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UNIVERSITY OF CALIFORNIA, SAN DIEGO  
CALIFORNIA STATE UNIVERSITY, SAN MARCOS

UC Confidential:

Uncovering the Path to Access to the University of California

A Dissertation submitted in partial satisfaction of the requirements for the degree

Doctor of Education

in

Educational Leadership

by

César Figueroa

Committee in Charge:

University of California, San Diego

Professor Alan J. Daly

California State University, San Marcos

Professor Patricia Prado-Olmos, Chair

Professor Annette Daoud

2010

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The Dissertation of César Figueroa is approved, and it is acceptable in quality and form for publication on microfilm and electronically:

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Chair

University of California, San Diego  
California State University, San Marcos

2010

## DEDICATION

This work is dedicated to my family. First, to my beautiful and supportive wife, Jenny, I could not have done this without you. *Tue eres mi otro yo.* Your love, patience, and unwavering support gave me the strength to never give up. I love you.

Next, to my parents, who I love dearly, this dissertation is a direct manifestation of all of the hopes, dreams, and sacrifices they both made so that my brothers and I can have a better life. *Mom y Dad los quiero mucho y les quiero decir que con esta meta que e cumplido, espero que les hice orgulloso de mi.*

## TABLE OF CONTENTS

Signature Page.....	iii
Dedication.....	iv
Table of Contents.....	v
List of Tables.....	vi
List of Figures.....	vii
Acknowledgements.....	viii
Vita.....	x
Abstract of the Dissertation.....	xi
Chapter I.....	1
Chapter II.....	33
Chapter III.....	64
Chapter IV.....	83
Chapter V.....	114
References.....	133
Appendix.....	144

## LIST OF TABLES

Table 1: Fall 2007-2009 Participant Numbers, by Ethnicity.....	74
Table 2: Students Admitted to the University of California for Fall 2007- 2009.....	86
Table 3: Academic Profile of Students Admitted to UC for Fall 2007-2009.....	97
Table 4: Educational Environment Points for Fall 2007-2009.....	99
Table 5: ANOVA for HSGPA and SAT I Reasoning for Fall 2007-2009.....	100
Table 6: ANOVA of Academic Profile with Tukey HSD.....	101
Table 7: Decomposition Summary of Path Analysis.....	108
Table 8: ANOVA on Academic and Non-Academic factors to determine Admissions.....	110
Table 9: Model Summary for Path Analysis.....	112

## LIST OF FIGURES

Figure 1: Proposed Path Model.....	79
Figure 2: Results of Path Model.....	109



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To my beautiful wife, Jenny, I want to say thank you so much for your constant support and patience through this journey. Jenny, you are a wonderful partner and I could not have completed this journey without your love, encouragement and understanding. You are my rock, my best friend, my confidant, my sounding board, and I love you so very much.

To my committee, I give you the sincerest respect and admiration for your support during this process. Dr. Daoud thank you for letting me know that it is okay to let my reader know where I stand, even when I am trying to be as neutral as possible with my research. Dr. Daly, thank you for your guidance and mentorship, words cannot even begin to express my gratitude. I am honored and humbled to call you my mentor. Dr. Prado-Olmos, thank you for your support throughout this entire process, I literally could not have gotten my data without you. Thank you for believing that the work that I was doing was valuable enough for you to take me on as my dissertation chair.

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Finally, a heartfelt thank you and appreciation to all of my friends and family, your support and encouragement throughout the years have allowed me to be where I am today.

## VITA

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ABSTRACT OF THE DISSERTATION

UC Confidential:  
Uncovering the Path to Access to the University of California

by

César Figueroa

Doctor of Education in Educational Leadership

University of California, San Diego, 2010  
California State University, San Marcos, 2010

Professor Patricia Prado-Olmos, Chair

The purpose of this research was to examine the ways in which the non-academic factors were used in conjunction with the academic factors in today's undergraduate comprehensive admissions review process at the University of California. This research sought to clarify whether there was a differential impact on how African-American, White/Caucasian, and Latino students were admitted via the University of California's Comprehensive Review process. This study further sought to determine if there was a difference in the academic profile among African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process.

This study's focus was to determine how the University of California's Undergraduate comprehensive admissions review process affected the access to the University of California across ethnicity. Analysis for this study included the use of a descriptive statistical technique and path analysis statistical procedure to analyze and determine if any of the academic<sup>1</sup> or non-academic<sup>2</sup> variables presented in this study contributed to admissibility to the University of California via the Comprehensive Review process through the use of cross-tabulation tables.

Using descriptive statistics and a path analysis statistical procedure allowed the researcher to not only explore the relationship that the non-academic variables had in determining admissions for African-American, White/Caucasian, and Latino students in the Comprehensive Review process, but it also allowed the researcher to analyze the role that the academic variables had in determining the admissibility of African-American, White/Caucasian, and Latino students to the University of California.

