is with the instrument or the procedures. Validity is significant because it allows a researcher to accurately assess what is measured; the concern is how successfully the study is to the researchers' measuring intentions. When conducting research on the validity of the TMAS, Lester and Bishop (2001), claimed that "evidence for construct and criterion validity is provided with a Cronbach alpha score of at least .86" (p. 374). (See Appendix A for full instrument.)

The 20-item, four factor model CQS was developed and validated by Ang and colleagues (2004) with alpha results as follows: four-item metacognitive = .76, six-items cognitive = .84, five-item motivational = .76, and five-item behavioral = .83 (Ang et al., 2006). Sample items from each factor includes "I check the accuracy of my cultural

knowledge as I interact with people from different cultures" for metacognitive CQ; "I know the values and religious beliefs of other cultures" for cognitive CQ; "I am sure I can deal with the stresses of adjusting to a culture that is new to me" for motivational CQ; "I alter my facial expressions when a cross-cultural interaction requires it" for behavioral CQ (See Appendix B for full instrument). The information from this survey instrument is relevant because it shows transparency in the purposes of acquiring the data.

Data Collection

All students in the state of Arkansas participate in Benchmark Examination administered at grade levels 3 through 12. The ADE (2010 [b]) reported that the Stanford Achievement Test, Tenth Edition (SAT-10) is a combination of the state-mandated criterion-referenced test and the norm-referenced test used in developing the Augmented Benchmark Examinations for grades 3 through 8. Additionally, the report noted that the Benchmark Examination has a science portion, which includes CRT items that are designed according to the Arkansas Science Curriculum Framework and NRT items in science for grades 5 and 7. The data used in this study are the results for grade 11. This group of students was selected because of the number of African American 11th graders in the Cardinal School District. "In grades 9–12, the state-mandated CRT includes the Grade 11 Literacy Examination and End-of-Course Examinations in algebra I, geometry, and biology" (ADE, 2010[b]). The Grade 11 Literacy Examination and the End-of-Course Examination items also align to the respective Frameworks.

The results were entered in the ADE database. Other published research in publications such as the *Journal of Advanced Academics*, *Peabody Journal of Education*,

and *Learning Disabilities Research & Practice*, utilized data acquired from the Benchmark exam. Upon analyzing the data, each school district receives a copy of the results, and the results are available on the ADE website. For this study the researcher obtained the quantitative data of final scores for grade 11 from the data manager at ADE for the sample sites.

The participants completing the TMAS and CQS included educators teaching 11th grade students at the high school. The document outlining the researchers' interest in conducting the study was submitted as a mock proposal to the superintendent of the Cardinal School District. The superintendent instructed the researcher to contact the principal of the high school when ready to perform the research. Upon the dissertation committee's approval to begin the research, within one week the researcher had contacted the principal of the high school to explain the purpose of the study. After two weeks, the researcher delivered the survey packets to the principal in person. The packets contained a written explanation of the purpose and importance of the study. The researcher informed the principal of the actual day the assessments would take place. The principal's secretary sent out reminders to the teachers that the researcher would be visiting their classroom during their conference period. The participants completed the survey via the researcher's Apple iPad (hand-held computer tablet). The researcher collected data for the surveys during two days. Statistical results were made available to the sample participants and sites after the study was completed.

Data Analysis

The dependent variable is the 11th grade students' scores on the Benchmark Exam. The 11th graders' exam scores were assessed against the 11th grade teachers' cultural awareness and cultural intelligence scores.

A student's academic achievement is measured by the scores on the assessment examination administered within the school district. Students have to use the knowledge and skills obtained in the classroom to understand the materials on the Benchmark Examination. This examination tests whether the students have the knowledge to complete a certain task, versus physically completing the task. "Benchmark examination results are available to the public only as the percentage of students in the school that scored in each of four performance levels (Advanced, Proficient, Basic, and Below Basic) for mathematics and literacy" (Dove et al., 2010, p. 283). The results from the Benchmark exam were analyzed according to the performance level provided by ADE and the results displayed in the result section. A description of each level is as follows:

- **Advanced:** Advanced students demonstrate superior performance well beyond proficient grade-level performance. They can apply established reading, writing and mathematics skills to solve complex problems and complete demanding tasks on their own. They can make insightful connections between abstract and concrete ideas and provide well-supported explanations and arguments.
- **Proficient:** Proficient students demonstrate solid academic performance for the grade tested and are well prepared for the next level of schooling. They can use established reading, writing and mathematics skills and knowledge to solve

problems and complete tasks on their own. Students can tie ideas together and explain the ways their ideas are connected.

- **Basic:** Basic students show substantial skills in reading, writing and mathematics; however, they only partially demonstrate the abilities to apply these skills.
- **Below Basic:** Below basic students fail to show sufficient mastering of skills in reading, writing and mathematics to attain the basic level.

Although the students performing at or below basic do not meet basic academic achievement criteria, they were included in this study.

The independent variables in this research are the scores on the TMAS and the CQS. The teachers' multicultural awareness, appreciation, and tolerance of cultural diversity were measured using the 20 question TMAS. The TMAS scale uses a 5-point Likert-type, self-report survey with a scale ranging from strongly disagree to strongly agree. The TMAS gives one total score by summing (or averaging) all 20 items after reverse scoring those items indicated. The following items are scored as is (1=1, 2=2, 3=3, 4=4, 5=5): Items 1, 2, 4, 5, 7, 8, 9, 10, 11, 13, 14, 17, 18. The following items are reverse-scored (1=5, 2=4, 3=3, 4=2, 5=1): Items 3, 6, 12, 15, 16, 19, 20. Total scores can then range from 20 to 100 (or if dividing by the number of items [20] to get a Likert-type range mean, from 1 to 5). Higher scores indicate a greater appreciation and awareness of multicultural teaching issues. At present, the TMAS only is meant for large scale mean research and, therefore, should not be used in any evaluative way.

The teachers' CQ was measured using the 20 question four factor CQS. These four factors of CQ measures four items for metacognitive CQ, six items for cognitive CQ, five items for motivational CQ, and five items for behavioral CQ. The CQS scale uses a

7-point Likert-type, self-report survey with a scale ranging from strongly disagree to strongly agree.

After the completed TMAS and CQS assessments were collected from survey-monkey, individual scores were entered into the Statistical Package for the Social Sciences (SPSS) version 18. A Kruskal-Wallis One Way ANOVA was conducted across the mean scores of the groups of the dependent variable and no significant differences were reported. Since there were no significant differences found, no inferential follow-up tests were performed.

Chapter Summary

This chapter discussed the methods used in this study. African American students who attend the Cardinal School District's high school are the target population. Eleventh grade teachers' cultural awareness and cultural intelligence were assessed using the TMAS and the CQS. The research question pertains to African American students, and teacher's cultural intelligence and cultural awareness level. Participation in this study was completely voluntary and participants were allowed to withdraw if they desired. The participants were instructed to read and acknowledge that they understood the instructions before completing the TMAS and the CQS. The researcher provided contact information to the principal of the high school with authorization to provide this information to the participants if requested.

Prior research was conducted relating to topics such as culturally responsive pedagogy and mathematics scores, culturally relevant pedagogy in a Hawaiian middle school, critical and reflective thinking, and culturally relevant literacy practices of pre-service teachers. There is limited research on culturally relevant pedagogy and its effect

on enhancing African American students' academic achievement. This study seeks to add to the body of knowledge of implementing a culturally relevant pedagogy theory to enhance student achievement in school districts that possess a predominantly African American population.

CHAPTER 4

Results

This study was designed to examine teachers' level of cultural awareness as assessed using the TMAS and their cultural intelligence levels as assessed by the CQS. These objective survey instruments measure the levels at which teachers believe they possess cultural awareness and cultural intelligence when delivering academic instructions in the classroom. This study also examined how teachers' CQ might help students improve academically on Arkansas' Benchmark exams. The research sample included 11th grade African American students and teachers who teach 11th grade academic courses at a high school in southeast Arkansas during the 2011–2012 school years.

A quantitative data method was used to answer the study's two research questions. SPSS was used in the data analysis to evaluate analysis of variances, estimated marginal means, and significant differences. The participants' data for the Benchmark scores was obtained from ADE within one-week of the request. The participants' data for the TMAS and CQS were completed within a week of notification. A demographics questionnaire was included as part of the 20-factor TMAS and 20-factor CQS surveys.

This chapter provides the key findings for the study and is presented in four sections: preliminary analysis, descriptive statistics, reliability, and inferential statistics. The findings from the preliminary analysis derived from the Kruskal-Wallis inferential statistics displays the hypothesized results. Inferential statistics assist in making

judgments about whether an observed difference between groups is dependent on something else or the results occurred by chance.

Participants

There were two groups of participants in this study: students who completed the BM exams and teachers who completed the TMAS and CQS. The students were enrolled in the 11th grade at a high school in southeast Arkansas. The teacher's were classroom instructors who provided academic instruction to 11th grade students at the high school.

The principal of the high school granted the researcher permission to administer the surveys for the TMAS and CQS using an Apple iPad during the teachers' conference period. During the 2012 spring semester, the researcher visited the high school to collect data from 12 teachers. Each teacher participant completed both surveys (TMAS and CQS) using the iPad within 15 minutes. The results were electronically submitted to Survey Monkey to receive its specific survey identification number.

A requirement of the TMAS was to retest participants three weeks after the initial distribution of the survey. To collect the retest data, the researcher returned to the high school to administer the retest during the 12 participants' conference periods. Each participant completed the survey (TMAS test-retest) using the iPad within 10 minutes. The results were electronically submitted to Survey Monkey to receive its specific survey identification number.

The data collected from this study will be protected and the confidentiality of the participants maintained. The hard copies and electronic data (memory drives) are kept in a locked filing cabinet in the researcher's home. Additionally, any documents not saved to memory drives and stored on the researcher's computer are password protected. All

documents are available to individuals in this study's academic community upon request. The study's documents will be shredded five years after the study is completed, allowing time for challenges to research results from the scientific community.

Demographics of Participants

The Benchmark scores of 96 student participants were obtained. The demographic information revealed that the participants were 50% male (*n* = 48) and 50% female (*n* = 48) (Figure 4.1).

