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Perception of Educational Equity and School Climate: A Case Study

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PERCEPTION OF EDUCATIONAL EQUITY AND SCHOOL CLIMATE: A CASE STUDY

by

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ABSTRACT

Although educational equity and school climate are considered critical factors to ensuring the success of every student in the 21st century (Darling-Hammond, 2010; Mitchell, Bradshaw, & Leaf, 2010; Skrla, McKenzie, & Scheurich, 2009), limited research has explored the relationship and strength of association between indicators of educational equity and school climate. Literature in these areas has largely treated these areas as separate. Using quantitative data from 24,757 students and 1,404 staff, this statistical analysis investigated whether middle school students and teachers perceive equity in school climate differently based on race, and whether a relationship between perceived equity and school climate exists. Results indicated staff and student's perceptions of equity in school climate by race, school, and year. The data revealed an absence of significant relationships based on race/ethnicity. Results also suggest that the long-term commitment of the District to the Education For the Future strategic data driven continuous school improvement process effected positive equitable systemic change. The significant need for further research exploring the relationships between perceived educational equity and school climate in order to identify indicators of measurement that promote equitable systemic strategies for the best educational results for each student are discussed.

This work is dedicated to our children - Neuza, Luke, Tatiana, Sonia, Joao, Samantha, Samuel, Madalena and Lawrence. You've made my life both spectacular and blessed.

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INTRODUCTION

In today's global world, which places the rate of change and global interconnectedness at the center of culturally relevant teaching and learning, multicultural competence is identified as the 'defining' element in education, research, training, and professional development (Lim & Renshaw, 2001). The rapidly changing demographics of the U.S. population has obliged change throughout institutions nationwide as reflected in the population changes in the educational system (U.S. Census Bureau, 2000). It is estimated that by the year 2020, over half of the U.S. K-12 student population will be students of color (Gollnick & Chinn, 2012). Access to globally stored information has steadily increased at a rate of 23% yearly over the past twenty years (Hilbert & Lopez, 2011). Furthermore, the past decade has seen the world make a fundamental transition from an industrial to knowledge-based society. The implications of such rapid change impact every aspect of society, at the core of which lies our educational system. In the new global economy, the phenomenon of change and diversity faced by educational institutions demands an international perspective and intercultural competencies as the foundation needed to allow individuals to function effectively in ever increasing pluralistic societies be it on the national or international level (Ford & Whiting, 2008; Gurin, Hurtado, & Gurin, 2002). Within the U.S. alone, demographic change is occurring at a pace that demands the transformation of the current educational system. As a result, one of the most controversial public policy issues for school districts and educators is the issue of educational equity.

According to the National School Climate Center (NSCC, 2012), over the past two years the percentage of non-white babies born yearly in the U.S. surpassed 50% while 83% of teachers remain white. As cited in Ford et al. (2008), the National Council for Education Statistics presents

data indicating that culturally diverse students attending the public school systems in the U.S. are rapidly nearing 50% of existing populations, guaranteeing that every educator will encounter a culturally and linguistically diverse student in his or her individual classroom experience. In order to ensure equitable school climates it is both a demographic and a moral imperative to address these changes (Ford et al., 2008; Menken & Antunez, 2001; Ross, 2013). Public schools, in particular, are being pressured to both close the education gap and ensure that minority children and those in poverty are served equitably and provided an education which will ensure their success as contributing citizens of a growing global society. Schools failing in this mission are at risk of losing funding and being closed. Ensuring equity is now recognized as one of the most significant challenges for educational leaders, classroom educators, and policy makers (Darling-Hammond, 2010; Duncan, 2010; Ford .al, 2008; Menken et al., 2001; Nelson, Bridges, Morelon-Quanioo, & Williams, 2007; Ross, 2013).

In his remarks to the NAACP, the U.S. Secretary of Education, Arne Duncan (2010) reminded us that, "...education is the civil rights issue of our generation…the only way to achieve equity in society is to achieve equity in the classroom" (p. x). Therefore, race and ethnicity in the current U.S. educational environment and its affect on academic achievement; the absence of culturally trained staff and curricula; and the challenges that arise in environments promoting diversity and inclusiveness of race and culture demand honest dialogue surrounding one of the most critical problems of the current educational system (Darling-Hammond, 2010; Espinoza, 2007; Ford & Malaney, 2012; King, 1991; Sue, Capodilupo, Torino, Bucceri, Holder, Nadal, & Esquilin, 2007; Tatum, 2007). This can be seen within the stance of the current Obama administration placing innovation in education as a top priority. Their educational agenda of reform has four goals aimed at ensuring high-quality education as, "…no longer just a pathway

to opportunity—it is a prerequisite to success…economic progress and educational achievement are inextricably linked, educating every American student to graduate from high school prepared for college and for a career is a national imperative" (The White House, 2013). The U.S. commitment to equity is the major determinant of the country's future (Darling-Hammond, 2010; Ford et al., 2008; Tatum, 2007; The White House, 2013).

Statement of the Problem

Educational equity is a systemic effort that encourages teachers, schools, and communities to work together to simultaneously improve student achievement, teacher development, community partnerships, and the future success of all students. Despite persistent educational reform movements, the inequalities, social justice issues, and inconsistent access to resources continue to affect educational institutions worldwide (Martinez & Kirkwood-Tucker, 2011; Sue et al., 2007). In this light, educational literature has documented four key areas that impact students' perception of their school experience to include historical legacy, structural diversity, behavioral climate, and the psychological climate. However, policies and accountability that address all these dimensions in the prevailing paradigm do not support systemic change. Systems that manage the learning mission within schools are almost non-existent (Darling-Hammond, 2010; Ford et al., 2012; Lezotte, 1996; NSCC, 2012).

Although the literature in the areas of school climate and educational equity has grown extensively, studies focusing on student and staff perception of equity practices within schools are lacking (Mitchell, Bradshaw, & Leaf, 2010). To our knowledge, there has been little documentation about school level factors that directly affect systemic change in purposeful and sustained efforts to move towards a fully equitable system (Armstrong & Anthes, 2001; Bernhardt, 2004; Gangi, 2009; Haynes, Emmons, & Ben-Avie, 1997; Klem & Connell, 2004).

Therefore, the purpose of this study was to examine perceptions of equity in the school climate of a large urban public school district. A district was identified that actively collected perception data looking at the attitudes of students and staff over a 10-year span in a proactive stance towards continuous school improvement. This study used archived data to compare students and staff perceptions at the middle school level over five of those years. The use of data for decision-making is a best practice in continuous school improvement (Todd, Lewis-Palmer, Horner, Sugai, Sampson, & Phillips, 2003). Although research has been increasingly carried out on the relationships between race, educational equality, equity, student achievement, and school climate, no single study exists which adequately covers the perceptions of equity within the school experience (Bernhardt, 2004; Darling-Hammond, 2010; Gangi, 2009; Lezotte, 1996).

Research Questions

This research examined the emerging role of equity in the K-12 school context. Taking into consideration the purpose of this quantitative study the central question examined was: Do middle school students and teachers of different races in the district perceive equity in school climate differently? The comparison of district schools was completed through the disaggregation of demographic subgroups in an attempt to determine the influence of race/ethnicity, school, and year on perception of equity and school climate.

Based on the background of the District, evidence supported in literature, and premises of recent equity scholarship, the following hypotheses are tested:

H_1: Results for students self-identifying as Black/African American and Hispanic Race/Ethnicity will show significantly lower results than students of White or Asian races.

H_2: Student perception results will show increased scores over time.

H_3: Teacher perception results will show higher scores than student perception results.

H_4: Results for the District Equity Index and School Equity Index will be consistent across independent variables.

Limitations and Delimitations

The reader should bear in mind that case studies are limited in scope and thus generalizations to larger populations cannot be made. However, as the researcher it was my hope to present theoretical supposition(s) identified in this case study in order to further encourage investigative studies on the topic at hand. The study was delimited to the collection of data in one urban school district in California over a five school-year period from the spring of 2009 to the spring of 2013. The researcher took into consideration the delimitations inherent to the use of existing data as a research design including the absence of control in types of data collected which may have directly or indirectly affected this study and the type of data collection model used.

One of the main limitations encountered was the nature of the survey instrument itself including self-reported data and response rate. In addition, research states that effective questionnaires, although using items and questions to assess the same content, can become invalid when posing questions that seek second-hand information (Bernhardt, 2004). The questionnaires used by the District have aligned many of their questions in such a way that could pose a limitation on the information included in this study. Yet another limitation may be posed by mobility rates. Schools with a minimum response rate less than 80 % for staff and students were excluded by Education for the Future.

Background

In 1995, the District, a large, K-12 urban school district began working in a collaborative educational partnership with Education for the Future (EFF), a non-profit organization specializing in systemic change and comprehensive data-driven continuous school improvement. The identified school district partnered with EFF over the past nine years, having utilized EFF perception surveys as part of their continuous school improvement efforts.

The original student and staff perception surveys that gathered the data used in this research were designed in 1991 by EFF. EFF is dedicated to helping schools stay focused on systemic improvement through the use of strategic data analysis including multiple measures (demographic, perception, student learning, and school processes) of data and predictive analysis. The response set included a five-point Likert-scale: 1-Strongly Disagree, 2-Disagree, 3- Neutral, 4-Agree, 5-Strongly Agree. Validity content was ensured during the development process and all items are based in best practice research literature and interviews with students and teachers nationally. For the first three years running, over 10,000 students were surveyed using questionnaires for grades K – 12 twice a year, in October and April in order to identify systemic change through changes in student perception. The reliability for each scale reflects the degree to which the items in a scale are internally consistent and the degree to which they tend to correlate with each other better than with other items on the survey. The reliability quotients are estimated at .93 for the student elementary questionnaires, and .86 for the staff questionnaires (AIRS, 2007; Bernhardt, 2004; Bernhardt et al., 2009).

District Background

The District is the one of California's larger urban school districts covering a geographic range of over 100 square miles, with twenty-seven elementary schools, six middle schools, and

eight high schools serving over 33,000 pre K-12th grade students (Education Data Partnership, 2013). Two of the elementary schools serve students through the eighth grade.

The District has a student population made up of 52% Hispanic, 28% White, and 13% Asian and 7% Other. In accordance with state trends, female students out number male students 60% and 40%. 44.8% of students' district-wide qualify for Free/Reduced lunch. 23.6% are English Language Learner (ELL) of which 20.2% speak Spanish as their primary language (District, 2008).

In 1992, the District engaged in a successful five-year national equity initiative demonstrating that all students in their district could successfully complete algebra and geometry, eliminating this barrier to college entrance (Murray, 2012). In 1998, the District made public their first Strategic Plan that directly addressed their commitment to two crucial topics: the use of predictive analytics to guide strategic institutional change and quality management; and the implementation of a district-wide equity policy. From 1999 to 2009 the achievement gap between the two dominant demographic populations, White and Hispanic, decreased by 36%. According to the Landsberg and Blume (2008), Hispanic students in the District are more than twice as likely to graduate high school compared to all other California districts. In addition, their dropout rate, at 14% is more than 10 points lower than the statewide figure and 15 points lower than L.A. Unified numbers. The District maintained the second highest graduation rate as an urban district in the U.S. several years running and has continued to make huge strides (District, 2012).

Like many comparable districts, the District faces a range of ongoing issues including: the increasing gap in opportunities for successful careers; graduation rates and dropout rates; performance indicators; and rapidly changing demographic student populations. They also

recognize the importance of social justice in education and include this in their Strategic Plan that focuses on equity and the highlights the challenges faced within their communities. This district acknowledges equity as critical to serving students and achieving their mission to prepare all students for the opportunities and reality of the 21st century (District, 2010; District, 2012). Their Board Equity Policy demonstrates the districts understanding of and commitment to educational equity,

> …certain groups in our society have not demonstrated academic success equitably.
> Systemic inequities…are essential causes of low academic achievement…such inequities
> leads to educational, social, and career outcomes that do not accurately reflect the
> abilities…of students...Such inequitable treatment limits future success and prevents
> individuals from making a full contribution to society. (District, 2010)

The Board is, therefore, committed to ensuring that equity and inclusion are essential principles of this school system and are integrated into all policies, programs, operations, and practices.

District Data Profile

The District is a large urban school district in California with an enrollment of over 35,000 students. As discussed earlier, the student population is predominantly Hispanic with Whites and Asians making up the 2nd and 3rd largest student groups. More than 50 different languages and dialects are spoken in district schools. The District claims 39% economically disadvantaged, 14% gifted and talented, and over 28% limited English proficiency (LEP). Of the students who are designated as LEP, 83% list Spanish as their native tongue. As cited by the District (2008, p. xix), at the K-5 level "…56% have special needs (Title I, Special Education), and 53% are from families receiving "free and reduced" lunch (socio-economically

disadvantaged)." Per Figure 1 (Eureka Award Application, 2008. p. xx), the District employs

over 2000 staff including 1500 teachers with the following ethnic breakdown:

Figure 1
District Race/Ethnicity Breakdown

Race	Certified		Classified	
	Admin	Teacher	Non-classroom	All groups
African American/Black	2%	16%	5%	3%
AmerInd/Native Amer.	2%	0%	0%	1%
Asian	2%	4%	3%	9%
Filipino	2%	1%	0.01%	2%
Hispanic	30%	16%	18%	45%
White	58%	58%	65%	37%
Multiple or No Response	4%	7%	9%	3%

With a history of innovation and leadership, the District was the first district in California

to raise graduation requirements and to publically recognize and combat systemic inequities that

could prevent students from attaining the ability to be fully participating members of the

communities in which they live. In California, in addition to many other states, legislation is

continuing to be passed requiring the inclusion of cultural competence within the educational

context (O'Hara & Pritchard, 2008). The purpose of the District partnership with EFF, and the

district-wide implementation of the program based in predictive analytics was aimed at ensuring

the eradication and prevention of all forms of discrimination, consistent policy and practice of

embracing the broad range of culturally diverse backgrounds in order to maximize educational

opportunities for all district students, and the pursuit of best practices in the effort to improve

overall student achievement (District, 2010).