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<sup>1</sup> Consistent with University of California's undergraduate freshman criteria for admissions, academic variables in this study were students' HSGPA, SAT I Reasoning Scores, ELC designation, and Educational Environment

<sup>2</sup> Consistent with University of California's undergraduate freshman criteria for admissions, non-academic variables in this study related to students' Parental Income, Parental Education, Demonstrated Leadership, Special Talents/Achievements/Awards, Community Service, Participation in Educational Preparation Programs (EPP), and Special Circumstances/Personal Challenges/Personal Growth.

## **Chapter I**

### **Introduction**

In the Fall 1996, California voters passed the California Civil Rights Act – most popularly known as Proposition 209 – by a 54% margin, which amended the California State Constitution to state that:

“The [state of California] shall not discriminate against, or grant preferential treatment to, an individual or group, on the basis of race, sex, color, ethnicity or national origin in the operation of public employment, public education, or public contracting” (Lungren, 1996)

#### **The University of California Post-209**

The passing of Proposition 209 initiated a ban on race-based admissions practices at state institutions throughout the state of California. Since the passing of Proposition 209, the University of California (UC) system has had a disastrous impact on the diversity and access of African American, Latino, and American Indian students, “resulting in a significant decline in the matriculation” of these communities at most UC campuses (Johnson, Mosqueda, Ramon, & Hunt, 2008, p. 2). Most notably, the enrollment of African American, Latino, and American Indian students dropped from 23% to 10% at UC Berkeley, and 20% to 13% at UC Los Angeles (UCLA), respectively (Orfield, 1998). Moreover, between 1995 and 1997, the University of California, experienced a 25% decline of African-American and a 31% decline of Latino applicants to the entire UC system since the Regents initiated the implementation of Proposition 209 (Karabel, 1998). In a more recent study on the access, equity, and diversity of African-American enrollment at the University of

California, Allen, Bonous-Hammarth, and Teranishi (2001) noted that since the passing of Proposition 209 in California, African-American and Latino enrollment at UCLA and UC Berkeley fell by roughly 50% since 1995 (Allen, Bonous-Hammarth, & Teranishi, 2001).

### **Impact of Proposition 209**

In recent years, courts have had a significant impact on the formulation of public policy surrounding affirmative action in college admissions practices in seeking a means to assure that candidates are admitted to an institution of higher learning in a fair and equitable fashion all while attempting to admit an academically competitive and diverse student body (Allen, 2005). Many of the challenges surrounding the use of race-based admissions practices have been particularly fueled by the growing legislative and judicial challenges facing affirmative action (Zwick, 2002, p. 130). Policies such as California's Proposition 209, "led the rush to roll back expanded access to higher education" in other states such as Arizona, Colorado, Missouri, Nebraska, Michigan, and Oklahoma (Allen, 2005, p. 20; Johnson, Mosqueda, Ramon, & Hunt, 2008).

Landmark court cases such as *Brown v. Board of Education of Topeka*, *Bakke v. Regents of the University of California*, and most recently with *Grutter v. Bollinger* as well as *Gratz v. Bollinger* have shaped the manner in how our country talks about race, equity, and fairness in our classrooms today (Allen, 2005). As a country, we have prevailed against the ideology of hate, discrimination, and segregation (Mills, 1997; Takaki, 2000). However, as we reach the close of the first decade of the 21<sup>st</sup> century it is evident that the struggle for access and equity to our institutions of higher

education “speaks volumes about openness and power relations in American society” (Allen, 2005, p. 18).

### **Legal Challenges Post 209**

Given the legal challenges facing admissions lawsuits post-209, cases such as *Castañeda v. The Regents of the University of California* (1999/2003) and *Rios v. The Regents of the University of California* (1998) have challenged the University of California’s post-209 admissions process by creating a preference for White, and other students from higher socioeconomic backgrounds, in two ways: 1) the admissions process showed preference to students taking Advanced Placement (AP) classes; 2) the over-reliance of the role that SAT I Reasoning scores showed preference to students who scored very high on the exam played a considerable role in the students being admitted to the University of California. For the sake of not undergoing further legal action the Regents of the University of California filed a Consent Decree in the *Castañeda* Case to initiate a *Comprehensive Review Admission Process* for the Fall of 2002 that would consider a full range of student accomplishments and personal circumstances (e.g. leadership, honors and awards, hours of community service, hardships, etc.) as well as taking into account a student’s academic and personal background (Allen, 2005; Johnson, Mosqueda, Ramon, & Hunt, 2008). “The comprehensive review process was instituted to improve the quality and fairness of admissions decisions at the University of California” (Johnson, Mosqueda, Ramon, & Hunt, 2008, p. 2).