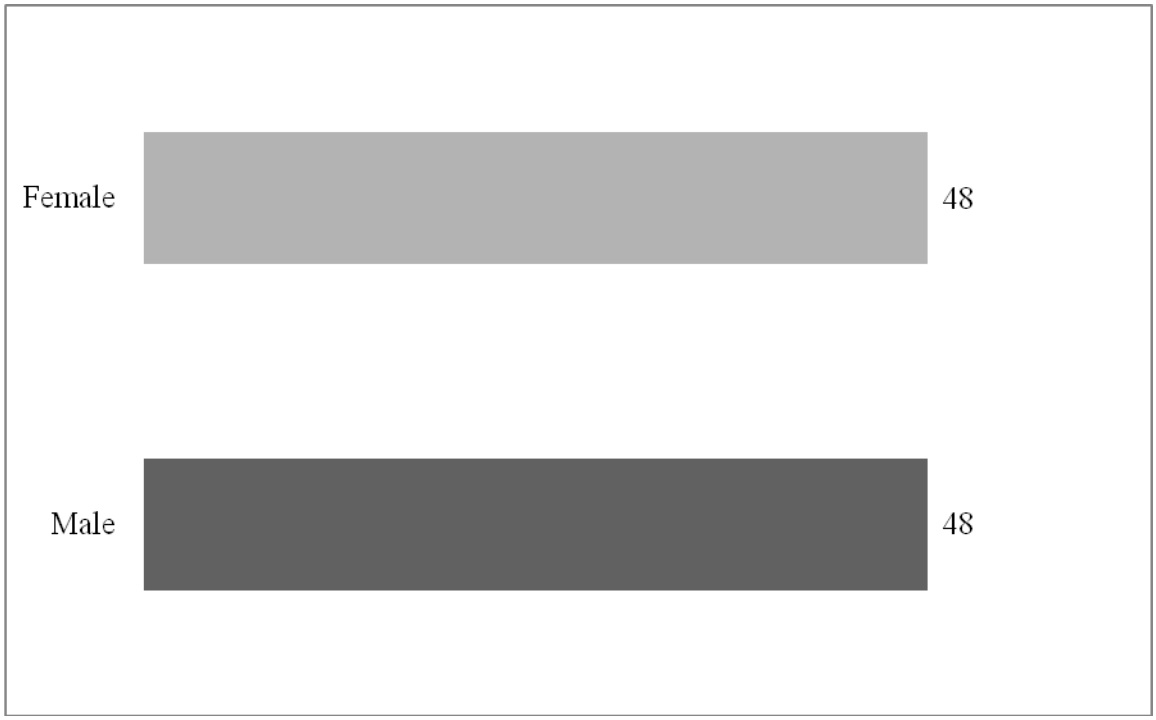

Figure 4.1. African American Students by Gender .

Twelve teachers completed the TMAS test, TMAS retest, and CQS. The demographic information for these participants disclosed that they were 50% male (*n* = 6) and 50% female (*n* = 6). The ethnic statuses of participating teachers were: approximately 75% African American, 17 % Caucasian (17%), and 8% other. Of the 12 teachers, 3 (25%)

reported having international experience and nine reported no international experience (Figure 4.2).

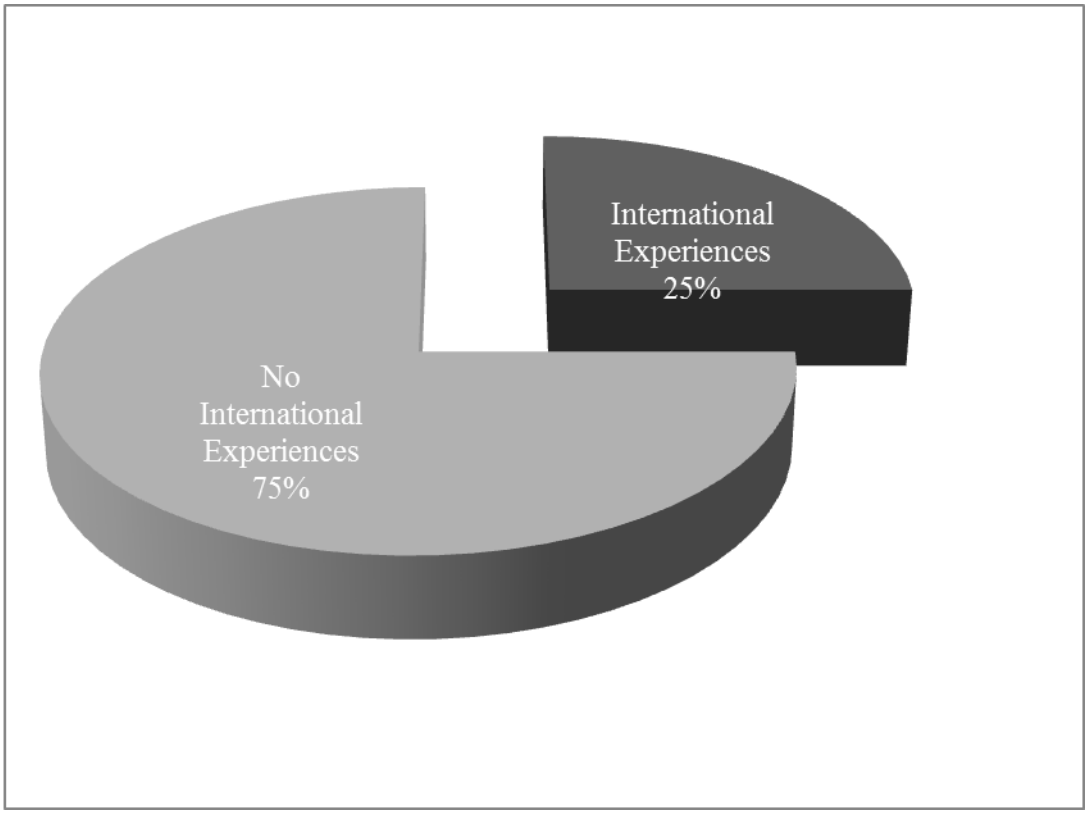

Figure 4.2 Percentages of Teachers' Possessing International Experiences.

Research Questions and Hypotheses

The following research questions were developed based on literature review on the topics of cultural awareness and cultural intelligence.

Research Question 1 (RQ1): Are there significant differences in the mean score between 11th grade African American students Benchmark scores and teachers' cultural awareness?

Hypothesis $H0^1$ (Null Hypothesis): There is no significant difference in the mean score between 11th grade African American students' Benchmark scores and teachers' cultural awareness.

Hypothesis HA^1 (Alternative Hypothesis): There is a significant difference in the mean score between 11th grade African American students' Benchmark scores and teachers' cultural awareness.

Research Question 2 (RQ2): Are there significant differences in the mean score between 11th grade African American students' Benchmark scores and teachers' cultural intelligence?

Hypothesis $H0^2$ (Null Hypothesis): There is no significant difference in the mean score between 11th grade African American students' Benchmark scores and teachers' cultural intelligence.

Hypothesis HA^2 (Alternative Hypothesis): There is a significant difference in the mean score between 11th grade African American students' Benchmark scores and teachers' cultural intelligence.

Preliminary Analysis

This study used the results achieved by Cardinal School District's 11th grade African American students on the Arkansas Benchmark Exam in 2011 and the district's 11th grade teachers' scores from the TMAS and CQS to answer each research question.

Benchmark Analysis

To assess how 11th grade African American students in the Cardinal School District fared on the Benchmark exam, their scores were obtained from the Arkansas Department of Education (ADE). The Benchmark exam scores were used because it is efficient in measuring student achievement and is the primary way student learning is assessed in Arkansas. Of the students taking the Benchmark exam, a large portion (48%) scored at the Basic level (Table 4.1). This indicates approximately half of the 11th grade

students in this sample show substantial skills in reading; however, the students only partially demonstrate the abilities to apply this skill. Only 29% of the students achieved a proficient score. According to ADE (2011):

> Proficient students demonstrate solid academic performance for the grade tested and are well prepared for the next level of schooling. They can use established reading skills and knowledge to solve problems and complete tasks on their own. Students can tie ideas together and explain the ways their ideas are connected. (p. 1)

Proficient is the second highest score a student can achieve on the Benchmark exam. Only 29% of students scoring Proficient indicate that fewer than half of the African American students participating in this study demonstrated solid academic performance. Additionally, this means students participating in this study are not prepared to advance to the next grade level.

Table 4.1

Benchmark Scores by Levels

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Advanced	3	3	3	97
	Proficient	29	30	30	67
	Basic	48	50	50	17
	Below Basic	16	17	17	100
	Total	96	100	100	

A racial/ethnic listing of the literacy component scores on Arkansas' Benchmark exam was attained to see how African American students performed in general. A comparison of the state-wide scores with those of the Cardinal School District's African American students revealed that those scoring at the Basic level are proportionally in line

with the Benchmark scores of African American students throughout the state. Forty-eight percent of African American students at the sample site scored at Basic level, mirroring the 48% of the state (Table 4.2). It is important to understand this comparison because it indicates how other African American students are performing in geographic locations throughout the state.

Table 4.2

State of Arkansas Race/Ethnicity Score Comparisons of Grade 11 Benchmark Examination for 2011

Level	Combined	Asian	African American	Hispanic	Native American	Caucasian	Two or More
Advanced	16%	23%	5%	7%	15%	20%	18%
Proficient	49%	48%	35%	42%	49%	54%	18%
Basic	30%	25%	48%	41%	29%	23%	0
Below Basic	6%	4%	12%	10%	6%	3%	0

TMAS and CQS Analysis

The computation of teachers' TMAS and CQS scores displays the results as related to the mean score for each independent variable across teacher's classroom (Table 4.3). The TMAS scores for teachers' A, B, C, E, G, J, K, and L are below the mean, where TMAS scores for teachers D, F, H, and I are above the mean. The CQS scores for teachers' A, B, C, D, I, J, and K are below the mean, where CQS scores for teachers, E, F, G, H, and L are above the mean. This indicates that a majority of the teachers who participated in this study possess low level of cultural intelligence and cultural awareness knowledge. This is relevant because it illustrates a need for cultural competence training for classroom teachers. Stender (2010) reported that "culturally relevant pedagogy

emphasizes the importance of cultural competence and cultural issues engagement as a means to improve school progress for minorities" (p. 114).

Table 4.3

Comparative of Teachers Scores on the TMAS and CQS to Students Mean Scores

	TMAS	CQS	BM
Teacher A	78	80	2.13
Teacher B	80	101	2.38
Teacher C	80	63	2.13
Teacher D	92	102	2.13
Teacher E	79	131	2.50
Teacher F	87	117	2.25
Teacher G	80	122	2.38
Teacher H	92	130	2.13
Teacher I	83	100	2.00
Teacher J	71	83	2.13
Teacher K	74	88	2.13
Teacher L	83	107	2.13
Mean	81.58	104.58	2.20

Comparative of Teacher's Scores to Students Scores

TMAS. The quantitative analysis of student's scores on the benchmark with individual teacher's level of cultural awareness seems to indicate that in general, majority of teachers in this study reported lower levels of cultural awareness with most aspects of the TMAS. These findings establish a foundation from which to examine if there are significant differences in the individual teacher level of cultural awareness as measured by the TMAS to the students' achievement. The comparative is analyzed utilizing the TMAS range 71 to 92 (M= 81.58) and the Benchmark range 2 to 2.5 (M= 2.20)

Teacher A possesses a TMAS score of 78 while the mean score is 2.13 for students in this classroom. A TMAS score of 78 and student's mean score of 2.13

indicates the teacher's level of cultural awareness displays no affect on students' achievement on the benchmark exam.