The approach to empirical research adopted for this study was a quantitative, case-study

design utilizing two years of archived data from the District to compare student and staff

perceptions at the middle school level. The District, in partnership with Education for the

Future, modified the original EFF perception questionnaires as part of their continuous school improvement efforts.

Definition of Terms

Equal Access. Equal access ensures that all children, no matter their socio-economic group, have access to the school system (Education Northwest, 2013).

Equal Education Opportunity. Equal educational opportunity as a term is synonymous to educational equality, seeking to ensure the equality of provision of the same resources and treatment for each student (Bitters, 1997; Education Northwest, 2013).

Educational Equity. Educational equity includes both fair and inclusive education as defining elements. Fairness ensures that neither personal nor social circumstances will inhibit the attainment of a student's academic potential. Inclusion guarantees a minimum standard of education for each and every student (Bitters, 1997; Field, Kuczera, & Pont, 2007).

Equity Consciousness. Across varying fields of scholarship equity consciousness refers to an individual's awareness of levels of equity and inequity existent in all aspects of an organization (Skrla, McKenzie, & Scheurich, 2009).

Ethnicity. Ethnicity refers to social groups of people who define themselves as culturally different based on a common history and ancestry. They identify themselves by cultural heritage, shared history, shared identity, and cultural roots (Baumann, 2004; Wallman, Evinger, & Schechter, 2000).

Implicit Racial Stereotypes. Implicit racial stereotypes are unconsciously held attitudes and stereotypes towards categories of individuals that occur outside of our awareness and control (Godsill, Tropp, Goff, & Powell, 2014; Harvard University, 2014).

Inclusion. Inclusion in school climate rests on values and best practice that both expects and ensures that all students reach their full potential (Coulston & Smith, 2013).

Race. Race is an arbitrary concept with biological and social definitions used to describe and differentiate groups of people (Bitters, 1997).

Racial Stratification/Racism. Racism is beliefs and practices seen in actions, attitudes or institutional structures that place one group as inferior and/or subordinate to another based on skin color. In the United States, black Americans are socially stratified at birth based on their skin color. This classification lasts their lifetime. Racial stratification serves to separate, rank, and justify dominance of a certain social group (Bitters, 1997; Ogbu, 1994).

School Climate. For the purpose of this study we will adhere to the definition provided recently by the National School Climate Center (2012) who focus on the interpersonal relationships, organizational structures, and teaching and learning practices within a school that directly affect people's experiences of school life.

Systemic Equity. Systemic equity refers to the transformation of systems to ensure all students the best environments and opportunities for learning. Such systems provide the resources necessary for each student to achieve excellence, competence, independence, and self-sufficiency (Skrla et al. 2009).

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

The legacy of racism and how it has shaped the educational system are complex. Between 1972 and 2004 the number of immigrant and non-immigrant minorities present in the U.S. educational system doubled. In 2004, two in every five students were Black, Hispanic, Asian, or American Indian (Awokoya & Clark, 2008). The divide in diversity between educators and student populations is widening as the current teacher workforce and teacher educator programs continue predominantly white, middleclass, monolingual, and female.

The current state of racial equality in education continues to be controversial. Although there exist honest attempts at system reform, the issues of integrated education, funding, and equitable education seem an ever-present paradox that the U.S. has yet to resolve. This cumulative effect can take generations to turn around in terms of socioeconomic inequalities alone. While researchers work to identify factors inherent in a positive climate of racial diversity, racism continues to be one of the most divisive forces in U.S. society.

A number of authors (Ford et al., 2012; Gurin et al., 2002; Irons, 2002; Race Advisory Board, 1998; Warren, 2005) have reported that societal and racial inequities are deeply ingrained and nearly invisible, current policies and practices continue to create disparities between minority and majority groups, and the majority of the White population in the U.S. are ignorant of the advantages their skin color afford them in addition to how their attitudes and actions unintentionally discriminate against persons of color. The American Institute for Research (2007) has written extensively on this exact issue pointing out that the rapidly growing body of research clearly indicates a relationship between school climate, the level of connectedness,

equity, and student academic performance (Armstrong et al., 2001; Bennet, 1998; Darling-Hammond, 2010; Ford et al., 2009; Gordon, 1990; Klem et al., 2004).

The large body of research emphasizes a clear relationship between teacher expectations for students, and student race and ethnicity. Teacher expectations have been consistently found to be higher for White and Asian students than for African American or Hispanic students (Rubie-Davies, 2008). A more recent survey completed by MetLife (MetLife, 2009, p.3) supported literature in outlining the importance of high expectations on the part of teachers. According to this study, 86% of teachers and 89% of principals agreed that setting high expectations directly impacted student achievement. However, the same study also found that a mere 36% of teachers and 51% of principals actually believe students had the ability for academic success. Furthermore, research has shown that teachers believe students of Hispanic and African American heritage are less capable academically (Diamond, Randolph, & Spillane, 2004).

According to the 10 Regional Equity Assistant Center research (EAC, 2014), as the rigor of academic standards increase, ensuring focus on educational equity is critical. Without adequate support and training, the implementation of the Common Core will only sustain and even deepen inequities that have haunted American education. A report recently released by the Perception Institute (2014) frames the current culture of racial ambivalence facing the nation in their most recent report. In their in-depth analysis, they elude that

> …most whites, believing themselves to be non-racist, reasonably conclude that race has diminished in significance…yet people of color – particularly black people – often have a significantly different perception of the degree to which race affects their lives and opportunities. (p. 21)

Race and Ethnicity in Education

Race and ethnicity have been used synonymously in the literature. The initial categories were developed as a way to monitor equal access as regulated by federal and state law in the early 1970's. As standards have become more clearly defined, both have evolved in definition. The concept of ethnicity, although less understood, provides more insight as it refers to an individual's identification with a specific culture, attitudes, traditions, and even language (Wallman et al., 2000).

The role of education in the formation of American culture and society as regards the institution of slavery can be found at the interstices of race and learning (Ford et al., 2008; Franklin, 2002). Although contributions to the study of slavery have increased, uncertainty and disagreement still exist when looking at the relationship between slavery and education. Both King (1991) and Warren (2005) address this uncertainty focusing on the relationship between slavery functioning as an educational institution, whether education should be approached as more than schooling, and whether white privilege is an educational outcome of slavery. A number of researchers including Flagg (2005) and Ogbu (1987; 1994) have reported the ability to control the social construction of racial identity and the allocation of resources as two meta-privileges of whiteness. Meta-privilege, the invisibility or lack of awareness by whites that privilege exists, still plagues educational systems (Flagg, 2005).

U.S.-based racism has a well-documented negative impact on Black students academic experiences (Awakoya et al., 2008; Ogbu, 2004). Gordon (1990) found that although a considerable amount of African-American discourse and research have been published, it has been marginalized and had little success in effecting discourse or change in prevailing educational paradigms. In recent discussions surrounding equity issues and the implementation

of the common core standards, the Equity Assistance Center (2014) provides a concise timeline

of U.S. efforts to serve all students as seen Figure 2 below.

Figure 2
U.S. History of Legislation.

1954-1964 (first generation) – Litigation shaped civil rights, including education, starting with *Brown vs. Board of Education of Topeka, Kansas*.

1964-1983 (second generation) – Legislation redefined the civil rights landscape and education, starting with the passage of the *Civil Rights Act of 1964*.

1983-1990 (third generation) – State-driven reform efforts refocused the civil rights conversation on issues beyond access, starting with the report, *A Nation at Risk: The Imperative for Educational Reform.*

1990-2000 (fourth generation) – State and national government reform efforts focused on how public education should support excellence for all, starting with the 1994 *National Governors Association* meeting on education challenging the country to look forward to new century.

2001-2011 (fifth generation) – This generation was characterized by national discourse on educational and civil rights and by passage of the *No Child Left Behind Act*, which required public schools to be accountable for disaggregated student-achievement outcomes.

2012-present (sixth generation) – The current generation started with the Obama administration's Blueprint for Reform, outlining the re-envisioned federal role in education, and with adoption of the Common Core. It is being shaped by a focus on increased curricular rigor, on ensuring that students graduate from high school ready for success in college or postsecondary job training, and on effective leadership and quality teaching to ensure that students are successful.

In her work on dysconscious racism, King (1991) specifically addresses findings

identified in the literature providing three typical explanations for inequity including:

a) the results of slavery and U.S. history; b) denial or lack of equal opportunity for African

Americans; and c) racism and discrimination as a norm within the US societal framework. Over

a decade later, Franklin (2002) joined the dialogue claiming that the reaction of the black

community to continued discriminatory practices such as double taxation and the movement

towards collective resources of cultural capital has varied. He argues that the major role of

cultural capital due to two centuries of inadequate funding; separate and unequal; denial of group

access to quality education as the cornerstone of dominant group oppression; the historical lack

of equalization of funding for school systems that are predominantly Black; and the mobilization of the Black community as a whole has resulted in both academic failure and high dropout rates among African American students.

A considerable amount of research has been published on the history of achievement gaps between White students and students of color stateside. A recent American College Testing (ACT, 2012) report highlights the continued gaps in academic growth across African American and Hispanic students, two of the largest racial/ethnic groups in the United States (see Figure 3). According to these findings, "Asian and White students start with the highest scores and grow at the fastest pace; African American and Hispanic students start with the lowest scores and grow at the slowest pace." (ACT, p. 2)

Figure 3
ACT Average Scores by Race/Ethnicity.

Figure 1: Average EXPLORE, PLAN, and ACT Scores, by Race/Ethnicity
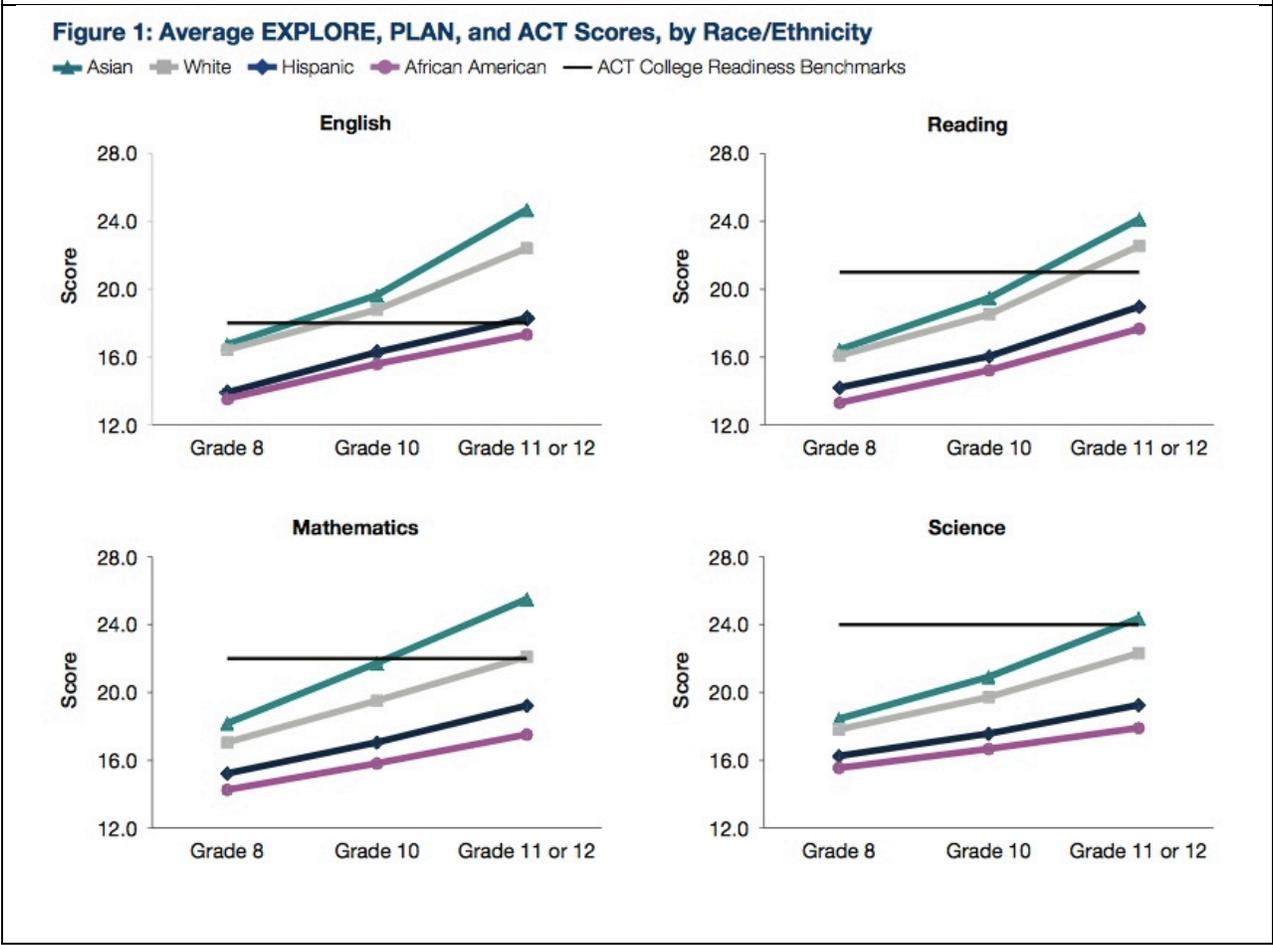
Ford et al. (2012) claim that White privilege continues to play the instrumental role in shaping access to meaningful learning for all students of color. While previous studies have provided comprehensive descriptions and analyses of accepted theories focused on the educational experiences of Black students, existing theories and research are striving to ask the critical questions necessary to widen understanding of the issues surrounding their experiences.