## **K-12 Inequalities**

Studies have shown that much of what has contributed to African-American and Latino students' preparedness to handle the rigors of college as well as their test performance on standardized tests in today's schools have been attributed to poor school funding, under-qualified teachers, and poor curricula. Combined, these factors have systematically denied African-American and Latino children the ability to pursue a higher education (Losen, 2004; Martin, Karabel, & Jaquez, 2005; Orfield, 2004; Orfield, Frakenberg, & Lee, 2008; Rendon, Nora, Cabrales, Ranero, & Vasquez, 2008; Teranishi, Allen, & Solarzano, 2004).

Solarzano and Ornelas (2004) noted that of California's top 50 high schools that offer the most AP classes 49% of the classroom consisted of White/Caucasian students in comparison to 16% of Latino, and only 5% of African-American students. Furthermore, Ali, Oakes, and Rogers (2007) "found that 60% of African American and Latino students attend public high schools that offer an insufficient number of 'a-g' courses in comparison to 40% of White/Caucasian and Asian students" (as cited in Johnson, Mosqueda, Ramon, & Hunt, 2008, p. 5). Lastly, studies conducted on the validity of high-school grades in predicting student success beyond the freshman year at the University of California found that SAT I Reasoning scores are related to the quality of a student's high school, parental education, and their socioeconomic status (Geiser & Studley, 2003; Geiser & Santelices, 2007; Martin, Karabel, & Jaquez, 2005).

## The Geiser Studies

The Geiser studies are of particular importance, especially when discussing the impact that Proposition 209 has had on informing admissions policies and practices at the University of California, because the Geiser studies took on a statistical approach in the manner in which they conducted their case studies of each individual University of California undergraduate campus.

Geiser & Studley's (2003) study presents UC system-wide data for the eight undergraduate campuses, except UC Merced, examining the relationship between SAT I Reasoning and SAT II Subject<sup>3</sup> scores and the academic performance of close to ~78,000 undergraduate students entering the University of California in the Fall 1998. The study took on a three-fold approach examining: a) the relative predictive power that the SAT I Reasoning and SAT II Subject exam had in predicting the academic performance of the students', b) the effects that the socioeconomic status and family background had on the predictive validity of these tests across the student body, and c) the differential impact that the SAT I Reasoning and SAT II Subject exam had on various racial and ethnic groups. Geiser and Studley (2003) found that the students' SAT II Subject scores were better predictors of predictive first-year academic performance in comparison to the SAT I Reasoning exam. Surprisingly, when the authors controlled for the socioeconomic factors that may have contributed to standardized test performance, they found that the SAT II Subject exam was still a

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<sup>3</sup> The "Sat II: Subject Tests" was constructed by the College Board to assess a student's knowledge in particular areas of study. Currently, the SAT II consists of over 20 individual subject exams that include, but are not limited to, Writing, World History, Mathematics, Biology, Chemistry, Physics, French, Spanish, Chinese, and Modern Hebrew (Zwick, 2002, p.8)

*stronger* and *fairer* predictor of the students' academic grade performance in their first year of study.

Lastly, with respect to the differential impact that the SAT I Reasoning and SAT II Subject exam had across racial and ethnic groups, Geiser and Studley (2003) found that the SAT II Subject exam still served as a slightly better predictor of academic performance across *all* racial and ethnic groups in comparison to the SAT I Reasoning exam. Even though the findings suggest that the SAT II Subject exam was consistently a better measure of predictive achievement for the students in the study certain themes were prevalent and consistent with other research on standardized tests: a) both the SAT I Reasoning and SAT II Subject exam had a tendency to “over-predict” academic grade performance for ethnic minorities, and b) gaps in standardized test-performance were relatively large between-groups for both the SAT I Reasoning and SAT II Subject exams, which may inhibit the University of California's ability to evaluate a students' academic eligibility beyond these standardized measures.

What makes that Geiser and Studley (2003) study so pertinent to the research on college admissions is that Geiser and Santileces (2007) conducted a follow up study to determine the validity of high-school grades in predicting student success beyond the freshman year. Similar to the Geiser and Studley (2003) study, Geiser and Santileces researched a population sample comprised of *all* undergraduate students (~80,000 students) enrolled at the University of California undergraduate campuses. Again, the only University of California (UC) undergraduate campus not mentioned in the study was UC Merced. The study was not only quantitative, but also longitudinal

in nature, following a cohort of students entering the University of California in the Fall 2001 and tracking their college grade performance for four years consecutively.

Geiser and Santileces (2007) employed a multi-level and hierarchal linear modeling technique to examine the effects of higher-level organizational units, such as the clustering of students within campuses, the various academic disciplines that students engage in at each campus to get a comprehensive understanding on the predictive validity of student-level admissions criteria employed by the University of California. A key finding to this study, which was consistent with the previous study conducted by Geiser and Studley (2003), was that high school grade point average (HSGPA) was the only consistent predictive variable that was directly correlated to how well students did academically at the University of California, regardless of race or gender. With respect to SAT I Reasoning test performance, Geiser and Santileces (2007) also found that SAT I Reasoning test performance was contingent upon the school's Academic Performance Index (API), parental education, and socioeconomic status of the test-takers.