Teacher B possesses a TMAS score of 80 while the mean score is 2.38 for students in this classroom. A TMAS score of 80 and student's mean score of 2.38 indicates the teacher's level of cultural awareness displays a moderate affect on students' achievement on the benchmark exam.

Teacher C possesses a TMAS score of 80 while the mean score is 2.13 for students in this classroom. A TMAS score of 80 and student's mean score of 2.13 indicates the teacher's level of cultural awareness displays no affect on students' achievement on the benchmark exam.

Teacher D possesses a TMAS score of 92 while the mean score is 2.13 for students in this classroom. A TMAS score of 92 and student's mean score of 2.13 indicates the teacher's level of cultural awareness displays no affect on students' achievement on the benchmark exam.

Teacher E possesses a TMAS score of 79 while the mean score is 2.50 for students in this classroom. A TMAS score of 79 and student's mean score of 2.50 indicates the teacher's level of cultural awareness displays a moderate affect on students' achievement on the benchmark exam.

Teacher F possesses a TMAS score of 87 while the mean score is 2.25 for students in this classroom. A TMAS score of 87 and student's mean score of 2.25 indicates the teacher's level of cultural awareness displays a moderate affect on students' achievement on the benchmark exam.

Teacher G possesses a TMAS score of 80 while the mean score is 2.38 for students in this classroom. A TMAS score of 80 and student's mean score of 2.38 indicates the teacher's level of cultural awareness displays a moderate affect on students' achievement on the benchmark exam.

Teacher H possesses a TMAS score of 92 while the mean score is 2.13 for students in this classroom. A TMAS score of 92 and student's mean score of 2.13 indicates the teacher's level of cultural awareness displays no affect on students' achievement on the benchmark exam.

Teacher I possesses a TMAS score of 83 while the mean score is 2.00 for students in this classroom. A TMAS score of 83 and student's mean score of 2.00 indicates the teacher's level of cultural awareness displays no affect on students' achievement on the benchmark exam.

Teacher J possesses a TMAS score of 71 while the mean score is 2.13 for students in this classroom. A TMAS score of 71 and student's mean score of 2.13 indicates the teacher's level of cultural awareness displays no affect on students' achievement on the benchmark exam.

Teacher K possesses a TMAS score of 74 while the mean score is 2.13 for students in this classroom. A TMAS score of 74 and student's mean score of 2.13 indicates the teacher's level of cultural awareness displays no affect on students' achievement on the benchmark exam.

Teacher L possesses a TMAS score of 83 while the mean score is 2.13 for students in this classroom. A TMAS score of 83 and student's mean score of 2.13

indicates the teacher's level of cultural awareness displays no affect on students' achievement on the benchmark exam.

Teachers TMAS scores that are closer to the bottom of the range indicates less appreciation and awareness of multicultural teaching issues. A classroom mean score of 2.13 indicates that on average most students scored at the Basic level (2=Basic) below the mean. On average, most teachers TMAS score had no impact on students' achievement on the Benchmark exam.

CQS. The quantitative analysis of student's scores on the benchmark with individual teacher's level of cultural intelligence seems to indicate that in general, majority of teachers in this study reported lower levels of cultural intelligence with most aspects of the CQS. These findings establish a foundation from which to examine if there are significant differences in the individual teachers level of cultural intelligence as measured by the CQS to the students' achievement. The comparative is completed by utilizing the CQS range 63 to 131 (*M*= 104.58) and the Benchmark range 2 to 2.5 (*M*= 2.20)

Teacher A possesses a CQS score of 80 while the mean score is 2.13 for students in this classroom. A CQS score of 80 and student's mean score of 2.13 indicates the teacher's level of cultural intelligence displays no impact on students' achievement on the benchmark exam.

Teacher B possesses a CQS score of 101 while the mean score is 2.38 for students in this classroom. A CQS score of 101 and student's mean score of 2.38 indicates the teacher's level of cultural intelligence displays a modest impact on students' achievement on the benchmark exam.

Teacher C possesses a CQS score of 63 while the mean score is 2.13 for students in this classroom. A CQS score of 63 and student's mean score of 2.13 indicates the teacher's level of cultural intelligence displays no impact on students' achievement on the benchmark exam.

Teacher D possesses a CQS score of 102 while the mean score is 2.13 for students in this classroom. A CQS score of 102 and student's mean score of 2.13 indicates the teacher's level of cultural intelligence displays no impact on students' achievement on the benchmark exam.

Teacher E possesses a CQS score of 131 while the mean score is 2.50 for students in this classroom. A CQS score of 131 and student's mean score of 2.50 indicates the teacher's level of cultural intelligence displays a modest impact on students' achievement on the benchmark exam.

Teacher F possesses a CQS score of 117 while the mean score is 2.25 for students in this classroom. A CQS score of 117 and student's mean score of 2.25 indicates the teacher's level of cultural intelligence displays a modest impact on students' achievement on the benchmark exam.

Teacher G possesses a CQS score of 122 while the mean score is 2.38 for students in this classroom. A CQS score of 122 and student's mean score of 2.38 indicates the teacher's level of cultural intelligence displays a modest impact on students' achievement on the benchmark exam.

Teacher H possesses a CQS score of 130 while the mean score is 2.13 for students in this classroom. A CQS score of 130 and student's mean score of 2.13 indicates the

teacher's level of cultural intelligence displays no impact on students' achievement on the benchmark exam.

Teacher I possesses a CQS score of 100 while the mean score is 2.00 for students in this classroom. A CQS score of 100 and student's mean score of 2.00 indicates the teacher's level of cultural intelligence displays no impact on students' achievement on the benchmark exam.

Teacher J possesses a CQS score of 83 while the mean score is 2.13 for students in this classroom. A CQS score of 83 and student's mean score of 2.13 indicates the teacher's level of cultural intelligence displays no impact on students' achievement on the benchmark exam.

Teacher K possesses a CQS score of 88 while the mean score is 2.13 for students in this classroom. A CQS score of 88 and student's mean score of 2.13 indicates the teacher's level of cultural intelligence displays no impact on students' achievement on the benchmark exam.

Teacher L possesses a CQS score of 107 while the mean score is 2.13 for students in this classroom. A CQS score of 107 and student's mean score of 2.13 indicates the teacher's level of cultural intelligence displays no impact on students' achievement on the benchmark exam.

Teachers CQS scores that are closer to the bottom of the range indicates less appreciation and awareness of multicultural teaching issues. A classroom mean score of 2.13 indicates that on average each student in the classroom scored at the Basic level (2=Basic) below the mean. On average, most teachers CQS score had no impact on students' achievement on the Benchmark exam.

Descriptive Statistics

The independent variables in this study are: teachers' TMAS scores and CQS scores. The dependent variable in this study is the students' Benchmark mean scores. The descriptive statistics table displays the output for 11th grade African American students' Benchmark scores, and teachers' TMAS and CQS score (Table 4.4). The possible range for the benchmark is 1 to 4, the outcome ranged from 2 to 2.50, and the mean result indicates that a majority of students scored at the Basic level (2 = Basic). The range for the TMAS is 71 to 92 (M= 81.58, SD = 6.04) the mean outcome indicate that, on average, the teachers in this sample possess a greater appreciation and awareness of multicultural teaching issues. The range for the CQS is 63 to 131 (M= 104.58, SD = 19.07), indicating that the teachers participating in this study have a high level of cultural intelligence. This level of cultural intelligence is based upon a mean score that is closer to the upper than the lower range.

Table 4.4

Descriptive Analysis of Variables for Teachers and Students Participants

	n	Minimum	Maximum	Mean	Std. Deviation
TMAS	12	71	92	81.58	6.04
CQS	12	63	131	104.58	19.07
Benchmark	96	1	4	2.20	.75

The descriptive statistics exhibits the output for 11th grade African American students' Benchmark mean scores across teachers' classrooms (Figure 4.3).

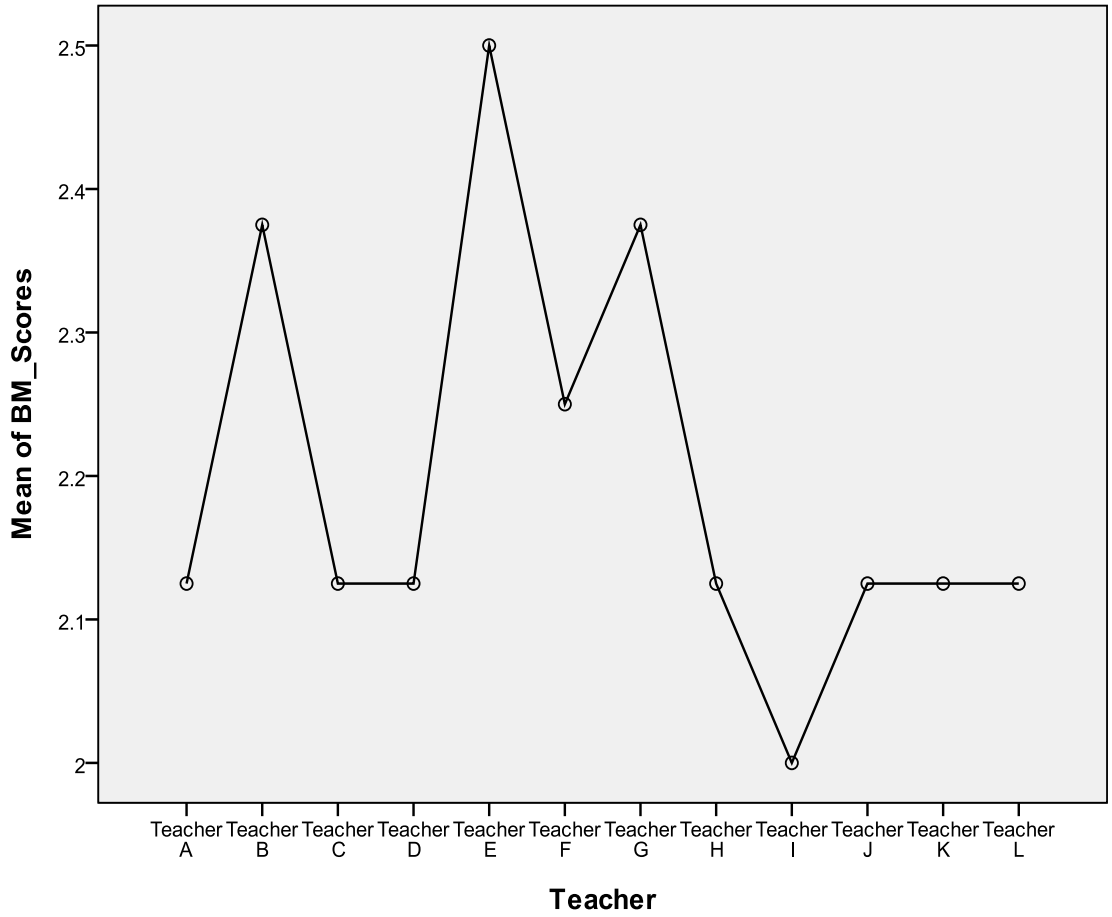

Figure 4.3. Plots of Mean Differences for Benchmark Scores by Teachers.