Racial/Ethnic Pedagogy

Ogbu (1994) introduces the concept of racial stratification in the educational system that affects African Americans through denial of equal access and equal sources, treatment and

perception in schools, and the response and perceptions to the system. Obgu's (1987) theoretical

and historical approach was contrary to findings proposed by earlier educational research

paradigms indicating cultural deprivation as the basis for minority students' failure in the U.S.

educational system. The major tenets and typologies of Ogbu's cultural-ecological theory is well

documented and cited throughout literature. Ogbu's framework (Foster, 2004) for a clearer

analysis and understanding of the vast differences in academic performance and adjustment

problems facing minorities used the following prerequisites as a basis for understanding: a) types

of minority groups (autonomous, immigrant and involuntary minorities); b) types of cultural and

language differences inherent in minority identity (primary or secondary); c) societal and school

forces; and d) community forces (instrumental, symbolic and relational factors). Over the years,

Ogbu (1983; 1987; 1990) has concluded that basic to improving school success and social

adjustment is the recognition and removal of obstacles experienced by minority groups.

According to Ogbu, (as cited in Erickson, 1987) culturally responsive pedagogy, although

effective in many contexts, is not the complete solution, but rather a transformation of society in

general is required. Ogbu's (1994) claim remains constant in that he insists that race, not socio-

economic level, is the main determinant of life success. Racial stratification creates barriers in

the opportunity structure, which begins, in educational access and policies.

More recently, a study completed by Awakoya et al. (2008), presented emerging

contradictory findings highlighting limitations of predominant theories such as Cultural

Ecological Theory (CET); Culture-Centered Theory (CCT); and Critical Race Theory (CRT).

Their discussion covers CET limitations such as the tendency for oversimplification of minority

experiences, a focus on minority versus white relations, and overlooking critical interracial and

intra-racial issues. CCT limitations were three pronged; the difficulty in defining a unified

vision of culture; the requirement that teachers understand and are skilled in critical reflection; and finally a lack of consideration of the sociopolitical context in which culturally responsive teaching must occur. Poignantly phrased, Awakoya et al. (2008) poses the pivotal question of how many white, middle class, female educators are experienced, confident and capable of identifying these controversial issues of racism within racist institutions? This mirrors Erickson's (1987) suggestions that educators must accept responsibility towards becoming conscious of and working towards changing practices, processes, and symbol systems in educational settings.

The need for further investigation of the role educators' play when balancing effective teaching and students worldviews is supported throughout literature. This is further supported by Ladson-Billings (2008) in her review of the current state of educational inequity in the U.S., suggesting a change in discourse from the achievement gap to education debt through a focus on historical, economic, sociopolitical, and morality as four underlying variables. Donnor's (2011) discussion reminds us that race, in addition to ethnicity, is essential as a diagnostic tool in the assessment and promotion of equity in educational institutions because it is not only historical, but also relational. Until we address the systemic issues, which both structure and reproduce inequality in our systems we will remain at an impasse.

Policy Mandates

Desegregation

As discussed earlier, the face of racism and systemic oppression left its marks on the educational system in the U.S. as desegregation brought with it huge barriers for African American and more recently, Hispanic communities, including language barriers, socio-cultural incongruence, and low expectations for students. Desegregation was one of several policy

attempts aimed at trying to correct ineffective and underlying systemic issues. In order to ensure equal access to educational inputs, racial desegregation seemed the answer to constitutional discrepancies. However, even years later Bell (1992) proposes that school desegregation was nothing more than a strategic foreign policy maneuver to support dominant class economic interests within governing institutions at the time. Although a popular symbolic move, it did not address the underlying systemic issues. This perspective is supported in a recent article by Donnor (2011) who presents a compelling argument in his review of a high Court decision on desegregation and inequality. His depiction of the reality of inequity in education faced by students of color as secured by the structural reality of institutions is repeated throughout literature.

Multicultural Education

The second phase of the civil rights movement, the implementation shifted from the legislated mandates of civil rights to the model of acceptance and appreciation known as multiculturalism or cultural diversity (White, 1994). Multicultural education is a national phenomenon regulated by the particular needs of individual countries. Noel (2008) clarifies that the term 'multicultural education', although historically a source of both confusion and controversy, focused specifically on the creation of national policies intended to prepare students to live and function within multicultural societies. The underlying goal was to implement individual, school, and societal change. Aldridge, Calhoun and Aman (2000), supported by other researchers (Bennett, 1998; Pattnaik, 2003), presented a concise definition of multicultural objectives including designing programs to facilitate cross-cultural understanding, equal opportunity for all in the educational setting, and respect and support for equity among diverse groups.

Hill (2007) presents a coherent review of the relationship between multicultural and intercultural education, clarifying the changes in the multicultural educational movement within the U.S. In early 1900s the first U.S. national policy on multicultural education was established directed at the assimilation of immigrants into mainstream U.S. culture. Until the early 1960s and the civil rights era, multicultural education seemed to be unchallenged in both political and educational arenas. This focus changed overnight from the assimilation of immigrants to the social integration of marginalized or minority groups. Fox and Diaz-Greenberg (2006) describe the approach used to accomplish the overall goal as evolving through three distinct phases including assimilation, social integration, and more recently, pluralism. Although the original goal directed at empowering students with the knowledge and skills necessary to function in an increasingly diverse world remained consistent, the intent of this second wave of multicultural education consciousness was geared towards the restructuring of educational institutions.

On one hand, multicultural education is considered a venue to improve race relations, and many agree that cultural diversity is already acknowledged and embraced by U.S. society (Aldridge et al., 2000; Bennett, 1998; Pattnaik, 2003). Aldridge et al. (2000) suggest that multicultural education is divisive for the country, is an anti-western movement, is unnecessary in mono-cultural or bicultural communities, and finally that the majority of individuals identify with one single culture.

Grounded in pluralism, conventional multiculturalism attempts to identify and focus on the inclusion of those individuals historically suppressed or oppressed by mainstream dominant U.S. culture (Weinshenk, 2008). In this case, multiculturalism is an attempt at reformation rather than transformation of educational contexts, leaving out social justice and distancing individuals from communities. She goes on to argue along the same lines contending that critical or

postmodern multiculturalism is united in the effort to "...eradicate and dismantle systems of oppression" (Weinschenk, 2008, p. 14). Critical multiculturalism, on the other hand, applies critical theory with the goals of identifying oppressed and marginalized groups and dismantling dominant systems of thought. Along similar lines, Pattnaik (2003) concludes that although the original context was intended as a philosophical guide to be used in developing programs and making curriculum decisions, these practices were ineffective in that they left out direct student involvement, self-analysis, and critical reflection.

Noted scholars throughout multicultural education research stress that in a nation as culturally diverse as the U.S., cultural consciousness and competence on the part of educators is critical. In 2005, an international education congressional resolution emphasized U.S. priority and efforts to reposition themselves as leaders on the world scene (Parker, 2003). Ford et al. (2008), noted scholars in the field of multicultural education, stress that in a nation as culturally diverse as the U.S., intercultural competence on the part of educators is critical. They view the role of multicultural education as a reform movement as pivotal in the fight for equality and social justice for youth. Until a paradigm shift occurs between modern and postmodern multiculturalism, educators will continue to struggle with little success (Asher, 2005; Awakoya et al., 2008; Bennett, 1998; Ford et al., 2008; Pattnaik, 2003; Weinschenk, 2008).

Educational Equity and Equality

Educational inequality in the U.S. is well documented (as cited in Ladson-Billings, 2008; Irons, 2002; Tatum, 2005). Both Irons (2002) and Fields-Smith (2005) identify the post desegregation era as a continuous struggle, revealing the increasing difficulty educational institutions are confronting as students of color attend either predominantly minority or nonwhite schools. Although more than sixty years have passed since the U.S. Supreme Court's landmark

decision, racism is a normalized part of daily life for people of color and continues to haunt the U.S. Cross-cultural competence continues to exist in the margins of the U.S. national educational system (Bennett, 1998; Colvin-Burque, Davis-Maye, & Zugazaga, 2007; Ford et al., 2012; Gurin et al., 2002; McDonough, 2008; Pattnaik, 2003).

Although the scholarship on educational equity has grown tremendously over the past twenty years, the relationship between equity, equality, and social justice continue to haunt collegial discussions. While researchers and laymen agree that equal educational opportunity should be an inherent 'right', they become divided when the discussion turns to definition, and meanings. Jencks (2008) finds both public policy and education arenas in agreement regarding the interchangeable use of the terms equity and equality, and suggests that both concepts continue to be surrounded by confusion and misunderstanding.

Espinoza (2007) clarifies the notions of equity and equality while encouraging colleagues to work towards a concise synthesis of research. He states that the concept of equality, as we know it today, grew out of the late 1700s contending sameness in treatment of all people as a fundamental right. Equal opportunity in education thereby ensures equality of resources and treatment for each student at the starting gate. According to Espinoza, the concept of equality should not include the expectation for identical outcomes, although equity in itself demands that different outcomes should never be a result of differing socio-economic power.

Ladd and Loeb (2007) evaluate equity as access to equal quality schools, equity as equal educational opportunity, and equity as adequacy. Of particular interest in this discussion is their focus on educational outcomes versus school inputs and a proposed realistic expectation of equity as one that seeks equality of average outcomes across demographically defined groups of students. This argument allows interplay and consideration of factors outside of the schooling

components.

The growing body of research has, however, begun to provide commonly agreed upon stages in the educational process. In his attempt to clarify the conceptual dilemma that exists between equality and equity, Espinoza (2007) outlines features including access, resources, survival, output, and outcomes. Although equal access ensures that all children, no matter their socio-economic group, have access to the school system, equal access in itself does not ensure either equality or equity. Particular attention should be devoted to the allocation of resources, systemic issues, and school processes and practices as the primary areas of focus when investigating equity in the educational realm. In a position paper presented by the Equity Assistance Center Directors (2014, p. 4), they argue that unless the following six goals of educational equity are addressed in the implementation of Common Core standards, gaps in achievement among students of color will continue to widen. The goals include:

- Comparably high academic achievement and other positive outcomes for all students on all achievement indicators

- Equitable access and inclusion

- Equitable treatment

- Equitable resource distribution

- Equitable opportunity to learn

- Shared accountability

Field et al. (2007) explain that educational equity takes the concept of equality further by focusing on the implementation of planned and systemic strategies providing individual students with the needed interventions that will, optimally, increase the possibility of equality of

educational attainment. Skrla et al. (2009) work supports the urgency of embracing the concept

of systemic equity, identifying the critical components of educational equity as:

> … the educational policies, practices and programs necessary to (a) eliminate
>
> educational barriers based on gender, race/ethnicity, national origin, color,
>
> disability, age, or other protected group status; and (b) provide equal educational
>
> opportunities and ensure that historically underserved or underrepresented
>
> populations meet the same rigorous standards for academic performance expected
>
> of all children and youth. (p. 10)

A number of researchers (Education Northwest, 2013; Espinoza, 2007; Field et al., 2007;

Jencks, 1988; Secada et al., 1995; Secada, 1989) have reported that the key concepts to be

considered in looking at equity are fairness and inclusion. Inclusion, in this study, refers to the

minimum standard of education for all. Fairness implies that the educational success of each

student should not be hindered by any demographic such as gender, race, ethnic origin, or socio-

economic status. Uline and Tschannen-Moran (2008) indicate the need to focus on the

complicated and varying interplay between the physical and social environments of schools that

directly influence individual student group outcomes. According to Diamond et al. (2004),

> …teachers' beliefs about students' abilities to be highly academically successful tend to
>
> be unevenly distributed based on students' race and family income status…this pattern is
>
> particularly troubling because teachers' expectations are a more powerful influence on
>
> African American students than they are on whites. (p. 14)

Ross's (2013) work on school climate and equity with the NSCC claims, "Equity is

intrinsic to all aspects of school climate work. It is not a separate issue." (p. 1) Although the

controversy surrounding the equality-equity debate in terms of definition, analytical model, and

systemic resolution are vast and far from resolved, based on this perspective the investigation and implementation of strategies towards positive school climates mirrors equity efforts.

School Climate and Equity

Researchers have been studying school climate for decades. Although a large number of initial studies on school climate reform originated in the U.S., interest worldwide has rapidly increased and studies around the globe support the significant role school climate plays in the future success of all students. Extensive research has highlighted the core components of school climate (Hoy & Tartar, 1997; Hoy & Miskel, 2001; McIntyre, 2004). As defined earlier by the National School Climate Center (2012), school climate refers to the attitudes of staff and students toward their school experiences, patterns of school life, and reflects the norms and values held institution wide. Therefore, school climate refers to the overall culture of any educational institution comprised of forms of interaction between staff and students that demonstrate the underlying beliefs, attitudes, and values held.

In the 2012 School Climate Research Summary, Thapa, Cohen, and Alessandro (2012) discuss the power of school climates. Positive school climates clearly play a role in student self-esteem, overall emotional and mental health, enhanced motivation to learn, and reducing the negative influence socio-economic status can have on student achievement. Research also demonstrates a clear relationship between school climate, school connectedness, absenteeism, academic achievement, student behavior, and civic engagement. The quality and consistency of interactions in any school community plays a critical role in the social, cognitive, and psychological development of all children. Thapa et al. (2012) also present a consolidated list of school climate measures including five key areas of focus; physical and emotional safety, relationships within the school environment, teaching and learning methodology, physical

environment, and the processes of school improvement. Whereas these measures have been identified and supported in literature, the number of studies investigating school climate measures is few and consensus lacking among scholars. More specifically, the lack of consensus among educational professionals in implementation strategies, measurements, and models for improvement demands rigorous and sound research.