The number of students are the same across teachers' classroom (n = 8) (Table 4.5).

Table 4.5

Students Benchmark Mean Scores across Teachers' Classroom

	n	Mean	Std. Deviation
Teacher A	8	2.13	.64
Teacher B	8	2.38	.92
Teacher C	8	2.13	.64
Teacher D	8	2.13	.64
Teacher E	8	2.50	.93
Teacher F	8	2.25	.87
Teacher G	8	2.38	1.06
Teacher H	8	2.13	.84
Teacher I	8	2.00	.76
Teacher J	8	2.13	.64
Teacher K	8	2.13	.64
Teacher L	8	2.13	.64
Total	96	2.20	.75

Outcome of Normality Test

Before considering a comparison of one data set to another, the data was tested for normality. A descriptive analysis was conducted, but a percentile ranks assuming normality was not performed because the samples do not appear normal. There is a sample of 96 students participating in the benchmark assessment, and an interest to determine if there are differences in teacher's TMAS and CQS scores (n = 12). For this study, Shapiro-Wilk's (S-W) test evaluates the numerical data for normality. The test of normality table reveals the Benchmark scores (p <.001) data significantly deviated from a normal distribution (Table 4.6). The p-value for this data is .001. Since .001 < .05, we reject the hypothesis that the data is normally distributed.

Table 4.6

Test of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
Benchmark	.84	96	.001

Creating normal Q-Q Plots permits a graphical determination of normal outputs. The straight line on the graph in Figure 4.4 is the null hypothesis of normality; researchers want the data as close to the line as possible to assume normality. The *p* value reveals whether the data are significantly different from the line or not. The de-trended normal Q-Q Plot of Benchmark scores illustrate the data deviates from normal distribution as shown in Figure 4.4.

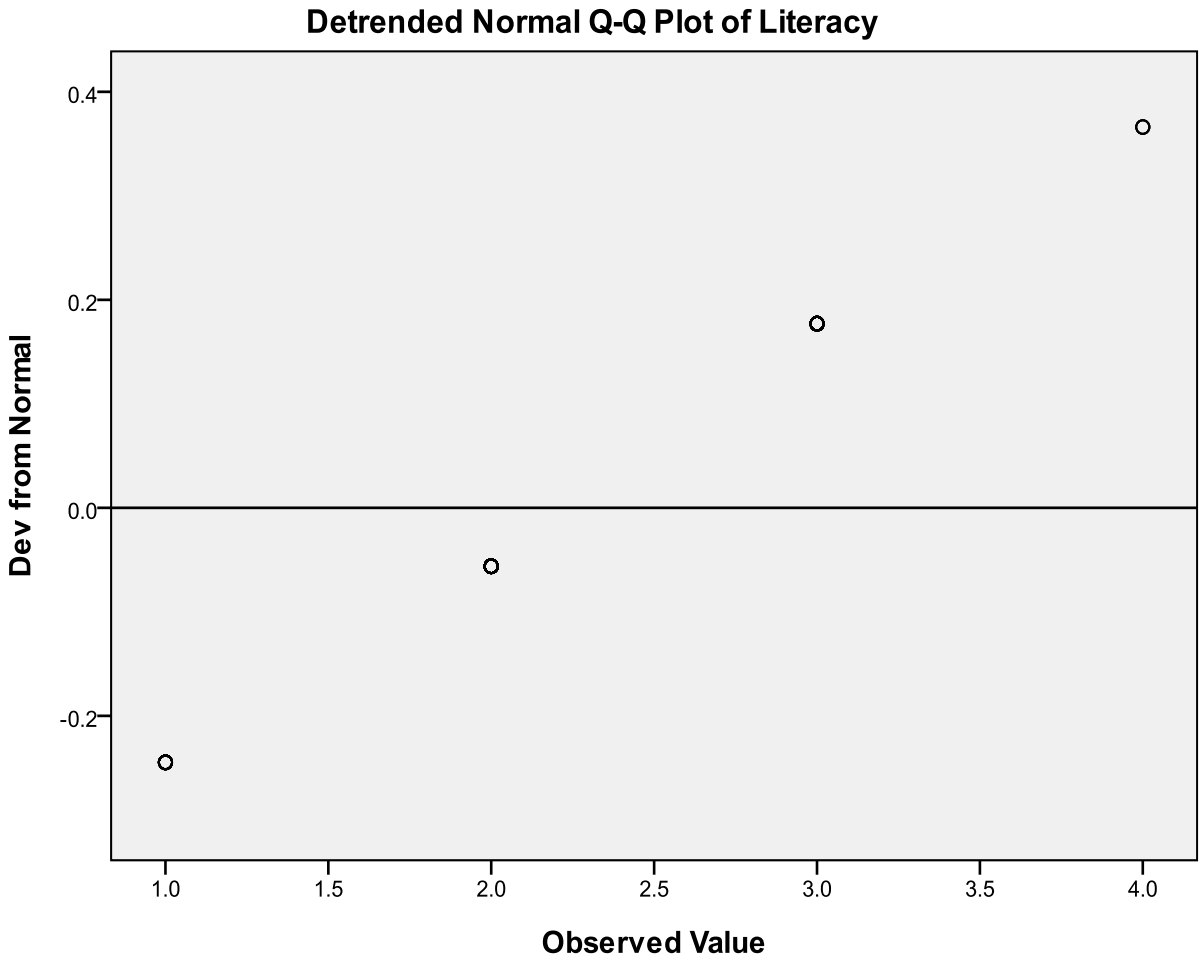

Figure 4.4. Benchmark Literacy Scores Normality Plot.

Nonparametric Testing

In view of the fact that the data sets deviates from normality, a Kruskal-Wallis one way ANOVA was conducted to test the difference in students' benchmark mean scores and teachers' TMAS and CQS scores. The Kruskal-Wallis is a nonparametric test, which allows a comparison of multiple independent groups.

Findings Related to Research Questions

Research Question 1 Results

The first research question asked: Is there a significant difference in the mean scores between African American students' Benchmark scores and their teachers' cultural awareness? It is hypothesized that teachers with a high level of culture awareness about their students have a greater influence on their students' Benchmark scores. In order to answer this question, the researcher checked for reliability and conducted a Kruskal-Wallis for research question one.

TMAS Reliability

To determine reliability of the TMAS, Ponterotto et al. (1998) reported that the revised 20-item survey resulted in a Cronbach coefficient alpha of .86 and a three-week test-retest reliability coefficient of .80. An internal consistency estimate of reliability computed the TMAS cultural awareness scale as an alpha coefficient. The TMAS alpha is .62, and the TMAS alpha three-week retest is .82 respectively (Table 4.7). Therefore, for this study the TMAS and the TMAS three-week retest estimates are reliable.

Table 4.7

TMAS Reliability Statistics

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
TMAS	.62	.72	20
TMAS three-week retest	.82	.87	20

TMAS Kruskal-Wallis Tests

The Kruskal-Wallis test enables comparison of two or more data sets collected from different groups and do not assume normality. Two tables were developed from

running the Kruskal-Wallis test: the ranks table and test statistics table. The ranks table shows the mean rank of the Benchmark score for each teacher group (Table 4.8). Teacher E with a mean rank of 57.75 is higher than that of the other eleven teachers. Teachers A, C, D, J, K, and L have the same total score (17) and, therefore, the same rank (46.13). Teacher H also has a total score of 17 but a rank of 46.94. However, teacher E's cultural awareness level (TMAS = 79) is lower than teachers B, C, D, F, G, H, I, and L.

Table 4.8

Ranks

Group	TMAS	n	Sum	Mean Rank
Teacher A	78	8	17	46.13
Teacher B	80	8	19	52.94
Teacher C	80	8	17	46.13
Teacher D	92	8	17	46.13
Teacher E	79	8	20	57.75
Teacher F	87	8	18	51.75
Teacher G	80	8	19	53.75
Teacher H	92	8	17	46.94
Teacher I	83	8	16	42.13
Teacher J	71	8	17	46.13
Teacher K	74	8	17	46.13
Teacher L	83	8	17	46.13

Results of the Kruskal-Wallis TMAS test indicate no significant difference between the mean of the various groups yielding an H (11) = 2.70, $p = .99$ (Table 4.9). The result supports the hypothesis that there is no significant difference in the mean between the students' Benchmark scores and their teachers' cultural awareness.

Table 4.9

Test Statistics [a, b]

	Benchmark
CHI-square	2.70
Df	11
Asymp. Sig. (2-tailed)	.99

[a] Kruskal Wallis Test
[b] Grouping Variable: Teachers TMAS

Research Question 2 Results

The second research question asked: Is there a significant difference in the mean score between African American students' Benchmark scores and their teachers' cultural intelligence? It is hypothesized that teachers with a high level of culture intelligence significantly affect students' Benchmark scores. Before answering this question, a reliability of measurement was first checked, then a Kruskal-Wallis test conducted to answer research question two.

CQS Reliability

The 20-item, four factor model CQS was developed and validated by Ang and colleagues (2004) with alpha results as follows: four-item metacognitive = .76, six-item cognitive = .84, five-item motivational = .76, and five-item behavioral = .83 (Ang et al., 2006). An internal consistency estimate of reliability was computed for the CQS as an alpha coefficient. The alphas for the cultural intelligence scale are: four-item metacognitive = .87, six-items cognitive = .91, five-item motivational = .92 and five-item behavioral = .93, respectively (Table 4.10). For this study, the CQS estimate results for all elements are reliable.

Table 4.10

CQS –Reliability Statistics

	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
MC	.87	.88	4
COG	.91	.92	6
MOT	.92	.94	5
BEH	.93	.94	5

CQS Kruskal-Wallis Test

The Kruskal-Wallis test enables comparison of two or more data sets obtained from different groups and the data is assumed abnormal. Two tables were derived from running the Kruskal-Wallis test: the ranks table and test statistics table. The ranks table shows the mean rank of the Benchmark score for each teacher's group (Table 4.11). Teacher E with a mean rank of 57.75 is higher than the other eleven teachers. Teachers A, C, D, J, K, and L have the same total score (17) and, therefore, the same rank (46.13). Teacher H also has a total score of 17 but a rank of 46.94. Additionally, teacher E has a higher level of cultural intelligence (CQS = 131) than the other teachers.

Table 4.11

Ranks

Group	CQS	n	Sum	Mean Rank
Teacher A	111	8	17	46.13
Teacher B	101	8	19	52.94
Teacher C	63	8	17	46.13
Teacher D	102	8	17	46.13
Teacher E	131	8	20	57.75
Teacher F	117	8	18	51.75
Teacher G	122	8	19	53.75
Teacher H	130	8	17	46.94
Teacher I	100	8	16	42.13
Teacher J	83	8	17	46.13
Teacher K	88	8	17	46.13
Teacher L	107	8	17	46.13

Results of the Kruskal-Wallis CQS test indicates no significant difference between the mean of the various groups yielding an H (11) = 2.70, p = .99 (Table 4.12). The result supports the hypothesis no significant difference in the mean score between the students' Benchmark scores and their teachers' cultural intelligence.

Table 4.12

Test Statistics [a, b]

	BM
CHI-square	2.70
df	11
Asymp. Sig. (2-tailed)	.99

[a] Kruskal Wallis Test
[b] Grouping Variable: Teachers CQS

Chapter Summary

This chapter analyzed data that examined the hypothesis of differences among mean scores of teachers' level of cultural awareness (measured by the TMAS) and cultural intelligence (measured by the CQS) and students' academic achievement as

defined by the state assessments (Benchmark exam). The results of this study revealed no significant difference in the mean scores between African American students' Benchmark scores and teachers' cultural awareness (H1). Additionally, the results of this study revealed no significant difference in the mean scores between African American students' Benchmark scores and teachers' cultural intelligence (H2). Chapter 5 will provide a discussion of findings, conclusions, and implications for future research.

CHAPTER 5

Discussion

This chapter presents a discussion of the study. An overview of the purpose of the study is provided in the first section of this chapter. A review of the research questions is presented in the second section. Next a discussion of the findings follows, along with sections on implications for practice and implications for future research. Finally, a conclusion of this dissertation ends the chapter.

Overview of the Purpose of the Study

The purpose of this study was (a) to gain a better understanding of the differences between teachers' level of cultural awareness and African American students' achievement on the state assessment; (b) to foster a better understanding of the differences between teachers' level of cultural intelligence and students' achievement on the state assessment. This study examined the cultural awareness and cultural intelligence assessment scores of teachers participating in the study and compared them to the other study participants'—a group of African American students—scores on a state assessment exam. This study evaluated quantitative data of teachers' level of cultural awareness to seek differences in mean scores across several teachers' classrooms, which indicated no differences between teachers' level of cultural awareness and African American students' achievement. Additionally, the study evaluated quantitative data related to teachers' level of cultural intelligence to seek differences in mean scores across several teachers' classrooms, which indicated no differences between teachers' level of cultural intelligences and African American students' achievement.

The premise for this study was based on the literature review and, in particular, on research of Ladson-Billings (1998), Gay (2000), and Leonard, et al. (2009). Evidence from the study's results will be reported in the following sections of this chapter as they relate to these research themes.

Review of the Research Questions

Answers to the following research question were sought: Are there significant differences in the mean scores between 11th grade African American students' Benchmark test scores and their teachers' TMAS scores? Are there significant differences in the mean scores between 11th grade African American students' Benchmark test scores and teachers' CQS scores? Answers were sought using a quantitative method approach. Quantitative data for the two independent variables surveys (teachers' TMAS and CQS scores) were collected within a week of permission being sought to give them.

Two hypotheses were tested to determine whether teachers' TMAS and CQS scores have an effect on students' Benchmark scores.

Hypothesis $H0^1$ (Null Hypothesis): There is no significant difference in the mean scores between 11^{th} grade African American students' Benchmark scores and teachers' cultural awareness.

Hypothesis HA^1 (Alternative Hypothesis): There is a significant difference in the mean scores between 11^{th} grade African American students' Benchmark scores and teachers' cultural awareness.

Hypothesis $H0^2$ (Null Hypothesis): There is no significant difference in the mean scores between 11^{th} grade African American students' Benchmark scores

and teachers' cultural intelligence.

Hypothesis HA^2 (Alternative Hypothesis): There is a significant difference in the mean scores between 11th grade African American students' Benchmark scores and teachers' cultural intelligence.

Discussion of the Findings

Research Question One: Student Achievement and Teachers' Cultural Awareness. Tests for differences between the dependent variable (students' Benchmark scores) and the independent variable (teachers' cultural awareness) were run. A statistically significant difference in students' assessment scores was not evident as result of the analysis of research data connected to research question 1. When students' assessment scores associated with question 1 were grouped by teachers, the researcher determined that the 11th grade students' assessment scores were not affected by the teachers' level of cultural awareness. There were teachers who possessed higher level of cultural awareness than their colleagues, but no difference in mean scores of students' assessment scores was found. It appears that most teachers display a high level of cultural awareness, but the awareness is not communicated to the students in a way that display in the outcome on the benchmark. The test confirmed that the distribution of Benchmark scores is the same across the groups, the null hypothesis is supported.

Research Question Two: Student Achievement and Teachers' Cultural Intelligence. Tests for differences between the dependent variable (students' Benchmark mean scores) and the independent variable (teachers' cultural intelligence) were run. A statistically significant difference in students' assessment scores was not apparent as result of the analysis of research data connected to research question 2. When students'

assessment scores associated with question 2 were grouped by teachers, the researcher concluded that the 11th grade students' assessment scores were not affected by the teachers' level of cultural intelligence. There were teachers who possessed higher levels of cultural intelligence than their associates, but no difference in mean scores of students' assessment scores was found. It appears that most teachers display a high level of cultural intelligence, but the intelligence is not communicated to the students in a way that display in the outcome on the benchmark. The test confirmed the distribution of Benchmark scores is the same across the groups, the null hypothesis is sustained.

While this finding exists in contrast to Ladson-Billing's (1995) culturally relevant pedagogy theory, perhaps studying a school district with similar student demographics' that uses culturally relevant pedagogy will yield different results.

Implications

The literature regarding culturally relevant pedagogy as well as the results of this study provides insight into how teachers may facilitate academic achievement on the state assessment among a predominantly African American student population. This study provides suggestions on the next steps with implications for practice and implications for future research.

Implications for Practice

The first implication is the need for teachers to reflect and understand their own cultural pedagogy, cultural beliefs, and cultural identity. Ashraf and Rarieya (2008) acknowledged that teachers should utilize reflective practices because they improve teaching and learning. Teachers participating in a research study conducted by Pedro (2005) used reflective practices as a conceptual device to enhance their knowledge about

themselves and improve their pedagogy. Teachers used a metacognitive process of knowing that includes awareness, perception, reasoning, and judgment: "A person who is metacognitive knows how to learn because he/she is aware of what he/she knows and what he/she must do in order to gain new knowledge" (Wilson, 2010, p. 270). Teachers can reflect on the principles of metacognitive strategies to engage students in critical thinking and helping them to draw conclusions about their own learning.

The second implication for practice is the need for teachers to pursue professional development opportunities concerning cultural competencies. Educational systems show an interest in preparing pre-service teachers as culturally competent individuals by incorporating teaching strategies in teacher preparation programs. Although multicultural competency gains are favorable, the growth is still small (Kitsantas & Talleyrand, 2005).

The third implication for practice is the need for teachers to incorporate a culturally relevant pedagogy into their current practices. As Parhar (2008) stated, culturally relevant pedagogy is a theory where teacher display pedagogical methods while reflecting upon students' cultural backgrounds and heritage, resulting in academic improvement among students. Using reflective practices and professional development training on cultural competencies will equip teachers with the skills necessary to apply a culturally relevant pedagogy within classrooms. Ladson-Billings (2009) stated that culturally relevant teaching practices allow teachers to display how they see themselves and how they see others.

Implications for Future Research

The aim of this research was to provide a framework for future studies of the focus of culturally relevant pedagogy that enhances state assessment scores of African

American students regardless of the type of school district they attend. "The gap between cultural minority students and the Eurocentric practices of mainstream schooling has prompted many scholars to argue for a more representative and empowering way of teaching" (Parhar, 2008, p.11). The findings from the analysis of data enabled the researcher to make recommendations for further research. This study suggests further research regarding staff development opportunities for teachers on addressing culture diversity in the classroom. However, it does not support the theory that differentiated high levels of cultural awareness and cultural intelligence, as in the case of culturally relevant pedagogy, significantly enhances academic achievement.

This study examined the differences in assessment scores for 11th grade African American students. A similar study might compare student achievement using a different population of students. This research would provide additional information relevant to the impact of cultural pedagogy on academic achievement.

This study examined the differences in assessment scores for the 2011 school year. A longitudinal assessment of academic performance of students exposed to cultural pedagogy will enhance the understanding of cultural awareness and cultural intelligence impact on academic performance. Additionally, a longitudinal study could incorporate a plan so that teacher's cultural pedagogy is infused in students to illustrate students' academic improvement.

This study examined the differences in students' outcomes on the Benchmark Literacy Exam. The Benchmark Literacy portion was chosen because it is the final state-level exam that 11th grade students in Arkansas have to participate in. Assessing students at this level could provide insight into their preparation for entering college or

finding careers after graduating from high school. Dooley (2004) believed that literacy teachers need the skills necessary to monitor students' literacy development while teaching skills and strategies to support students as they develop an appreciation of words and languages and literary understandings. A related study might compare other student assessment scores (such as science or math) to literacy scores or study them independently as in this study.

This test not only assessed students' academic performance, but the scores are inclusive of the school districts' performance. A tally of all assessment scores generates a report card of the districts' academic performance. The report card informs schools of their performance and identifies where each school ranks within the state. Although data concerning global experience of teachers was collected for this study, it was not used to determine the differences in teachers' cultural awareness and cultural intelligence across the mean samples. This data could replicate an investigation for future research. This research would provide additional information essential to the connection of global experiences on cultural pedagogy.

Importance of Implications as Related to This Study

The implications related to the findings in this study are significant to a culturally relevant pedagogy. Because of the need for teachers to reflect and understand their own cultural competencies, students' ability to improve academically is lacking. One pedagogical practice that identifies important factors that affect learning of a predominantly African American student population is that of cultural pedagogy. Ladson-Billings (1994) suggested an equitable pedagogy, one that involves changes to the curriculum so that it aligns with students cultures to cultivate academic achievement.

Additionally, she suggested that teachers adapt their current teaching practices by altering their language and understanding that mirrors their students in an effort to link what students know and what they need to learn.

It is important that in-service teachers have extensive training in cultural pedagogy versus that of inadequate training or the lack there of. This is significant because extensive training requires action and is tracked for follow-thru results. Additionally, trainings for current teachers on applying cultural pedagogy can provide the foundation for staff development throughout the school year. Follow-up on applying a cultural pedagogy can be assessed by evaluating students' progress by individual teacher. Evaluating students' academic progress will determine if teachers are adequately applying the skills acquired as well as assess any areas requiring improvement that might assist students in receiving equitable learning opportunities. If the shift in diverse demographics trends continue to hold true, student population becoming more diverse, and if teachers are to become effective they will need to acquire a cultural pedagogy.