Over the past decade the NSCC (2012) has focused on school climate reform in order to encourage the improvement of learning climates in schools through advocacy and policy, measurement and research, and educational services that translate research into relevant practice. Their research overwhelmingly indicates that in order to build a positive social-emotional climate within an entire school, it is necessary to actively involve all members. An earlier investigation completed by Stewart (2003) focused on school culture, the organizational structure, and social milieu as predominant elements of school climate. Within these three elements school culture represents unwritten beliefs and values and how they manifest themselves in interactions between students and staff; the organizational structure representing class size and student teacher rations; and the social milieu spotlighting the attention to the relationships between student and staff demographics to also include teacher experience and training. Although Stewart's research looks specifically at misbehavior and school climate, his findings highlight the importance of how culture plays into social milieu and interactions.

Skrla et al. (2009) work on equity consciousness and equity audits outlines four primary beliefs that have been shown by research to raise academic achievement for all students and close achievement gaps among students from different racial and socio-economic groups. These beliefs are that *all* children are capable of high levels of academic success; that the primary

responsibility for learning lies with the staff; and that in order to eliminate the gap, educators must be willing to change traditional practices.

School climate is one of the most important tools of measurement when looking at equity. Organizations (NSCC, 2012) research findings on school climate issues and measures of proactive change determined vast discrepancies between existing empirical research on positive school climate, and measures of implementation seeking change within schools. In a study completed by Mitchell et al. (2010) comparing teacher and student perceptions of school climate, highlight the importance of assessing both teacher and student perceptions when looking at school and racial climate as a determinant of improved academic performance. Interestingly, they found that teachers focus on classroom-level factors (management, behavior), while students are sensitive to school-level factors (relationships, mobility).

Recently, there has been a surge in interest and research in the place of equity in school climate and system-wide factors. According to Cohen, Pickeral, and McCloskey (2009), this lacuna between school climate, research, policy, practice and teacher education is socially unjust and a violation of children's human rights. In accordance with the latest report from the NSCC (Ross, 2013) reporting that school climate and equity are one and the same, the need to expand previous research by investigating indicators of equity within the school climate is timely.

Data-Driven Strategic School Improvement

The use of questionnaires is an effective tool used to collect perceptions of survey groups that can provide invaluable information regarding attitudes, values and beliefs about all aspects of an educational environment. A valid questionnaire focused on school continuous improvement follows a process including determining purpose, content, and pilot, collection of

data, analysis of results, effective reporting of results, how and when to share results, and the use

of results for continuous improvement (Bernhardt, 2004).

In order to ensure educational success for students of color and encourage systemic

change, educators must confront institutional practices that impede equitable education for all

students (Darling-Hammond, 2010; Lezotte, 1996; Martinez et al., 2011). According to Lezotte

(1996), this is the most critical challenge for schools and districts. The literature supports

including demographic data, perception data, and school process data as supporting best practice

efforts. Perception and process data, in particular, inform decision making that leads to

improved school climate, equity, and student connectedness (Bernhardt & Geise, 2009; Ross,

2013).

In her work on strategic data driven systemic change and continuous school

improvement, Bernhardt (2004) discusses multiple measures of data that allow educators to

predict how to best meet the learning needs of all students. In a recent study, the Center for

Advancement of Racial and Ethnic Equity (2010) suggests that engagement in data-driven

inquiry, promoting intensified awareness of racial and ethnic inequalities in individual schools,

and the acceptance of personal and collective responsibility of educators for ensuring equitable

education provides the missing framework needed. Although districts and individual schools

have distinctly different cultures, each has similar data sets that can provide the ability to predict

potential outcomes, thereby contributing to the ability to strategize for both prevention of failure

and increased success among all student populations.

In order to learn, students need to feel their teacher cares about them, feel safe, that they

belong, and that there are choices, fun and freedom in their learning environment (as cited in

Bernhardt et al., 2009; NSCC, 2012). According to the NSCC, "a comprehensive assessment of

school climate includes major spheres of school life such as safety, relationships, teaching and learning, and the environment as well as larger organizational patterns" (NSCC, 2012, p. 1). The items EFF uses in the perception surveys are based in research about what is required in a school setting in order for students to learn. The items on the *student* version of the survey investigate perceptions in the dimensions of safety, teaching and learning, social support, respect for diversity, and respectful climate (see Appendices G and H).

CHAPTER 3

METHODOLOGY

Introduction

The purpose of this quantitative study was to examine significant relationships in the perception of equity and school climate through the use of archived data from a questionnaire designed as part of a comprehensive school improvement process. This study used a MANOVA statistical analysis to explore whether middle school students and teachers perceive equity in school climate differently based on race, and to ascertain whether a relationship between perceived equity and school climate exists. Additional analyses were completed using ANOVA and posthoc tests in order to further explore the correlations of each item with race, school and year. The researcher sought to document and hypothesize on the relationship between perceived equity, school climate, and race in a large urban school district located in California.

This study used two years of archived data from the District to compare student and staff perceptions of equity in school climate at the middle school level. The District, in partnership with Education for the Future (EFF), refined and utilized EFF perception surveys as part of their continuous school improvement efforts. The comparison of district schools disaggregated demographic subgroups including school, year, and race. Data collected included student and staff online surveys for the years of 2009 and 2013, and school demographic data.

Setting and Participants

The population included in this study included six suburban middle schools comprised of 29,886 students of which 14,859 were female and 15,027 were male in grades six, seven, and eight along with 1,404 staff. Students and staff were surveyed during the spring of 2009, 2010, 2011, 2012, and 2013 employing a district-modified version of the Education for the Future

School Climate Survey. This study used the spring data for the years of 2009 and 2013. Schools represented diversity in size, racial composition, and socio-economic status. Only staff and student participants who identified a single race were included in the final analysis.

Research Design and Nature of Data Set

This quantitative study examined whether a relationship between several variables existed. The units of analysis included staff and students at six middle schools in a large Californian urban school district. This study used appropriate statistical procedures to examine existing perception survey data. The middle school students completed the secondary school online questionnaire consisting of 47 statements eliciting their perception of the norms of school climate measures including a caring school climate, high expectations, equity, academic engagement, connection, academic support, and future orientation. Staffs completed the staff climate online survey, which consisted of 71 statements. The final questions on the surveys asked for demographic data including; (a) gender, (b) race/ethnicity, (c) grade level. The student and staff perception questionnaires are included in Appendix B and C.

The researcher established a research based school equity index (SEI) of 25 selected questions (Appendix D) in order to allow a focused analysis of the relationship among the dependent variables. The Equity Index questions were selected based on the existing District climate survey (DEI) dimensions index (Appendix E), NSCC research on equity in school climate and the research reviewing question selection provided by EFF (Appendix F). In addition, an analysis and cross comparison of the questions identified by the District Climate Survey Dimension as measurements of equity in their district (See questions 1 – 5 in Appendix E) was completed.

The original data uses a five-point Likert scale and is collected into File Maker Pro,

which provides line graphs to note thematic joins between the questionnaire items and the disaggregation of key demographic subgroups tied back to school demographic data to note differences. In quantitative research, the researcher must isolate and identify variables and relate them causally to determine relationships (Huck, 2012). In order to present powerful and concise analyses and discussion, this study used a two by two Analysis of Variance (ANOVA) to identify interactions between the selected independent and dependent variables by exporting the data into Excel for investigation (Huck, 2012). The ANOVA design provides a solid design structure allowing for comparison across multiple variables. The two identified independent variables include the constituents (students and staff) and race/ethnicity (African American/Black, Hispanic, Asian, and White). The researcher will also adjust for other individual-level characteristics including school and year.

Operationalization of Variables

Independent Variables

Constituents – made up of district staff and students.

Race and Ethnicity – include the federally mandated reporting categories including African American/Black; White; Hispanic; Asian and Other.

Schools – made of up 6 district middle schools.

Years – includes the years of 2009 to 2013.

Dependent Variables

District Equity Index (DEI) – a scale created by the district combining five survey items.

Table 1
District 5-Item Equity Index

Field Name Values	Survey Question
cc	Students are treated equally when they break school rules.
ff	I feel like I am a part of this school.
uu	People of different cultures, races or ethnicities get along at my school.
vv	Adults at my school respect my race, ethnicity or religion.
ww	I respect the beliefs of people who are of a different race, religion or culture.

School Equity Index (SEI) – the score on a scale created by combining 25 survey items.

Table 2
School 25-Item Equity Index

Field Name Values	Survey Question
a	Students at this school are friendly.
b	Students at this school treat each other with respect.
c	My teachers care about me.
d	My teachers listen when I have something to say.
e	My teachers tell me when I do a good job.
f	My teachers give me individual help when I need it.
g	I feel comfortable asking my teachers for help.
h	My teachers help me catch up if I'm behind.
i	My teachers notice if I'm having trouble learning something.
j	My teachers treat me with respect.
k	School administrators treat students with respect.
l	Campus supervisors treat student with respect.
q	I am recognized for good academic work.
r	I am recognized for good behavior.
t	I have to work hard to do well in school.
u	The work in my classes is engaging.
w	I am encouraged to participate in accelerated/advanced courses.
x	My teachers expect me to do my best.
y	My teachers set high standards for achievement for all students.
z	My teachers show how classroom lessons are helpful to me in real life.
cc	Students are treated equally when they break school rules.
ee	It is important for me to participate in activities outside the classroom.
ff	I feel like I am part of this school.
jj	My school gives me the academic support I need
bbb	I feel I am a successful student.

Procedures

The collection of survey data was a structured and streamlined process converting responses into raw data while simultaneously verifying reliability (Bernhardt et al., 2009; Nardi, 2006). This data collection model has significant ramifications for educational institutions resources. In collaboration with EFF, the District made several modifications to the original EFF questionnaires. Student and staff surveys are completed online in May of each academic year. Surveys were completed online and housed on a server that minimizes costs and requires limited administrative oversight. Survey submission is completely confidential and anonymous - with the responses for all questions and demographics optional. According to the District, the student and staff perception surveys were all administered online at each individual school, so they were able to achieve nearly 100% results over the 5-year period. The data is stored on a secure third party server (survey monkey) and the files provided to the researcher will be destroyed after the results have been tabulated.

Research Ethics

The approval of the George Fox University Institutional Review Board (IRB) for this research project was not required. The researcher obtained institutional approval for access to and use of preexisting data collected by Education for the Future (EFF). As the data was provided anonymously, the anonymity and confidentiality of participants was guaranteed. Each participant school was issued a pseudonym for the reporting of all data and analysis. EFF signed a letter of consent describing the nature and purpose of the study (Appendix A).

The data used in this study is stored on a secure third party server. All files including the EFF consent form, site documents, perception survey results, demographic data and student

achievement data was destroyed by the researcher after results were tabulated and the dissertation successfully completed.

Role of the Researcher

The researcher in this study pursued this investigation in an ethical and professional manner, following all policies and procedures of the George Fox University Human Subjects in Research Committee. The researcher satisfied committee requirements and preserved the integrity of EFF, a highly respected academic data analysis organization. The researcher, as a professional educator, previously implemented of a U.S. Department of Education dissemination grant on Data-Driven Continuous School Improvement in partnership with EFF. In addition, the researcher has implemented the EFF surveys and process with several schools spanning three continents. The researcher was the principal investigator of this study.

Potential Contributions of the Research

Educational equity knowledge and practices in public schools have evolved over time and require a comprehensive approach. A review of the literature reveals a paucity of equity oriented research and scholarship that will drive effective equity strategies that are planned and systemic. There is a significant need for further research exploring the relationships between perceived educational equity and school climate in order to identify indicators of measurement that promote the real possibility of equality of educational results for each student and between diverse student groups.

CHAPTER 4

RESULTS

Introduction

This chapter examines the relationship between school climate and the perception of

equity among students and teachers. Pre-existing quantitative survey data were analyzed using a

Multivariate Analysis of Variance (MANOVA) to identify interactions between the selected

independent and dependent variables. Additional analyses were completed using ANOVA and

posthoc tests in order to further explore the correlations of each item with race, school and year.

The findings respond to the research question posed in the first chapter: Do middle school

students and teachers of different races in the District perceive equity in school climate

differently? The findings also discuss the initial hypotheses presented in Chapter 1.

Of the original five-year student data set, 774 students did not indicate their race and

were removed from the study. The number of students identifying with 1 racial group totaled

24,757, students identifying with two racial groups totaled 3, 509 and so forth (see Table 3). The

final MANOVA analysis was limited to the first and last year of data (2009 and 2013) with a

total of 9,675 students.

Table 3
School and Race Identifier Cross Tabulation for Students.

		Number of Racial Group Identifiers							Total
		.00	1.00	2.00	3.00	4.00	5.00	6.00	
School	School 1	132	3219	291	71	14	5	7	3739
	School 2	141	4633	754	189	33	13	44	5807
	School 3	140	4208	471	134	25	3	8	4989
	School 5	82	4751	615	120	25	10	20	5623
	School 6	170	3897	679	194	39	8	16	5003
	School 8	109	4049	699	162	46	10	32	5107
Total		774	24757	3509	870	183	49	127	30268

Fisher's Procedure

Using Fisher's procedure (Huck, 2012) a MANOVA was conducted to examine the effects of race, school, and year on the 5-item and 25-item Equity indices. The MANOVA results indicated the existence of some significant group differences. The MANOVA was followed by two ANOVAs using the 5-item District Equity index (DEI) as the dependent variable for one ANOVA and the other using the 25-item School Equity index (SEI) as the dependent variable focused on the first and last year of data (2009 and 2013). When significant differences emerged in these two-way ANOVAs, the effects were investigated further using one-way ANOVAs and post hoc tests.

Cleaning the Data

Only participants who indicated a single race category were included in the final analysis. Missing data were replaced by the mean of each item before the 5-item and 25-item Equity

indices were calculated. The number of missing data for each item is shown in Table 5. The rate

of missing data is extremely low. There were no significant patterns of missing data identified as

a function of race, school, or year.