Conclusion

Banks (1995a) stated that "in the United States, multicultural education began as reform movement intended to change educational practices that hindered the achievement of students of minority group background and reinforced the discriminatory practices and ethnic stereotypes of American society" (as cited in Morey, 2000, p. 25). According to Roux (2002) education is not just about one culture. Classrooms encompass cultural diversity, thereby requiring teachers to be culturally competent. When teachers do not effectively communicate in a cultural manner, it could result in intercultural conflict and ultimately school failure (Roux, 2002). Researchers Fordham and Ogbu (1986), Dei

(1992, 1997), and Howard (2001) provided compelling evidence that confirmed a strained relationship between culturally diverse students and schools possessing exclusionary educational practices and Eurocentric ideologies (as cited in Parhar, 2008). The cause for the stress is because the school practices contradict students' individualities and undermine their cultural knowledge, which results in poor academic performance for their students.

Diversity in the classroom comes in many forms such as ethnicity, culture, and learning needs. Regardless of form of diversity, teachers have to adapt their pedagogical skills to differentiate instructional practices to meet the diverse needs of the population in the general classroom. Students need teachers whose pedagogical skills are adaptable to a diverse student body while enhancing student's academic knowledge which can allow them to function in a culturally diverse society (Uchida et al., 1996). According to Dooley (2004), a large number of educators and researchers suggest that the current educational system does not appropriately prepare teachers to teach within a cross cultural learning environment. A culturally relevant pedagogy theory provides a sense of hope and supportive guidance to educators who desire to improve the academic and social achievement of culturally diverse students (Parhar, 2008). Dooley's (2004) research revealed that cultural sensitivity and responsiveness is important to content-area methods courses to help new teachers develop pedagogy to deliver classroom instructions in literacy that demonstrate cultural awareness and cultural intelligence.

According to Merryfield (2002) a teacher who possesses a global mindset can help students explore other cultures through the multiple perspectives of other parts of the world and through paths besides their textbooks. These paths include literature, history,

news, and Web sites, which allow students to gain a diverse understanding of reading and writing, and a new comprehension of diverse perspectives and knowledge bases. "Successful negotiation of cultural diversity in the future relies on building a bridge from the present focus on awareness, knowledge, and skills required for attainment of cultural competence to the application of cultural competence through cultural mediation, which leads to academic, personal/social, and career success of culturally diverse students," (Portman, 2009, p.23). Public school should consider staff development opportunities and pre-service activities that focus on cultural diversity, which increases academic knowledge and opportunities to improve students' academic achievement.

References

(2012, April 4). Cardinals loses $1.8 million grant. *Pine Bluff Commercial*, 3-5.

Achievement. (2012). In *Merriam-Webster*. Retrieved from http://www.merriam-webster.com/dictionary/achievement

Alexander, R. J. (2001). Border crossing: Towards a comparitive pedagogy. *Comparitative Education, 37*(4), 507-523.

Altbach, P. G., Berdahl, R. O., & Gumport, P. J. (Eds.). (2005). *American higher education in the twenty-first century: Social, political, and economic challenges*. Baltimore, MD: Johns Hopkins University Press.

American Youth Policy Reform. (2001). *Raising minority academic achievement: A compendium of education program and practices*. Washington, DC: James, D. W., Jurich, S., Estes, S.

Amerson, R. (2010). The impact of service-learning on cultural competence. *Nursing Education Perspectives, 31*(1), 18-22.

Ang, S., & Van Dyne, L. (Eds.). (2008). *Handbook of cultural intelligence: Theory, measurement and applications.* New York, NY: M.E. Sharpe.

Ang, S., Van Dyne, L., & Koh, C. (2006). Personality correlates of the four-factor model of cultural intelligence. *Group & Organization Management, 31*(1), 100-123.

Arkansas Department of Education. (2010)[a]. Testing Definitions. Retrieved from: http://arkansased.org/testing/definitions.html.

Arkansas Department of Education (2010)[b]. Testing Assessment. Retrieved from: http://arkansased.org/testing/assessment.html.

Arnold, J. Breaking new ground: Cultivating 21st century skills in secondary schools. Ed.D dissertation. Indiana University, United States - Indiana. Retrieved October 12, 2011, from ProQuest Dissertations and Theses.

Ashraf, H., & Rarieyab, J. F. A. (2008). Teacher development through reflective conversations – possibilities and tensions: A Pakistan case. *Reflective Practice 9*(3), 269-279.

Beers, K. (2005). With equality for all. *Voices From the Middle, 13*(1), 4-5, 82.

Black, R. W. (2009). English-Language learners, fan communities, and 21st-century skills. *Journal of Adolescent & Adult Literacy*, *52*(8), 688-697.

Blackstone, T. (2002). A creative and cultural education for the 21st century. *Education Review, 15*(2), 2.

Bodur, Y. Preservice teachers learning of multiculturalism in a teacher education program. Ph.D. dissertation, The Florida State University, United States –Florida. Retrieved November 28, 2011, from ProQuest Dissertations and Theses.

Bondima, M. H.. The nature of culturally responsive pedagogy in two urban African American middle school science classrooms. Ph.D. dissertation, University of Maryland, United States-College Park. Retrieved December 30, 2012, from Dissertations & Theses.

Bourassa, G. N. (2010). A review of power, crisis, and education for liberation: Rethinking critical pedagogy. *Educational Studies, 46*(3), 363-366.

Brown-Allen, D. J. A quantitative descriptive study of the academic achievement of black students in nonpublic secondary schools. Ed.D dissertation. Seton Hall

University, United States – New Jersey. Retrieved July 22, 2012, from ProQuest Dissertations and Theses.

Brown, R. S., & Conley, D. T. (2007). Comparing state high school assessments to standards for success in entry-level university courses. *Educational Assessment, 12*(2), 137-160.

Bücker, J., & Poutsma, E. (2010). How to assess global management competencies: An investigation of existing instruments. *Management Revue, 21*(3), 263-291.

Buendia, E., Gitlin, A., & Doumbia, F. (2003). Working the pedagogical borderline: An African critical pedagogue teaching within an ESL context. *Curriculum Inquiry 33*(3), 292-320.

Byrd, D. Investigating how second language teachers are prepared to teach culture: An analysis of methods course syllabi. Ph.D. dissertation, The University of Iowa, United States –Iowa. Retrieved October 4, 2010, from Dissertations & Theses.

Chan, E. (2006). Teacher experiences of culture in the curriculum. *Journal of Curriculum Studies, 38*(2), 161-176.

Colbert, P.J. (2010). Developing a culturally responsive classroom collaborative of faculty, students, and institution. *Journal of College Teaching and Learning 7*(11), 15-24.

Coulehan, M. B., & Wells J. F. (n.d.). Guidelines for responsible data management in scientific research. *Office of Research Intelligence,* 1-46.

Cowan, J., George, J. W., & Pinheiro-Torres, A. (2004). Alignment of developments in higher education. *Higher Education , 48*, 439-459.

Crowne, K. A. (2009). The relationships among social intelligence, emotional intelligence and cultural intelligence. *Organization Management Journal, 6*(3), 148-163.

Crowne, K. A. (2008). What leads to cultural intelligence? *Business Horizons, 51*(5), 391.

Czarnecki, K. (2009). How digital storytelling builds 21st century skills. *Library Technology Reports, 45*(7), 15-19.

D'Andrea, M., Daniels, J., & Noonan, M. J. (2003). New developments in the assessment of multicultural competence: The multicultural awareness-knowledge-skills survey-teachers form. In Pope-Davis, D. P., Coleman, H. L. K., Toporek, R., & Liu, W. (Eds.), *Handbook of multicultural competencies in counseling and psychology* (pp. 154–161). Thousand Oak, Sage.

Darder, A. (1995). *Buscando America: The contributions of critical Latino educators to the academic development and empowerment of Latino students in the U.S*. In C. E. Sleeter & P. L. McLaren (Eds.), *Multicultural education, critical pedagogy and the politics of difference* (pp. 245-268). New York: Suny Press.

Delano, R., & Hutton, K. (2007). Economic and workforce development –K through 12 education issue. *Economic Development Journal, 6*(2), 47-53.

Doherty, W. R., & Hilberg, S. R. (2007). Standards for effective pedagogy, classroom organization, English proficiency, and student achievement. *Journal of Educational Research, 101*(1), 24-34.

Dooley, C. E. An exploration of learning: Beginning teachers building knowledge about culture and literacy. Ph.D. dissertation, University of Texas at Austin, United States - Texas. Retrieved August 12, 2012, from Dissertations & Theses.

Dove, M. J., Pearson, L. C., & Hooper, H. (2010). Relationship between grade span configuration and academic achievement. *Journal of Advanced Academics 21*(2), 272–298.

Drainville, A. C. (2003). Critical pedagogy for the present moment: Learning from the Avant-Garde to teach globalization from experiences. *International Studies Perspectives, 4*(3), 231-249.

Duffy, M., Giordano, V., Farrell, J., Paneque, O., & Crump, G. (2008). No child left behind: Values and research issues in high-stakes assessments. *Counseling and Values, 53*(1), 53-66.

Durden, T. (2008). Do your homework! Investigating the role of culturally relevant pedagogy in comprehensive school reform models serving diverse student populations, *Urban Review, 40*(5), 403-419.

Dweck, C. (2009). Who will the 21st-century learners be? *Knowledge Quest, 38*(2), 8-9.

Earley, P. C., & Ang, S. 2003. *Cultural intelligence: An analysis of individual interactions across cultures*. Palo Alto, CA: Stanford University Press.

Educational Research Center. (2011). NORMES. Retrieved from http://normes.uark.edu/?page_id=34.

Enyedy, N., & Mukhopadhyay, S. (2007). They don't show nothing I didn't know: Emergent tensions between culturally relevant pedagogy and mathematics pedagogy. *Journal of the Learning Sciences, 16*(2), 139-174.

Fehring, H. (2005). Critical, analytical and reflective literacy assessment: Reconstructing practice. *Australian Journal of Language & Literacy, 28*(2), 95-113.

Flowers, D. L. (2004). Culturally competent nursing care a challenge for the 21st century. *Critical Care Nurse, 24*(4), 48-52.

Forrest, M. E. S. (2008). Learning and teaching in action. *Health Information and Libraries Journal 25*(1), 229–232.

Frye, B. J., & Vogt, H. A. (2010). The causes of underrepresentation of African American children in gifted programs and the need to address this problem through more culturally responsive teaching practices in teacher education programs. *Black History Bulletin, 73*(1), 11-17.

Gallavan, N. P. (2005). Helping teachers unpack their "invisible knapsacks". *Multicultural Education*, p. 36-39.

Green, R. L. (2005). *Expectations: How teacher expectations can increase student achievement and assist in closing the achievement gap*. Columbus, Ohio: McGraw Hill.

Griffer, M. R., & Perlis, S. M. (2007). Developing cultural intelligence in preservice speech-language pathologists and educators. *Communication Disorder Quarterly, 29*(1), 28-35.

Harper, K. A., Freuler, R. J., & Demel, J. T. (2007). Cultivating problem solving skills via a new problem categorization scheme. *AIP Conference Proceedings, 883*(1), 141-144.

Harrison-Jones, L. (2007). No child left behind and implications for black students. *The Journal of Negro Education, 76*(3), 346-353.