Table 4
Final Analysis – Posthoc ANOVA Demographics

Race			School						Total N
			School 1	School 2	School 3	School 5	School 6	School 8	
AFRICAN AMERICAN /BLACK	Student	2009	12	22	30	15	41	38	158
		2013	12	19	26	18	36	29	140
	Total		24	41	56	33	77	67	298
AMERICAN INDIAN	Student	2009	5	5	9	7	0	7	33
		2013	3	6	7	10	5	1	32
	Total		8	11	16	17	5	8	65
ASIAN	Student	2009	37	98	41	412	121	45	754
		2013	41	118	40	400	82	31	712
	Total		78	216	81	812	203	76	1466
CAUCASIAN	Student	2009	21	392	72	336	196	274	1291
		2013	23	351	68	294	181	217	1134
	Total		44	743	140	630	377	491	2425
HISPANIC	Student	2009	475	296	608	98	346	428	2251
		2013	497	270	665	82	356	210	2080
	Total		972	566	1273	180	702	638	4331
OTHER	Student	2009	123	90	89	127	88	64	581
		2013	84	82	67	123	83	70	509
	Total		207	172	166	250	171	134	1089
TOTAL	Student	2009	673	903	849	995	792	856	5068
		2013	660	846	873	927	743	558	4607
	Total		1333	1749	1722	1922	1535	1414	9675

Table 5
Missing data for each District Equity Index and School Equity Index Scale Item.

	Variable Name	N of Missing Values	Percent Missing Values
1.	a	8	.08
2.	b	19	.20
3.	c	85	.88
4.	d	48	.50
5.	e	57	.59
6.	f	58	.60
7.	g	59	.61
8.	h	59	.61
9.	i	78	.81
10.	j	86	.89
11.	k	59	.61
12.	l	71	.73
13.	q	109	1.13
14.	r	108	1.12
15.	t	115	1.19
16.	u	59	.61
17.	w	94	.97
18.	x	52	.54
19.	y	81	.84
20.	z	77	.80
21.	cc	111	1.15
22.	ff	77	.80
23.	gg	96	.99
24.	bbb	105	1.09
1.	E5_cc	111	1.15
2.	E5_gg	96	.99
3.	E5_uu	109	1.13
4.	E5_vv	50	.52
5.	E5_ww	46	.48

Findings

    In response to the original research question, outcomes indicate that race did not have an affect on student or staff perception of equity as measured by both equity indexes. The results for each hypothesis are outlined below:

    H₁: Results for students self-identifying as Black/African American and Hispanic Race/Ethnicity will show significantly lower results than students of White or Asian races.

    F₁: Black/African American and Hispanic student results were consistent with White and Asian student results.

    H₂: Student perception results will show increased scores over time.

    F₂: Student perception scores increased significantly over time.

    H₃: Teacher perception results will show higher scores than student perception results.

    F₃: Teachers perception result scores were higher than student scores.

    H₄: Results for the District Equity Index (DEI) and School Equity Index (SEI) will be consistent across all independent variables.

    F4: The DEI and SEI responses were consistent for constituents. Race, school and year outcomes demonstrated inconsistencies across indices.

MANOVA: Initial Exploration and Results

    The means and standard deviations for the two Equity indices as a function of race, school, and year are shown in Table 6. Notice that the mean scores for American Indians are lower than for other groups. Additionally, means for 2013 are consistently higher than for 2009.

Table 6
Posthoc ANOVA: Equity as a Function of Race/Ethnicity.

School	Year	African American			American Indian			Asian			Caucasian			Hispanic			Other		
		M	SD	N	M	SD	N	M	SD	N	M	SD	N	M	SD	N	M	SD	N
EQUITY.5																			
School 1	2009	19.83	2.17	12	17.20	4.15	5	17.89	3.31	37	17.29	3.04	21	17.77	3.66	475	17.89	3.40	123
	2013	18.86	3.73	12	20.00	2.65	3	18.26	2.76	41	18.13	4.37	23	19.08	3.40	497	19.35	3.30	84
School 2	2009	17.67	4.35	22	14.00	6.04	5	18.35	3.22	98	18.13	3.61	392	17.15	3.96	296	17.93	4.17	90
	2013	18.30	3.93	19	16.50	2.74	6	18.24	3.04	118	18.23	3.21	351	18.36	3.82	270	18.38	3.33	82
School 3	2009	17.83	3.11	30	17.44	7.75	9	18.13	3.24	41	16.75	4.06	72	17.81	3.67	608	18.27	3.77	89
	2013	19.06	4.39	26	18.71	2.50	7	18.31	2.76	40	18.72	4.03	68	19.39	3.18	665	19.48	3.15	67
School 5	2009	18.24	4.02	15	18.00	2.58	7	18.49	3.61	412	19.36	3.12	336	18.26	3.99	98	19.28	3.35	127
	2013	18.67	3.94	18	17.60	3.34	10	19.46	3.06	400	19.32	3.14	294	18.84	4.06	82	19.75	3.10	123
School 6	2009	19.07	3.59	41				18.23	3.38	121	19.02	3.41	196	19.14	3.47	346	19.31	3.24	88
	2013	18.62	4.66	36	20.20	2.05	5	18.94	3.18	82	19.36	3.16	181	19.33	3.36	356	18.70	3.82	83
School 8	2009	16.14	4.28	38	17.00	4.36	7	16.87	3.62	45	16.94	3.82	274	17.06	3.92	428	17.60	3.24	64
	2013	19.17	3.55	29	14.00		1	20.15	3.13	31	19.44	3.49	217	19.17	3.30	210	19.68	2.93	70
EQUITY.25																			
School 1	2009	98.10	8.29	12	89.60	22.77	5	95.82	12.87	37	84.79	16.76	21	89.35	15.76	475	91.96	14.29	123
	2013	96.15	13.69	12	102.33	7.02	3	94.45	10.30	41	94.07	16.26	23	94.94	14.25	497	95.63	13.31	84
School 2	2009	88.32	19.09	22	73.80	21.02	5	91.93	15.00	98	88.86	15.75	392	86.94	16.77	296	89.52	18.07	90
	2013	92.75	15.03	19	87.83	10.17	6	93.52	12.04	118	90.94	14.35	351	91.21	16.15	270	93.52	12.78	82
School 3	2009	91.44	16.79	30	89.61	30.80	9	95.04	13.71	41	85.52	18.03	72	88.97	16.38	608	89.61	17.19	89
	2013	93.83	20.64	26	92.95	14.61	7	95.19	11.79	40	94.86	16.60	68	95.48	13.86	665	95.45	14.73	67
School 5	2009	85.98	18.63	15	92.00	12.49	7	91.66	14.36	412	92.30	13.43	336	91.47	16.59	98	91.75	15.45	127
	2013	93.46	10.78	18	88.29	12.01	10	95.46	12.96	400	91.38	13.04	294	92.42	15.80	82	94.69	13.78	123
School 6	2009	94.56	11.21	41	99.58	6.84	5	94.12	12.01	121	92.98	14.48	196	93.18	14.04	346	97.30	13.79	88
	2013	92.74	18.39	36				96.73	13.64	82	95.12	13.86	181	94.56	14.17	356	93.79	17.31	83
School 8	2009	86.35	16.39	38	89.57	15.06	7	89.16	15.57	45	85.67	15.32	274	86.75	15.74	428	89.41	13.15	64
	2013	97.22	15.41	29	97.00		1	98.85	11.67	31	94.66	14.30	217	94.53	13.27	210	98.13	12.85	70

A 6 (races) x 6 (schools) x 2 (years) MANOVA using the two equity indices as dependent variables was completed. The data were judged to be linear through the visual inspection of bivariate scatterplots. Box's test (Box's $M = 494.46$, $F (207, 42351.37) = 2.29$, $p < .001$) revealed a violation of the assumption of homoscedasticity. Based on current research (Huck, 2012; Tabachnick & Fidell, 1996), Pillai's Trace provides a robust estimate of the effects

in such a case. The Pillai's Trace was found to be robust in the face of this violation and

therefore the Box Test assumption is not fatal to the analysis. The MANOVA effects are shown

in Table 7.

Table 7
MANOVA Summary Table

Effect	Pillai's Trace	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observe Power[d]
Race	.008	7.53	10	19208	<.001	.004	75.288	1.000
Year	.002	11.90	2	9603	<.001	.002	23.817	.995
School	.006	5.40	10	19208	<.001	.003	53.995	1.000
Race * year	.001	1.14	10	19208	.327	.001	11.402	.612
Race * school	.008	1.55	50	19208	.008	.004	77.253	1.000
Year * school	.003	2.47	10	19208	.006	.001	24.712	.953
Race * year * school	.006	1.27	48	19208	.101	.003	60.861	.996

There are significant main effects for race ($F(10, 19208) = 7.53$, $p < .001$), year ($F(2,$

$9603) = 11.90$, $p < .001$), and school ($F(10, 19208) = 5.40$, $p < .001$). The interactions of race

and year ($F(10, 19208) = 1.14$, $p = .33$) and race, year, and school ($F(48, 19208) = 1.14$, $p = .10$)

were not significant. However, the interactions of race and school ($F(50, 19208) = 1.55$, $p =$

$.008$) and year and school ($F(50, 19208) = 2.47$, $p = .006$) were both significant. The effect sizes

of all the main effects and the interactions were so small that they indicate "no effect" according

to Cohen (1992).

ANOVA: Additional Exploration and Results

In order to further examine the research question, two Analyses of Variance (ANOVAs) were completed in order to investigate the relationship between student and teacher perceptions of equity in the District. The results as represented in Figure 4 show that student responses were lower than teacher responses. A 4 (races) x 2 (constituent group) using the two equity indices as dependent variables was conducted and indicated that there was no main effect of race. The first ANOVA used the 25-item SEI as the dependent variable (see Table 8). The initial results indicated that no significant differences emerged among racial groups.

Table 8
Dependent Variable Test Effects Between Subjects on 25-Item SEI

Sources	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta.Sqd.	Noncent. Paremeter	Observed Power [b]
Race	888.153	3	296.051	1.316	.267	.000	3.949	.354
Group	10353.593	1	10353.593	46.033	.000	.002	46.033	1.000
Race * Group	232.688	3	77.563	.345	793	.000	1.035	.118
Error	4437595.208	19730	224.916					
Total	172652482.0	19738						
Corrected Total	4488287.458	19737						

The second ANOVA used the 5-item school DEI as the dependent variable. As was true with the results in the first 25-item SEI, no significant differences were identified among racial groups (see Table 8 below). There was no effect of race on either inventory.

From the date in Figures 3 and 4, it is apparent that students consistently score items lower than staff. The results in Table 9 also indicate that student response scores were lower than teacher responses as represented in Figure 4 below.

Table 9
Dependent Variable Test Effects Between Subjects on 5-Item DEI

Sources	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta. Sqd	Noncent. Paramenter	Observed Power[b]
Race	38.544	3	12.848	.960	.411	.000	2.880	.265
Group	631.726	1	631.726	47.198	.000	.002	47.198	1.000
Race * Group	54.042	3	18.014	1.346	.257	.000	4.038	.362
Error	3000751.183	22470	13.385					
Total	7984431.000	22478						
Corrected Total	303023.058	22477						

Note: a. R Squared = .007 (Asjusted R Squared = .007) b. Computed using alpha = .05

Figure 4
Estimated Marginal Means of Student and Staff by Race on 5-Item DEI
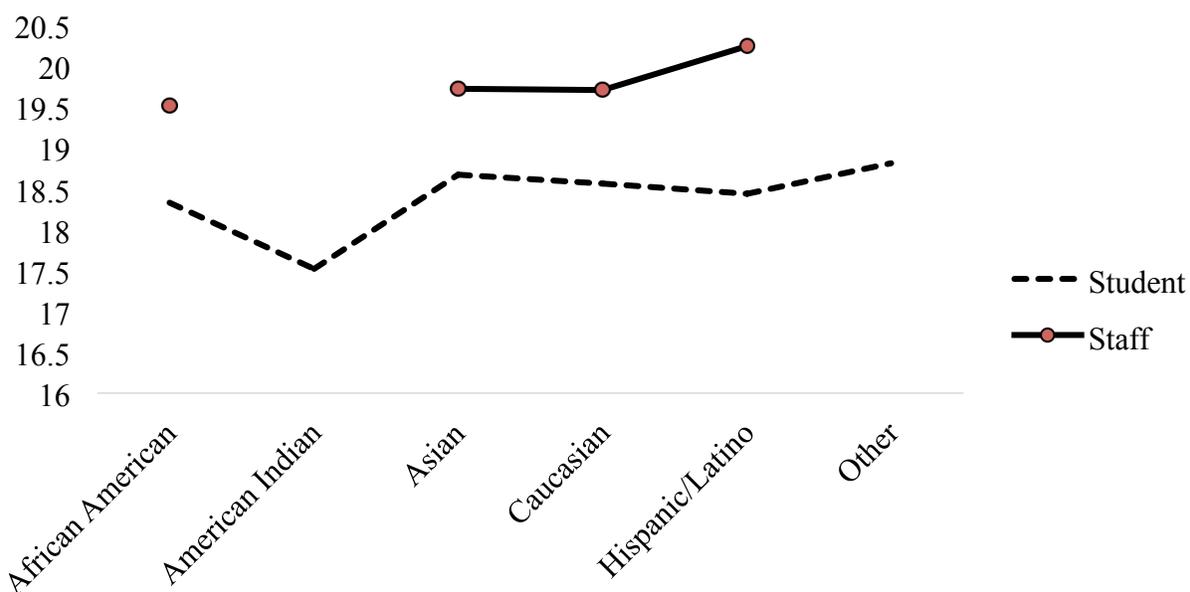
Note: a. R Squared = .011 (Adjusted R Squared = .011) b. Computed using alpha = .05

ANOVA: Additional Exploration and Results

Two Analyses of Variance (ANOVA) followed the MANOVA. The first ANOVA used the 5-item District Equity index (DEI) as the dependent variable and the second ANOVA used the 25-item school Equity index (SEI) as the dependent variable. When significant differences emerged in these two-way ANOVAs, the effects were investigated further using one-way ANOVAs and post hoc tests.

Univariate ANOVAs also indicate that the school by year interaction is significant for both the 5-item District Equity index ($F(25, 9604) = 3.80$, $p = .002$) and the 25-item School Equity index ($F(25, 9604) = 4.15$, $p = .001$). The interaction of school by year indicates that the differences between 2009 and 2013 scores were larger for some schools (e.g. School 8) than for other schools (see Figures 5 and 6 below; e.g. Schools 5 & 6), and indicated more profound growth on the 25-item SEI.
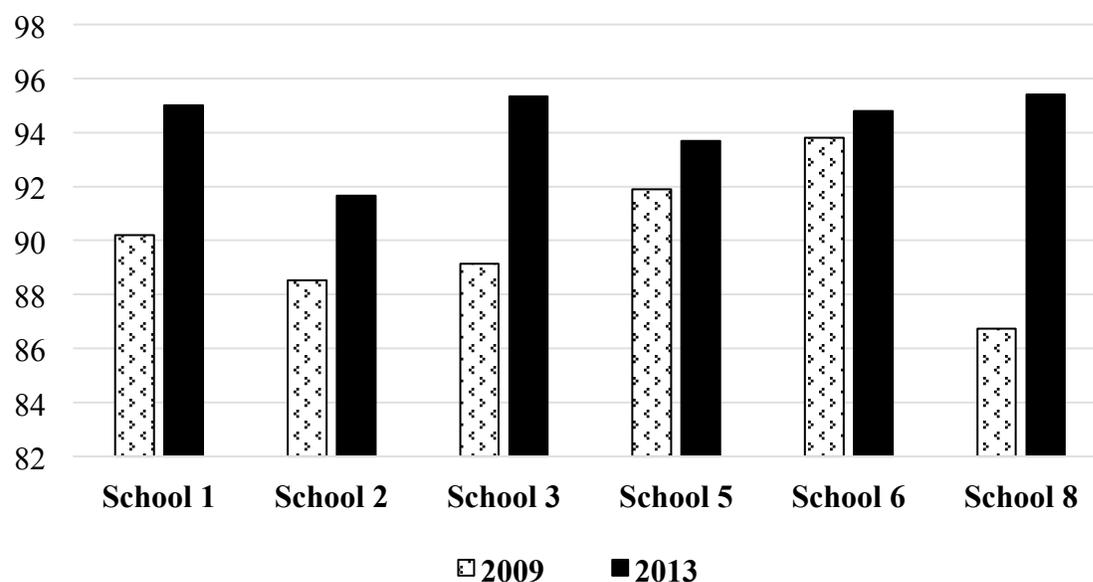
Figure 5
The Mean 5-Item Equity Scores in 2009 and 2013 varied across the Six Schools.
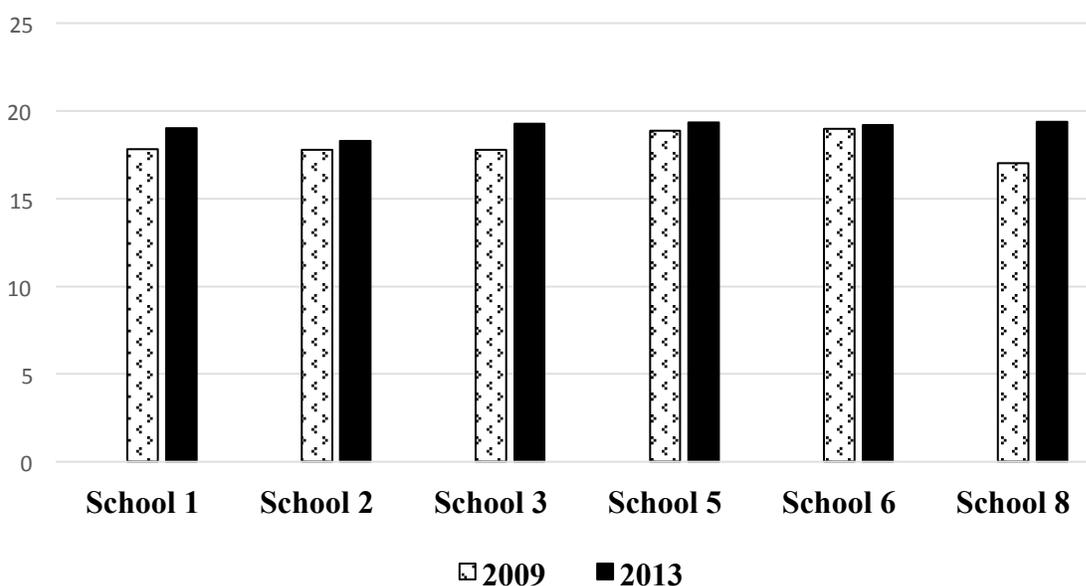
Figure 6

The Mean 25-Item Equity Scores in 2009 and 2013 varied across the Six Schools.

The SEI results in particular, by year and school, show that student perceptions at school 5 and school 6 did not have the favorable growth that the remaining four schools evidenced. Furthermore, School 8 results indicated almost twice the amount of positive growth of the other middle schools.

Because interaction effects are more important for interpretation and overshadow main effects, Univariate ANOVAs were used to examine the interactions for each of the dependent variables separately. Univariate ANOVAs reveal that the race and school interaction is significant for the 5-item Equity index $(F(25, 9604) = 1.70, p = .02)$ but is not significant for the 25-item Equity index $(F(25, 9604) = 0.74, p = .82)$. Six one-way ANOVAs (see Table 10) and follow-up Bonferroni post hoc tests show that this significant interaction is due entirely to the difference in the 5-item equity scores of Hispanic students $(M = 18.53, SD = 4.02)$ and students who claim the "other race" identity $(M = 19.51, SD = 3.23)$ in School 5, Brown – Forsyth F (5,

272.14) = 3.21, p = .01 (see Table 10). In 2013, School 5 claimed a student population of 41.6% Asian, 2% Black or African American, 39.5% White, 13.3% Hispanic or Latino, and 2.6% Other Races.

Data from six one-way ANOVAs show that the 5-item Equity index score was higher in 2013 than in 2009 for five of the six schools (see Table 11) and the 25-item Equity index score is higher in 2013 than in 2009 for four of the six schools (see Table 12). Data from Table 11 can be compared with the data in Table 12 that shows that the school and year scores increased from 2009 to 2013.

Table 10
Effect of Race on 5-Item Equity Scores for each of the Six Schools

School	df $_{effect}$	df $_{error}$	F	sig
School 1	5	1332	0.83	.53
School 2	5	117.27	2.20[a]	.06
School 3	5	88.08	1.52	.19
School 5	5	272.14	3.21[a]	.01
School 6	5	1529	1.63	.15
School 8	5	1413	1.90	.09

Note: [a] a Brown-Forsyth ANOVA test was used because the assumption of homogeneity of variance was not met.

Table 11
Effect of Year on 5-Item Equity Scores for each of the Six Schools

School	df $_{effect}$	df $_{error}$	F	sig
School 1	1	1332	40.95	<.001
School 2	1	1742.72	8.51[a]	<.001
School 3	1	1676.20	78.29[a]	<.001
School 5	1	1919.90	11.04[a]	.001
School 6	1	1534	1.38	.24
School 8	1	1412	142.27	<.001

Note: [a] a Brown-Forsyth ANOVA test was used because the assumption of homogeneity of variance was not met.

Table 12
ANOVA - Effect of Year on 25-Item Equity Scores for each of the Six Schools.

School	df $_{effect}$	df $_{error}$	F	sig
School 1	1	1321.83	35.91[a]	<.001
School 2	1	1740.26	18.10[a]	<.001
School 3	1	1662.75	68.54[a]	<.001
School 5	1	1919.96	8.87	.003
School 6	1	1534	1.87	.17
School 8	1	1412	116.67	<.001

Note: [a] a Brown-Forsyth ANOVA test was used because the assumption of homogeneity of variance was not met.

Correlations: Additional Exploration and Results

Point-biserial correlations were calculated for each of the 25-item and five-item responses (Likert responses) with each race and ethnicity (nominal dichotomous variables). These correlations appear in Table 13. Notice that the only correlations that reach the level of a small relationship (Cohen, 1992) exceed .1 including items w for Asians; items h, z, and bbb for Caucasians; and items q, r, w, ee, and bbb for Hispanics. Eight small effects in a matrix of 180 correlations is a rate of 4.44%, which is lower than the 5% rate that might be expected by chance alone. The analysis results on the research question examining whether middle school students and teachers of different races in the District perceive equity in school climate differently located no significant relationship between race and items (See Table 13).

Table 13
Point-biserial Correlations of each item with Race/Ethnicity.

Variable	Ethnicity					
	Afamer	AmInd	Asian	Cauc	Hisp	Other
a	-.043	-.057	.067	-.012	-.061	-.031
b	-.037	-.060	.090	-.047	-.061	-.026
c	-.054	-.063	.027	-.002	-.065	-.002
d	-.065	-.071	.033	.002	-.079	-.014
e	-.051	-.054	-.012	-.044	-.002	-.013
f	-.033	-.043	.008	-.026	-.022	-.018
g	-.041	-.054	.004	.022	-.067	-.014
h	-.030	-.046	-.017	-.101	.024	-.006
i	-.042	-.051	-.028	-.054	.001	-.009
j	-.077	-.091	-.004	-.024	-.021	-.028
k	-.050	-.067	-.014	-.038	-.020	-.001
l	-.032	-.052	-.038	-.099	.058	-.007
q	-.031	-.036	.097	.067	-.164	-.006
r	-.033	-.042	.056	.022	-.108	.003
t	-.013	-.061	-.071	-.095	.081	-.010
u	-.035	-.042	.019	-.073	.000	-.011
w	-.023	-.040	.100	-.004	-.119	-.004
x	-.054	-.063	.011	.022	-.069	-.016
y	-.042	-.067	.019	-.039	-.023	-.005
z	-.026	-.060	-.016	-.143	.068	-.016
cc	-.029	-.038	-.013	-.040	-.030	.002
ee	-.008	-.005	.051	.097	-.133	.007
ff	-.039	-.052	.027	.034	-.091	-.005
jj	-.051	-.078	.007	-.027	-.046	-.013
bbb	-.053	-.038	.056	.125	-.178	-.010
cc	-.029	-.038	-.013	-.040	-.030	.002
ff	-.039	-.052	.027	.034	-.091	-.005
uu	-.046	-.039	.004	-.061	.020	-.009
vv	-.051	-.046	-.016	.078	-.093	.001
ww	-.050	-.036	.001	.081	-.075	.000

Summary

  The findings of this study support that race did not have an affect on student or staff perception of equity as measured by both equity indexes. Follow-up ANOVA tests on the 5-item DEI showed that the interaction between race and school interaction was significant due entirely to the responses of Hispanic students at one school. In addition, student responses are consistently lower than staff responses. Interestingly, it is apparent from the findings that school and year results for both equity indexes indicated increased scores from 2009 to 2013. The following chapter will provide a discussion of the findings of this study, in addition to suggesting recommendations for continued research.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

Introduction

This chapter provides a final discussion of the results and implications of the research presented in the previous chapters, limitations of the study, and provide recommendations for future research. First, the discussion responds to the research question posed in the first chapter: Do middle school students and teachers of different races in the District perceive equity in school climate differently? Secondly, further investigations examining the proposed hypotheses are addressed. Central to the discussion of this study is the expansion of additional explorations that focused on the strength of association between equity and school climate. Finally, limitations of the research and suggestions for future research are discussed.

Discussion

As discussed in the literature review, research supports the belief that race in schools is constrictive and can contribute significantly to lower academic achievement (Armstrong et al., 2001; Darling-Hammond, 2010; Rubie-Davies, 2008). This is particularly true for students identified as African American/Black or Hispanic due in part to implicit stereotypes. First, the most striking observation to emerge from the data in this study was that over the five years the responses consistently demonstrated an absence of significant relationships based on race/ethnicity. Second, all middle school results show an increase of positive responses to both the DEI and SEI over the span of this study. The SEI individual school results show that although student perceptions at school 5 and school 6 did not have the favorable growth that the remaining four schools evidenced, there were still signs of improvement towards an equitable school climate at all middle schools. School 8 results indicated almost twice the amount of

positive growth of the other middle schools which can be attributed to the presence of a strong committed leader and a clear, shared school vision.

The above results are significant in at least two major respects. First, these findings indicate positive change resulting from the long-term partnership with EFF, and District commitment to both educational equity and systemic improvement throughout their district that has labored to integrate fairness and inclusion into all policies, programs, operations and practices. The District demonstrates a 20-year commitment to equity issues and school climate (District, 2012). Second, taking into consideration the 10-year history working in collaboration with EFF, the most immediately dependable conclusion to be drawn is that the absence of significance around race and the difference in year results can be attributed to the implementation of the EFF strategic data continuous school improvement processes over a period of time. When implemented correctly and over time, the EFF school improvement process effects positive equitable systemic change.

In response to the primary research question, although statistically significant correlations were identified early on the 5-item DEI results, upon further study these findings were found to be statistically insignificant. The early results were due entirely to the scores of students at School 5 self-identifying as Hispanic and Other races. However, more research on this finding needs to be undertaken before it is discarded. School 5 is a school with a predominant Asian student population and a small Hispanic student population. Although these results are considered statistically insignificant, they are important within the context of the EFF continuous school improvement process. This data set appears to communicate that Hispanic and other race students at School 5 are experiencing school differently than students of Asian, White or African

American/Black races. Students who do not feel they are treated fairly or cared about by a teacher(s) present lower responses overall (Berhardt et al., 2009).