Hart, P. D., & Winston, D. (2005). Ready for the real world? Americans speak on high school reform. *Educational Testing Services*. 1-32.

Hastie, P. A., Martin, E., & Buchanan, A. M. (2006). Stepping out of the norm: an examination of praxis for a culturally-relevant pedagogy of African-American children. *J. Curriculum Studies, 38*(3), 293-306.

Hatzipanagos, S., & Lygo-Baker, S. (2006). Teaching observations: Promoting development through critical reflection. *Journal of Further & Higher Education*, *30*(4), 421-431.

Haynes, B. Enriching the fabric: The role of cultural competency in higher education. Ph.D. dissertation, Capella University, United States -- Minnesota. Retrieved April 11, 2011, from Dissertations & Theses.

Hefflin, B. R. (2002). Learning to develop culturally relevant pedagogy: A lesson about cornrowed lives. *Urban Review, 34*(3), 231.

Hill, H. D. (1989). *Effective strategies for teaching minority students.* Bloomington, Indiana: National Educational Services.

Howard, T. C. (2001). Telling their side of the story: African-American students' perceptions of culturally relevant teaching. *Urban Review, 33*(2), 131.

Hsu, H. (2009). Preparing teachers to teach literacy in responsive ways that capitalize on students' cultural and linguistic backgrounds through weblog technology. *Multicultural Education & Technology Journal, 3*(3), 168-181.

Huston, A. C. (1991). *Children in poverty: Child development and public policy*. New York, NY: Cambridge University Press.

Hwang, A. (2009). Introduction to emerging conceptual scholarship section. *Organization Management Journal, 6*(3), 146-147.

International Society for Technology in Education (ISTE), State Educational Technology Directors Association (SETDA), and Partnership for 21st Century Skills. (2007). *Maximizing the Impact: The pivotal role of technology in a 21st century education system.* Vockley, M., & Vockley•Lang.

Irvine, J. J., & Candler, C. H. (n.d.). Culturally relevant pedagogy: A primer. *Teaching Diverse Students Initiative Facilitator's Guide*, 1- 6.

Jones, A., & Baker, R. (2005). Curriculum, learning and effective pedagogy in science education for New Zealand: introduction to special issue. *International Journal of Science Education, 27*(2), 131-143.

Joseph, A., C.. Examining the perceived role of teachers' ethnic identity, empathy, and multicultural sensitivity on teacher burnout. Ph.D dissertation, Fordham University, United States-New York. Retrieved December 1, 2011, from Dissertations & Theses.

Kay, K., & Honey, M. (2006). Establishing the R&D agenda for twenty-first century learning. *New Directions for Youth Development,* (110), 63-80.

Kemp, A. T., Blake, B., Shaw, C. C., & Preston, J. (2009). A conversation about content versus pedagogy. *Curriculum and Teaching Dialogue, 11*(1, 2), 103- 119.

Kirst, M. W. (2009). High School—Transitions to Postsecondary. Retrieved January 16, 2010, from Education Commission of the States http://www.ecs.org/clearinghouse/82/15/8215.pdf.

Kitsantas, A., & Talleyrand, R. M. (2005). The use of online resources to promote multicultural competencies among K-12 preservice teachers: A model for self-regulatory learning. *Education, 125(*4), 627-637.

Klotz, M. B. (2006). Culturally competent schools: Guidelines for secondary school principals. *Student Counseling 1(1),* 11-14.

Kolb, S. M., & Stuart, S. K. (2005). Active problem solving: A model for empowerment. *Teaching Exceptional Children*, *38*(2), 14-20.

Kreber, C. (2005). Charting a critical course on the scholarship of university teaching movement. *Studies in Higher Education, 30*(4), 389-405.

Kutash, K., & Duchnowski, A. J. (2004). The mental health needs of youth with emotional and behavioral disabilities placed in special education programs in urban schools. *Journal of Child & Family Studies*, *13*(2), 235-248.

Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. *Theory and Practice 34*(3), 159-165.

Ladson-Billings, G. (1998). Teaching in dangerous times: Culturally relevant approaches to teacher assessment. *The Journal of Negro Education, 67*(3), 255-267.

Ladson-Billings, G. (2009). *The dreamkeepers: Successful teachers of African American children* (2nd ed.). San Francisco, CA: Jossey--Bass.

Leonard, J., Napp, C., & Adeleke, S. (2009). The complexities of culturally relevant pedagogy: A case study of two secondary mathematics teachers and their ESOL Students. *High School Journal, 93*(1), 3-22.

Leshem, S., & Tafford, V., N. (2006) Stories as mirrors: Reflective practice in teaching and learning. *Reflective Practice, 7(1)*, 9-27.

Lester, P. E., & Bishop, L. K. (2001). *Handbook of test and measurement in education and social sciences.* (2nd ed.). Lancaster, PA: Technomic Publishing Co.

Martinez, M., & Klopott, S. (2005). The link between high school reform and college access and success for low income and minority youth. Washington, DC: American Youth Policy Forum and Pathways to College Network. Retrieved February 21, 2010, from http://www.aypf.org/publications/HSReformCollegeAccessandSuccess.pdf.

Marzano, R. J., & Waters, T. (2009). *District leadership that works*. Bloomington, IN: Solution Tree Press.

McMillian, M. (2003). Is no child left behind "wise schooling" for African American male students? *High School Journal, 87*(2), 25-33.

Merryfield, M. M., & Kasai, M. (2004). How are teachers responding to globalization? *Social Education, 68*(5), 354-359.

Merryfield, M. (1993). This issue. *Theory Into Practice, 32*(1), 2.

Merryfield, M. (2002). The difference a global educator can make. *Association for Supervision and Curriculum Development, 60*(2*),* 18-20.

Miller, S. R., Drill, K., & Behrstock, E. (2010). Meeting teachers half way. *Phi Delta Kappan, 91*(7), 31-34.

Moore, D. D. Culturally responsive pedagogy: The impact on African American middle school students' developmental scale scores in mathematics. Ed.D dissertation, Walden University, Retrieved December 2, 2010, from Dissertation & Theses.

Morey, A. I. (2000). Changing higher education curricula for a global and multicultural world. *Higher Education in Europe, 25*(1), 25–39.

Morton, J. P. (2009). Critical reflections from a neophyte lecturer in higher education: a self- narrative from an exercise "physiologist"! *Reflective Practice*, *10*(2), 233-243.

Nero, S. (2009). Inhabiting the other's world: Language and cultural immersion for US-based teachers in the Dominican Republic. *Language, Culture & Curriculum*, *22*(3), 175-194.

O'Hearn, T. C., & Gatz, M. (2002). Going for the goal: Improving youths; problem-solving skills through a school-based intervention. *Journal of Community Psychology*, *30*(3), 281–303.

Ōmae, A. (2002). Reproduction strategies through "catch-up" cultural capital: The possibility of cultural reproduction in the context of Japan's Credential Society. *Kyōiku Shakaigaku Kenkyū*, *70*(165), 84.

Parhar, N. Culturally relevant pedagogy in practice: Teachers' conceptions of their work and its challenges. Masters Theses, Simon Fraser University, Canada. Retrieved September 17, 2012, from Dissertations & Theses.

Partnership for 21st Century Skills. (2009). Standards: A 21st century skills implementation guide. 1-7.

Pathways to College Network. (2007). *Aligning p-12 and postsecondary education*. Retrieved January 16, 2010, from The Education Resource Institute, Inc: http://www.pathwaystocollege.net/pdf/alignment.pdf.

Pedro, J. Y. (2005). Reflection in teacher education: Exploring pre-service teachers' meanings of reflective practice. *Reflective Practice, 6*(1) 49–66.

Planel, C. (2008). The rise and fall of comparative education in teacher training; should it rise again as comparative pedagogy? *Compare: A Journal of Comparative Education, 38*(4), 385-399.

Ponterotto, J.G., Baluch, S., Greig, T., & Rivera, L. (1998). Development and initial score validation of the teacher multicultural attitude survey. *Educational and Psychological Measurement, 58*(6), 1002-1016.

Popkewitz, T. S., & Fendler, L. (Eds.). (1999). *Critical thinking and critical pedagogy: Relations, differences, and limits.* New York: Routledge.

Portman, T. A. (2009). Faces of the future: School counselors as cultural mediators. *Journal of Counseling & Development*, *87* (1), 21-27.

Prawat, R. S. (1992). Teachers' beleifs about teaching and learning: A constructivist perspective. *American Journal of Education, 100* (3), 354-395.

Richards, B. E. An exploration of what happens when second and third graders in two countries interact through a technology enhanced multicultural collaboration. Ph.D. dissertation, University of South Carolina, United States - South Carolina. Retrieved September 5, 2012, from Dissertations & Theses.

Roach, A. T., Niebling, B. C., & Kurz, A. (2008). Evaluating the alignment among curriculum, instruction, and assessments: Implications and applications for researach and practice. *Psychology in the Schools , 45* (2), 158-176.

Rogers, R. R. (2001). Reflection in higher education: A concept analysis. *Innovative Higher Education, 26*, (1), 37-57.

Roux, J. L. (2002). Effective educators are culturally competent communicators. *Intercultural Education 13*(1), 37-48.

Ruggiero, V. R. (2009). *The art of thinking: A guide to critical and creative thought* (9th ed.). New York, NY: Pearson Longman.

Ryan, E. (1999). Comparing 21st century job-skills acquisition with self-fulfillment for college students. *Education, 119*(3), 529.

Schneider, C. G. (2003). Preparing students for what? School-College alignment in an era of greater expectations. *Peer Review, 5*(2), 13-16.

Schneider, S. B. (2010). Signature pedagogies for social foundations: Negotiating social foundations teaching practices in the field of education. *Educational Studies, 46,* 416–428.

Schlichting-Artur, S.. Learning to listen: Pursuing leadership strategies for achieving multiculturalism in educational administrative work environments. Ed.D. dissertation, University of Pennsylvania, United States -- Pennsylvania. Retrieved August 13, 2010, from Dissertations & Theses.

Sealey-Ruiz, Y. (2007). Wrapping the curriculum around their lives: Using culturally relevant curriculum with African American adult women. *Adult Education Quarterly, 58* (1), 44-60.

Sezer, R. (2008). Integration of critical thinking skills into elementary school teacher education courses in mathematics. *Education*, *128*(3), 349-362.

Silva, E. (2009). Measuring skills for 21st-century learning. *Phi Delta Kappan, 90*(9), 630-634.

Sinclair, A. (2005). Body and management pedagogy. *Gender, Work & Organization, 12*(1), 89-104.

Snider, V. E., & Roehl, R. (2007). Teachers' beliefs about pedagogy and related issues. *Psychology in the Schools, 44*(8), 873-866.

Somerville, J. & Yun, Y. (n.d). Curriculum and Assessment System. Report prepared for the United States Department of Education Office of Vocational and Adult Education. Washington, DC.

Stairs, A. J. (2007). Culturally responsive teaching: The Harlem renaissance in an urban English class. *English Journal, 96*(6), 37-42.