Moreover, the small relationships identified through correlation, although low, deserve mention. Asian students scored .100 on variable 'w', 'I am encouraged to participate in accelerated/advanced courses', whereas Hispanic students measured a -.119. Caucasian student results showed a .125 on variable 'bbb', I feel I am a successful student, while Hispanic student results show a -.178. Hispanic students also show a -.164 on the variable, 'I am recognized for good academic work'. Teaching staff in the District is predominantly white, with a representation of merely 2% of Asian teachers. Research shows that white teachers perceive white students more positively and as more capable than minority students, and Asian students as possessing higher capacity for academic achievement (ACT, 2012). While these long-term perceptions have contributed negatively towards academic performance for African American and Hispanic students, Asian-American students as the model minority have also been affected (Rubie-Davies, 2008). Such stereotypes promote the belief that they are most likely to achieve academic excellence, are excellent in math and science and are academic overachievers. This is an important issue for further investigation within the district considering their commitment to school climate and high expectations and performance across all demographic groups.

Following the EFF (Bernhardt, 2004) multiple measures of data and predictive analysis model, the school should analyze the other data categories of student learning and school processes, in addition to the multiple intersections in order to gain a complete and coherent picture of their learning organization (see Figure 7).

Figure 7
Education For The Future (EFF) Multiple Measures of Data.
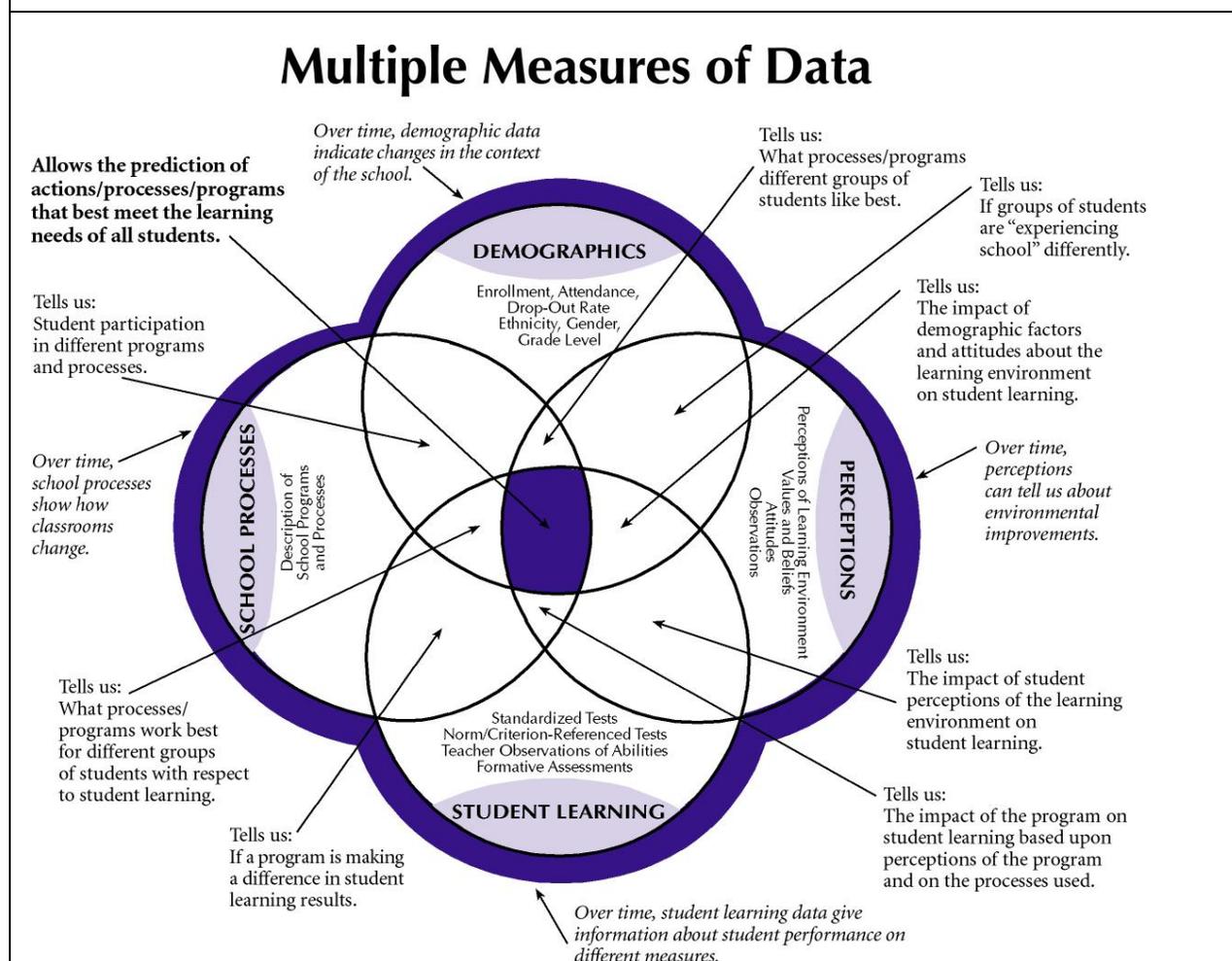
The intersection between student learning and perceptions would clarify whether Hispanic and other race students perceptions of the environment are impacting learning; looking at student learning and school processes would clarify if programs are contributing to student results; and analysis of demographics, school processes and student learning would illustrate what programs and processes contribute most effectively to learning for different groups of students.

Unsurprisingly, the demographic data in this study also supports that teacher responses to items were elevated compared to student responses as supported in the literature (Bernhardt, 2004; Cohen et al., 2009).

As mentioned earlier, there is a lack of research identifying the differences between indicators of equity and indicators of school climate. It could be conceivably hypothesized that the indicators of equity earlier identified as inclusion and fairness, are routinely measured in existing school climate surveys. It is interesting to note that overall results from both the DEI and SEI used in this study were consistent overall. The differences highlighted were statistically insignificant, and could be contributed to modifications to the survey made by the District as discussed in the Limitations section below. These findings, while preliminary, appear to support the recent stand taken by the National School Climate Council (Ross, 2013) suggesting that equity and school climate are one and the same. It is also important to bear in mind that this study's findings could also raise the question as to whether the findings indicating no real effect of how race perceives equity are valid, or whether the instrument used to measure equity in school climate was inadequate. There may be other possible explanations that could be explored in further research.

Although available research regarding educational equity and school climate continues to grow, it is of interest that the research continues to lack clear connections between the two areas. The review of the literature found extensive school climate measurement inventories, but a lack of instruments focused on measuring educational equity. The two articles that directly addressed the topic (Coulston et al., 2013; Ross, 2013) concluded that equity is 'intrinsic' to school climate and demands fair, fully accessible and inclusive climate and strategies.

Limitations of the Research

The findings of this study are subject to at least three limitations. The first include threats to internal validity. The District instrument was used to obtain student and staff perception data. The survey used was focused on the perceptions of students and staff at a given point in time. Therefore, the results may not be representative of actual perceptions or beliefs creating a potential threat to the internal validity of the instrument and results (Creswell, 2003). A second threat to internal validity is the limitations encountered in the nature of the survey instrument itself. The District modified the instrument from the original EFF survey content. Modifications included questions seeking second-hand information and questions that contain conjunctions joining more than one idea. Questions with conjunctions can result in confusion and inaccuracies in the analysis of results as it is unclear which issue the responder might be addressing. Three of the five questions included in the 5-item DEI (see Table 6, questions uu, vv, and ww) contain conjunctions that asked about more than one issue, but allowed for only one response. Question 'vv', for example, is phrased as 'Adults at my school respect my race, ethnicity or religion'. Therefore, a negative response does not provide sufficient data to identify if the responder feels adults at the school do not respect race their race/ethnicity or that adults at the school do not respect their religion. Rather, the survey items indicated above should be separated into two or more questions in order to gather useful and clear data. The 25-item SEI created from the original 47-statement District survey did not include items with conjunctions or items seeking second-hand information.

Finally, the items across student and staff surveys are aligned in such a way that could pose a limitation on the information included in this study. These final two threats to the internal validity have important implications for future surveys and gathering clear and useful data.

Recommendations for Future Research

Notwithstanding the limitations discussed above, the data and findings produced from the present study have a number of important implications for future practice. More broadly, research is needed to clarify the relationship between school climate and equity measurement tools. As was discussed in the literature review, teachers indicate a focus on classroom-level factors, while students are sensitive to school-level factors. More research should be undertaken investigating the relationship between measurement tools and indicators of classroom-level factors, school-level factors, and systemic change.

Replication of this research study is recommended focusing on the areas of reliability and validity among the equity index measures selected for review in this study.

Finally, further research exploring equitable school climate measurement instruments and evidence-based strategies and interventions will increase the body of knowledge for education professionals, allowing them to challenge their own perceptions and use these reflections to shape their interactions with students and colleagues alike.

The future growth of theory and student success is dependent on the continued expansion of current and relevant research on equitable school climates and data based systemic processes and strategies. Equitable school climates and systems that are inclusive will not only lead to improved student academic achievement, but will ensure our young people gain the skills and perspective required for success in the 21st century (Coulston et al., 2013; Ford et al., 2008; NSCC, 2012; Ross, 2013).

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APPENDICES

Appendix A

Letter of Organization Consent

Dear Dr. Bernhardt,

My name is Elise Ferreira d'Azevedo. I am an educator from Oregon working in partnership with Education for the Future Foundation (EFF) on a dissemination grant from the U.S. Department of Education and a doctoral candidate in the School of Education at George Fox University. Per our previous conversations, I am preparing to conduct research for my doctoral dissertation on student and staff perceptions of school climate and equity in public schools. The research will examine significant similarities or differences in views of schools held by students of different grade levels, different genders, differing socio-economic backgrounds and among ethnic and/or racial groups; and staffs of different ethnic/racial group composition.

I am requesting permission to have access to previously gathered perception data, demographic data, and student achievement data collected by your organization. *Partnership with your organization in this research is completely voluntary and I will only be permitted access to your data with your permission.*

All data gathered from EFF will be collected and analyzed in a professional confidential manner. Each school participant will be identified by a pseudonym and not the actual school name or location. Signed consent forms will be kept in a locked file accessible only to me and all material will be destroyed three years after the completion of my dissertation. The results of the research may be used for presentation and/or professional publication as a means to better inform educators on the general perceptions of students and staff regarding public school performance.

I appreciate the time you have taken to consider this project and respect the decision taken by your organization. If you have any further questions regarding this research, please contact either:

Mrs. Elise Ferreira d'Azevedo   Board Chair
1936 SE Eagle St.   Dept. of Educational Foundations & Leadership
Milwaukie, OR 97222   George Fox University
Elisefda@gmail.com   Newberg, OR 97132