Stender, R. H.. KŪ I KE AO: Hawaiian cultural identity and student progress at Kamehameha elementary school. Ed.D. dissertation, University of Southern California, United States —California. Retrieved January 16, 2011, from Dissertations & Theses.

Stuart, L. (1999). *21st century skills for 21st century jobs*. Washington, D.C.

Taylor, B. (2009). Emotional intelligence and cultural competency: Implications for pedagogy. *International Journal of Learning, 16*(9), 311-322.

Teaching 21st Century Skills. (2009, August 7). *Issues & Controversies On File*. Retrieved March 24, 2010, from Issues & Controversies database.

The Association Of American Colleges And Universities (2006). *How should colleges prepare students to succeed in today's global economy?* Washington, DC: Peter D. Hart Research Associates, Inc.

Thurman, B. A. Teaching of critical thinking skills in the English content area in South Dakota public high schools and colleges. Ed.D dissertation. University of South Dakota, United States – South Dakato. Retrieved November 2, 2012, from ProQuest Dissertations and Theses.

Tucker, A.. An investigation of student performance in Arkansas high schools using the traditional schedule, alternate day block schedule and intensive block schedule. Ed.D. dissertation, University of Arkansas Little Rock, United States—Arkansas.

Turner, M. M.. Multicultural teacher attitudes and cultural sensitivity: An initial exploration of the experiences of individuals in a unique alternative teacher certification program. M.A. thesis, University of Notre Dame, United States – Indiana. Retrieved November 20, 2011, from Dissertations & Theses.

U.S. Department of Education. (2004). Efforts by Federal Agencies to Develop Occupational Curriculum for Entry-Level Workers (Contract No. ED-02-PO-0225). Warren, MI: Jacobs, J.

Uchida, D., Cetron, M. J., & McKenzie, F. (1996). What students must know to succeed in the 21st century. *Futurist, 30*(4), 26.

Wallitt, R. (2008). Cambodian invisibility: Students lost between the "achievement gap" and the “model minority.” *Multicultural Perspectives, 10*(1), 3-9.

Weaver, T. L.. Principals' attitudes toward the use of culturally relevant pedagogy and culturally responsive leadership in predominately African American schools. Ph.D. dissertation. Florida Atlantic University, United States – Boca Raton. Retrieved August 15, 2012, from Dissertations & Theses.

Webb, N. T. (2007). Issues related to judging the alignment of curriculum standardsand assessments. *Applied Measurement In Education , 20* (1), 7-25.

Webb-Johnson, G., & Bridgest, S. T. (2003). The effects of African American movement styles on teachers perceptions and reactions. *The Journal of Special Education, 37*(1), 49-57.

Weng, X.. Bridging cultures in a third space: A phenomenological study of teaching Chinese in American Chinese schools. Ph.D. dissertation, University of Maryland, United States – College Park. Retrieved September 2, 2012, from Dissertations & Theses.

White, S. E. (1992). Factors That Contribute to Learning Difference among African American and Caucasian Students. Retrieved March 5, 2010, from Education Resource Information Center: http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/13/53/03.pdf.

Wiggan, G. (2008). From opposition to engagement: Lessons from high achieving African American students. *Urban Review, 40*(5), 317-349.

Wilson, N. S., & Bai, H. (2010). The relationships and impact of teachers' metacognitive knowledge and pedagogical understandings of metacognition. *Metacognition & Learning*, 5(3), 269-288.

Yamamoto, Y., & Brinton, M. C. (2010). Cultural capital in East Asian educational systems: The case of Japan. *Sociology of Education, 83*(1), 67-83.

Zimmerman, L. W. (2009). Reflective teaching practice: Engaging in praxis. *Journal of Theory Construction & Testing, 13*(2), 46-50.

Zippay, C.. An exploration of the critical and reflective thinking and the culturally relevant literacy practices of two preservice teachers. Ed.D. dissertation, Tennessee State University, United States -- Tennessee. Retrieved January 3, 2011, from Dissertations & Theses.

APPENDICES

Appendix A

Teacher Multicultural Attitude Survey (TMAS)

Please respond to all items in the survey. Remember, there are no right or wrong answers. The survey is anonymous; do not put your name on the survey. Please circle the appropriate number below.

Use the following scale to rate each item.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

---

1. I find teaching a culturally diverse student group rewarding.
   1 2 3 4 5

2. Teaching methods need to be adapted to meet the needs of a culturally diverse student group.
   1 2 3 4 5

3. Sometimes I think there is too much emphasis placed on multicultural awareness and training for teachers.
   1 2 3 4 5

4. Teachers have the responsibility to be aware of their students' cultural backgrounds.
   1 2 3 4 5

5. I frequently invite extended family members (e.g., cousins, grandparents, godparents, etc.) to attend parent teacher conferences.
   1 2 3 4 5

6. It is not the teacher's responsibility to encourage pride in one's culture.
   1 2 3 4 5

7. As classrooms become more culturally diverse the teacher's job becomes increasingly challenging.
   1 2 3 4 5

8. I believe the teacher's role needs to be redefined to address the needs of students from culturally diverse backgrounds.
   1 2 3 4 5

Use the following scale to rate each item.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

---

9. When dealing with bilingual students, some teachers may misinterpret different communication styles as behavioral problems.
1 2 3 4 5

10. As classrooms become more culturally diverse, the teacher's job becomes increasingly rewarding.
1 2 3 4 5

11. I can learn a great deal from students with culturally different backgrounds.
1 2 3 4 5

12. Multicultural training for teachers is not necessary.
1 2 3 4 5

13. In order to be an effective teacher, one needs to be aware of cultural differences present in the classroom.
1 2 3 4 5

14. Multicultural awareness training can help me work more effectively with a diverse population.
1 2 3 4 5

15. Students should learn to communicate in English only.
1 2 3 4 5

16. Today's curriculum gives undue importance to multiculturalism and diversity
1 2 3 4 5

17. I am aware of the diversity of cultural backgrounds in my classroom.
1 2 3 4 5

18. Regardless of the racial and ethnic makeup of my class, it is important for all students to be aware of multicultural diversity.
1 2 3 4 5

19. Being multiculturally aware is not relevant for the subject I teach.
1 2 3 4 5

Use the following scale to rate each item.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree

---

20. Teaching students about cultural diversity will only create conflict in the classroom.
1 2 3 4 5

Do you have any thoughts or comments about this survey, or about the research topic?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Appendix B
The 20-item, Four Factor Cultural Intelligence Scale (CQS)

Instructions: Select the response that best describes your capabilities.

Select the answer that BEST describes you AS YOU REALLY ARE (1=strongly disagree; 7=strongly agree).

CQ Factor	Questionnaire Items
CQ-Strategy:	
MC1	I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds.
MC2	I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me.
MC3	I am conscious of the cultural knowledge I apply to cross-cultural interactions.
MC4	I check the accuracy of my cultural knowledge as I interact with people from different cultures.
CQ-Knowledge:	
COG1	I know the legal and economic systems of other cultures.
COG2	I know the rules (e.g., vocabulary, grammar) of other languages.
COG3	I know the cultural values and religious beliefs of other cultures.
COG4	I know the marriage systems of other cultures.
COG5	I know the arts and crafts of other cultures.
COG6	I know the rules for expressing non-verbal behaviors in other cultures.
CQ-Motivation:	
MOT1	I enjoy interacting with people from different cultures.
MOT2	I am confident that I can socialize with locals in a culture that is unfamiliar to me.
MOT3	I am sure I can deal with the stresses of adjusting to a culture that is new to me.
MOT4	I enjoy living in cultures that are unfamiliar to me.
MOT5	I am confident that I can get accustomed to the shopping conditions in a different culture.
CQ-Behavior:	
BEH1	I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it.
BEH2	I use pause and silence differently to suit different cross-cultural situations.
BEH3	I vary the rate of my speaking when a cross-cultural situation requires it.
BEH4	I change my non-verbal behavior when a cross-cultural

	interaction requires it.
BEH5	I alter my facial expressions when a cross-cultural interaction requires it.

Note. Use of this scale granted to academic researchers for research purposes only.

For information on using the scale for purposes other than academic research (e.g., consultants and non-academic organizations), please send an email to cquery@culturalq.com

Appendix C

Dear Teacher:

My name is Glenda Riley, I am a doctoral student in Global Leadership in the College of Professional Studies at Indiana Institute of Technology. I am requesting your participation in my doctoral dissertation study to investigate if teachers employ a cultural pedagogy will it enhance the teacher's Cultural Awareness and Cultural Intelligence, and whether or not it affects students' achievement and academic success in the classroom and on the Benchmark examination. This information gained from this study should be of interest to most administrators, practitioners, and counselors in education because of the importance of student achievement.

There are two surveys that I hope you will participate in, the TMAS and CQS. Both surveys are two-page questionnaires and should take approximately 20 minutes to complete. All responses will be handled anonymously and there is no need to include your name on the questionnaire. Your participation in this study is fully voluntary and you may choose to opt out at anytime. There are no for-seeable risks in participating in this study. Completing the surveys acknowledges your full consent for this study. Please keep a copy of this informed consent for your records.

If you have any questions concerning this survey please contact me, Glenda Riley at 870-329-4156 or my dissertation advisor Dr. Kenneth Rauch at 260-422-5561 x2446. If you have questions about your rights as a research subject, you may contact Dr. James B. Schaffer of the Institutional Research Board of Indiana Institute of technology at 260-422-5561 x2429.

Thank you for your time and efforts.

Glenda A. Riley, MBA
Ph.D. Candidate
Global Leadership
870-329-4156
Email: gariley01@indianatech.net

Appendix D

Dear Principal:

My name is Glenda Riley; I am a doctoral student in Global Leadership in the College of Professional Studies at Indiana Institute of Technology. I am working on my dissertation study to investigate if teachers employ a cultural pedagogy will it enhance the teacher's Cultural Awareness and Cultural Intelligence, and whether or not it affects students' achievement and academic success in the classroom and on the Benchmark examination. I hope my research will provide useful information to administrators, practitioners, and counselors in education for the importance of student achievement.

I know there are time constraints for your teachers in providing students with a quality education while adhering to academic standards. I am confident your teachers participating in this study will provide information to address various needs which are part of the teaching profession.

The surveys are accessible via the internet that I am requesting your teachers in grade 11 to complete. The informed consent letter assures that participation is strictly voluntary and opting out is possible at any time from completing the survey. I assure you that the responses from your teachers will be strictly confidential and anonymous. Teachers will be asked to complete the survey via the web link at Surveymonkey.com.
If you have any questions please feel free to contact me at 870-329-4156, or my dissertation chair, Dr. Kenneth Rauch at 260-422-5561 x2446, or Dr. James Schaffer, Indiana Institute of Technology Institutional Review Board at 260-422-5561 x2429.

Thank you for your assistance.

Glenda A. Riley, MBA
Ph.D. Candidate
Global Leadership
870-329-4156
Email: gariley01@indianatech.net