Appendix B

DISTRICT 2011 6-12 Secondary Student Survey

1. Students at this school are friendly.

2. Students at this school treat each other with respect

3. My teachers care about me

4. My teachers listen when I have something to say

5. My teachers tell me when I do a good job

6. My teachers give me individual help when I need it

7. I am comfortable asking my teachers for help

8. My teachers help me catch up if I'm behind

9. My teachers notice if I'm having trouble learning something

10. My teachers treat me with respect

11. School administrators treat students with respect

12. Campus supervisors treat students with respect

13. I know who to talk to if I am having a problem at school

14. If you speak a different language, do you receive help in learning English?

15. I feel safe outside of classrooms at school

16. I feel safe from threats or harassment at my school

17. I am recognized for good academic work

18. I am recognized for good behavior

19. My family expects me to do well in school

20. I have to work hard to do well in school

21. The work in my classes is engaging

22. I know what I am supposed to be learning in my classes

23. I am encouraged to participate in accelerated/advanced courses

24. My teachers expect me to do my best

25. My teachers set high standards for achievement for all students

26. My teachers show how classroom lessons are helpful to me in real life

27. My teacher talks to me about my future career or job

28. Teachers talk to me and my parents about continuing my education after high school

29. Students are treated equally when they break school rules

30. Students know what to do when they see others being picked on

31. It is important for me to participate in activities outside of the classroom.

32. I feel like I am part of this school

33. I usually look forward to class

34. The topics we are studying are taught in an interesting way

35. My teachers help me look at the quality of my work so that I can improve

36. My school gives me the academic support I need

37. I set aside time to do my homework

38. Setting learning goals in classes is important to me

39. I plan to attend college

40. People of different cultures, races, or ethnicities get along at my school

41. Adults at my school respect my race, ethnicity, or religion.

42. I respect the beliefs of people who are of a different race, religion or culture

43. It is important that I volunteer to make my community a better place

44. This school is preparing me well for what I want to do after high school

45. High school teaches me valuable skills (High School only)

46. What we learn in class is necessary for success in the future

47. I feel I am a successful student

Appendix C

DISTRICT 2011 Staff Climate Survey

1. Students at this school are friendly

2. Students at this school treat each other with respect

3. I care about my students

4. I listen when my students have something to say

5. I tell my students when they do a good job

6. I give my students individual help when they need it

7. My students are comfortable asking me for help

8. I help my students catch up if they are behind

9. I notice if my students are having trouble learning something

10. I treat my students with respect

11. School administrators treat students with respect

12. Yard duty/Campus supervisors treat students with respect

13. My students know who to talk to if they are having a problem at school

14. Students who speak a language other than English, receive the help they need in learning English

15. My students feel safe outside of classrooms at school

16. My students feel safe from threats or harassment at school

17. My students are recognized for good academic work

18. My students are recognized for good behavior

19. My students' families expect them to do well in school

20. My students have to work hard to do well in school

21. The work in my classes is engaging

22. My students know what they are supposed to be learning in my classes.

23. I encourage my students to participate in accelerated/advanced courses.

24. I expect my students to do their best.

25. I set high standards for achievement for my students.

26. I show how classroom lessons are helpful to my students in real life.

27. I talk to my students about their future careers or jobs.

28. I talk to my students about continuing their education after high school.

29. Students are treated equally when they break school rules.

30. Students know what to do when they see others being picked on.

31. It is important for students to participate in activities outside of the classroom.

32. Students feel like they are part of this school.

33. Students usually look forward to my class.

34. I teach the topics we are studying in an interesting way.

35. I help my students look at the quality of their work so that they can improve.

36. My school gives students the academic support they need.

37. My students set aside time to do their homework.

38. It is important that my students set learning goals in my class.

39. My students plan to attend college.

40. People of different cultures, races, or ethnicities get along at my school.

41. Adults at this school respect students' race, ethnicity, or religion.

42. Students respect the beliefs of people who are of a different race, religion or culture.

43. It is important that students volunteer to make our community a better place.

44. This school is preparing students well for what they want to do after high school.

45. High school teaches students valuable skills.

46. What students learn in class is necessary for success in the future.

47. I feel my students are successful.

48. Allowing families to choose which school their child attends has positively affected district schools.

49. This school is making progress in improving the achievement of all students.

50. I feel recognized for good work.

51. I feel intrinsically rewarded for doing my job well.

52. I feel clear about what my job is at this school.

53. I feel that others are clear about what my job is at this school

54. The vision for this school is clear.

55. The vision for this school is shared.

56. I believe student achievement can increase through effective professional development related to our vision.

57. We have an action plan in place, which can get us to our vision.

58. I have the opportunity to develop my skills.

59. I work with people who treat me with respect.

60. I work with people who listen if I have ideas about doing things better.

61. Teachers in this school communicate with each other to make student learning consistent across grades.

62. I believe student achievement can increase through teacher self assessment.

63. I believe student achievement can increase through teacher use of student achievement data.

64. I believe student achievement can increase through teaching to the state standards.

65. I believe student achievement can increase through using ongoing student assessments related to state standards.

66. I know the state standards.

67. I teach to the state standards.

68. I believe student achievement can increase through effective parent involvement.

69. I believe it is important to communicate often with parents.

70. I communicate with parents often about their child's progress.

71. I communicate with parents often about class activities.

Appendix D

Equity in School Climate Index (SEI) - Student

1. Students at this school are friendly.

2. Students at this school treat each other with respect.

3. My teachers care about me.

4. My teachers listen when I have something to say.

5. My teachers tell me when I do a good job.

6. My teachers give me individual help when I need it.

7. I feel comfortable asking my teachers for help.

8. My teachers help me catch up if I'm behind.

9. My teachers notice if I'm having trouble learning something.

10. My teachers treat me with respect.

11. School administrators treat students with respect.

12. Campus supervisors treat students with respect.

13. I am recognized for good academic work.

14. I am recognized for good behavior.

15. I have to work hard to do well in school.

16. The work in my classes is engaging.

17. I am encouraged to participate in accelerated/advanced courses.

18. My teachers expect me to do my best.

19. My teachers set high standards for achievement for all students.

20. My teachers show how classroom lessons are helpful to me in real life.

21. Students are treated equally when they break school rules.

22. It is important for me to participate in activities outside of the classroom.

23. I feel like I am part of this school.

24. My school gives me the academic support I need.

25. I feel I am a successful student.

Appendix E

Equity in School Climate Index - Staff

1. Students at this school are friendly.

2. Students at this school treat each other with respect.

3. I care about my students.

4. I listen when my students have something to say.

5. I tell my students when they do a good job.

6. I give my students individual help when they need it.

7. My students' feel comfortable asking me for help.

8. I help my students catch up if they're behind.

9. I notice if my students are having trouble learning something.

10. I treat my students with respect.

11. School administrators treat students with respect.

12. Campus supervisors treat students with respect.

13. My students are recognized for good academic work.

14. My students are recognized for good behavior.

15. My students have to work hard to do well in school.

16. The work in my classes is engaging.

17. I encourage my students to participate in accelerated/advanced courses.

18. I expect my students to do their best.

19. I set high standards for achievement for my students.

20. I show how classroom lessons are helpful to my students in real life.

21. Students are treated equally when they break school rules.

22. It is important for students to participate in activities outside of the classroom.

23. Students feel like they're a part of this school.

24. My school gives students the academic support they need.

25. I feel my students are successful.

Appendix F

2010-11 DISTRICT (DEI) Climate Survey Dimensions

Equity

1. Students are treated equally when they break school rules

2. I feel like I am part of this school

3. People of different cultures, races, or ethnicities get along at my school

4. Adults at my school respect my race, ethnicity or religion

5. I respect the beliefs of people who are of a different race, religion or culture

Future Orientation

1. My teacher(s) show how classroom lessons are helpful to me in real life

2. My teachers talk to me about my future career or job

3. Teachers talk to me and my parents about continuing my education after high school

4. I plan to attend college

5. What we learn in class is necessary for success in the future

6. I feel I am a successful student

Academic Engagement

1. I look forward to class

2. The topics we are studying are taught in an interesting way

3. I set aside time to do my homework

4. Setting learning goals in classes is important to me

5. I feel like I am part of this school

6. I know what I am supposed to be learning in my classes

Adult Connection at School

1. My teachers care about me

2. My teachers listen when I have something to say

3. My teachers tell me when I do a good job

4. I know who to talk to if I am having a problem at school

5. I am recognized for good behavior at school

Academic Support

1. My teachers give me individual help when I need it

2. I am comfortable asking my teacher(s) for help

3. My teachers help me catch up if I'm behind

4. My teachers notice if I'm having trouble learning something

5. My teacher(s) help me look at the quality of my work so that I can improve

6. My school gives me the academic support I need

Academic Press/High Expectations

1. I am recognized for good academic work at school

2. I have to work hard to do well in school

3. The work in my classes is engaging

4. My teacher(s) expect me to do my best

5. My teacher(s) sets high standards for achievement for all students

6. I am encouraged to participate in accelerated/advanced courses

Caring School Climate

1. My teachers care about me

2. My teachers tell me when I do a good job

3. Students at this school are friendly

4. Students at this school treat each other with respect

5. My teacher(s) treat me with respect

Appendix G

Education for the Future Student Questionnaire Review

Questionnaire Items	Why We Ask These Items
At school, I feel – I belong I am safe I have fun learning I have freedom at school I have choices in what I learn	William Glaser (The Quality School, 1990) says student have to feel these things in order for them to learn.
I like this school This school is good	These statements come from the students. They think it is important that students like their school and think it is good.
My teacher cares about me My teacher treats me with respect My teacher thinks I will be successful My teacher listens to my ideas I am challenged by the work my teacher Asks me to do The work I do in class makes me think	The number one thing that students tell us has to be in place in order for them to learn is a caring teacher. To students, caring means that the teacher knows, respects, and listens to them while making sure that the students are learning and actively doing challenging work. This information is consistent with the literature on dropout prevention.
My teacher is a good teacher My teacher believes I can learn I am recognized for good work I know what I am supposed to be learning in my classes Very good work is expected at my school	Teachers want students to say that they are good teachers, that they believe the students can learn, that teachers recognize students for good work, that students know what they are supposed to be learning, and that good work is expected of students. Teachers feel these are some of the most important things that students can say about their learning that will also help them learn.
My principal cares about me	Students asked us to add this item. They understand the importance of leadership in establishing a caring climate/culture.
I am a good student I can be a better student I behave well at school	These items help students reflect on their efforts and encourage them to do better
Students are treated fairly by teachers Students are treated fairly by the principal Students are treated fairly by the people on recess duty (grounds supervisors)	Fair treatment is a big issue for students, especially as they get older. Often we find that the adults whoa re supervising the students do not have the training they need to offer balanced and respectful supervision. Students are the first to know and sometimes the last to

	be listened to when it comes to fair treatment, both in and out of class.
Students at my school treat me with respect Students at my school are friendly I have lots of friends	These items on respect can give staffs a "heads up" on bulling and let them know what students are feeling about the other students.
I have support for learning at home My family believes I can do well in school My family wants me to do well in school	Students usually feel they have support for learning at home and that they are expected to do well in school. This is very interesting to teachers who feel that parents do little to help students learn at home. Perhaps teachers need to be clearer about how they help families help their children learn.

Appendix H

Education for the Future Staff Questionnaire Review

Questionnaire Items	Why We Ask These Items
I feel like I belong at this school I feel that the staff cares about me I feel recognized for good work I work with people who treat me with respect I work with people who listen if I have ideas about doing things better I love working at this school	These items help establish teachers' belonging at the school. If teachers do not feel like they belong or are respected, they will neither be able to focus on the needs of the students, nor will they be able to collaborate with colleagues to create a continuum of learning for all students.
I feel that learning can be fun I feel that learning is fun at this school Learning is fun in my classroom	Students say they like school because it is *fun*. *Fun* to them means that it is challenging and worth their time. In order for the learning to be *fun* for students, teachers have to know how to make it fun, as well as challenging.
I feel intrinsically rewarded for doing my job well	How much are teachers feeling intrinsically rewarded for doing a good job, and how much do they need external rewards? Our most effective teachers feel intrinsically rewarded for doing their jobs well.
My administrator treats me with respect My administrator is an effective leader My administrator allows me to be an effective Instructional leader My administrator facilitates communication Effectively My administrator supports me in my work with Students My administrator supports shared decision Making My administrator is effective in helping us Reach our vision	Teachers' perceptions of the administration help us see the impact of the leader(s) in the school. Is the administrator an instructional leader, or are the teachers the only instructional leaders? Does the administrator see her/his job to help all staff implement the shared vision? We believe that helping staff implement the vision is the leader's number one job. These items also help us see the degree of support the teachers feel they receive from administrators. Teachers feel supported when they is effective communication and mutual respect.
I have the opportunity to think for myself, not Just carry out instructions. I have the opportunity to develop my skills	This item helps us understand how much teachers feel they are in control of their own classrooms. This item helps us know if teachers feel they have support to improve their skills.
I love seeing the results of my work with Students I believe every student can learn	These three statements are what the most effective teachers in the United States say about why they got into teaching. We have

I love to teach	found when these items are high, staffs usually got into teaching for the right reasons. Almost any kind of change is possible. When these items are low for an entire staff, there is not a single plan on the planet that will be implemented without some team-building and professional learning that remind teachers about why they got into teaching in the first place.
I work effectively with special education students I work effectively with limited English speaking students I work effectively with an ethnically/racially diverse population of students I work effectively with heterogeneously Grouped classes I work effectively with low-achieving students	On an anonymous questionnaire, teachers say if they feel they work effectively with different types of students. Professional learning needs can be determined from the responses to these items.
I believe student achievement can increase through differentiating instruction I believe student achievement can increase through effective professional development related to our vision. I believe student achievement can increase through teaching to state standards I believe student achievement can increase through using ongoing student assessments related to state standards I believe student achievement can increase through teacher use of student achievement data I believe student achievement can increase through providing a threat-free environment I believe student achievement can increase through close personal relationships between students and teachers I believe student achievement can increase through addressing student learning cycles I believe student achievement can increase through effective parent involvement I believe student achievement can increase through partnerships with business	As humans, we cannot act any differently from what we value, believe, or perceive. When we ask teachers if they believe student achievement can increase through specific methodologies that are spelled out in the literature on effective schools, their responses essentially tell us what they are doing in their classrooms. These responses can tell staffs if the shared vision is being implemented, and what professional learning might be necessary. If teachers say they do not believe student achievement can increase through strategies agreed upon, it does not necessarily mean they do not want to do them. It often means they need more learning on the topic and to "see what it would look like" if implemented in their own classroom.
The instructional program at this school is challenging This school provides an atmosphere where	These items provide information about the feelings teachers have about the quality of work offered and provided to students, and the

every student can succeed
Quality work is expected of all students at this
  school
Quality work is expected of me
Quality work is expected of all the adults
  Working at this school
	equality of expectations. If there is a discrepancy between what teachers feel is expected of them and the other adults at the school, there probably is not a feeling of camaraderie or a chance that together they can create a continuum of learning for all students. These items could also point to a sense of fair treatment.

The vision for this school is clear The vision for this school is shared We have an action plan in place that can get us to our vision	The analysis of these statements show what staff is thinking about the clarity and commitment of staff in implementing the vision Does everyone know there is an action plan in place to implement the vision? Or did the Leadership Team create the vision and put it on the shelf? The collective results show what staff is thinking about the plan.
This school has a good public image	All members of the staff are responsible for the public image of the school.

I think it is important to communicate often
  With parents
I communicate with parents often about their
  Child's progress
I communicate with parents often about class
  activities
	These questions explore the discrepancy between knowing it is important to communicate with parents and actually doing it for the right reasons.

Morale is high on the part of the teachers.
Morale is high on the part of students.
Morale is high on the part of support staff.
Morale is high on the part of administrators.
Teachers in this school communicate with each
  Other to make student learning consistent
  across grades.
	Many staffs feel that teacher morale is the lowest of any group in the school, and this is often the lowest scoring question on the staff questionnaire. If teacher morale is low, we have found that *Teachers in this school communicate with each other to make student learning consistent across grades* is also low, as well as items related to administrative communication and leadership of the vision. Teachers want to work together to create a continuum of learning that makes sense for students. If they cannot work together, a continuum of learning cannot be created.

I am clear about what my job is at this school. I feel that others are clear about what my job is at this school.	A discrepancy in responses between these two items can mean that teachers have a feeling of cognitive dissonance, or a feeling of not being valued.
The student outcomes for my class (es) are	If outcomes are not clear, there is little clarity

clear to me. The student outcomes for my class (es) are clear to my students.	in the school offerings or in what students should know and be able to do.