An interesting observation to note in this study are the limitations to the study, Geiser & Santileces (2007) are very intentional in stating that the reliability of the sample of students in the study are only limited to the study itself. They caution researchers to over generalize their findings to other colleges and universities due to the demographic and academic characteristics that their cohort of students exhibited at the point in time in which the study was conducted. Even though Geiser & Santileces's (2007) case study was comprehensive and rich in nature, they were very careful in stating the conditions of their findings may not be specifically relevant in

another time or academic setting. However, to Geiser & Santileces's credit, their 2007 study was able to support similar findings on an earlier cohort of students entering the University of California in the Fall 1998 (Geiser & Studley, 2003).

### **The Effects of Comprehensive Review**

In 2008, UCLA's Ralph J. Bunche Center for African-American studies published a study examining how each UC campus instituted their Comprehensive Review process as well as examining how each UC campus' admissions process affects African-American [and Latino] students' access to the UC system between 2002-2007 (Johnson, Mosqueda, Ramon, & Hunt, 2008). This research study critically analyzes the University of California's comprehensive review process, initiated in 2002, in response to the dropping numbers of African-American enrollment within the UC system since the enactment of Proposition 209. Since the enactment of proposition 209 in 1996, the report finds that the number of students – overall – who are admitted to the University of California have increased, however, the number of African-American freshman has not kept pace, and the enrollment of Latino students has remained stagnate system-wide.

Since the enactment of Proposition 209 the report finds that the representation of African-American students at UC Berkeley, UCLA, and UC San Diego (UCSD) posted dramatic drops of 34, 22, and 30 percentage points since 1997. The Ralph J. Bunche report (2008) raises some serious concerns regarding the inconsistencies of how each respective UC campus administers their Comprehensive Review process to increase the enrollment of African-Americans to their respective campuses, further citing that each campus, with the exception of UCSD failed to produce the weight that

they place on HSGPA, Class Rank, and standardized test scores for their admissions processes. Based on their analyses of the University of California's comprehensive review process, the authors noted that there was a common over-reliance placed on traditional academic measures of achievement – HSGPA, Class Rank, and SAT I Reasoning & SAT II Subject scores, that dilute the consideration that non-academic factors have on African-American and other underrepresented students applying to the University of California. The report further cited that the consideration of other indicators of merit (e.g. tenacity, creativity, commitment to community service, or the academic achievement that students have within the context of overcoming challenges) should have stronger more equitable weight in the admissions process to increase the diversity across all the undergraduate campuses.

The Ralph J. Bunche report's (2008) findings are consistent with previous studies conducted by Contreras (2003) who conducted a case study across three UC Campuses: UCLA, UC Davis, and UC Riverside. Contreras (2003) found that the role of SAT I Reasoning and SAT II Subject test score performance played a significant effect on increasing a student's likelihood to be admitted to each respective campus. Contreras (2003) also found that 87% of students attending California schools in the lowest API bracket were of Latino and African-American descent. Furthermore, Contreras (2003) also found that schools in the lowest API bracket also offered the fewest honor and AP courses which made these students' eligibility of admissibility at a disadvantage to be competitive (Allen, 2005; Johnson, Mosqueda, Ramon, & Hunt, 2008; Martin, Karabel, & Jaquez, 2005; Swail, Cabrera, Lee, Williams, 2005; Rendon, Nora, Cabrales, Ranero, & Vasquez, 2008). Lastly, Contreras (2003) also found that

the inconsistent application of the scoring process via the comprehensive review throughout the UC system made the admissions process unfair to students who may be qualified to be admitted to some campuses, but are seen as undesirable at other campuses within the UC system that have similar requirements for admissions.

Contreras' (2003) findings were consistent with a study conducted by Martin, Karabel, and Jaquez's (2005) on their study on High School Segregation and Access to the University of California, found that California high schools were unequal with respect to AP courses available to African-American and Latino students attending low API schools, and students attending schools in economically disadvantaged areas. Martin et al. (2005) found that the high schools that fell within the top 50 public feeder schools to the University of California (UC) offered AP courses that comprised of 6% of the school's entire curriculum whereas the high schools that produced the least amount of applicants to the University of California (i.e. the bottom 50 public feeder schools) only had AP courses that comprised of 2% of the school's entire curriculum. In addition, the researchers found that two-thirds of all courses offered at the top public feeder schools counted towards fulfilling UC eligibility requirements whereas less than half of the courses offered at low-tier feeder schools fulfilled UC requirements. An interesting finding to this study noted that African-Americans attending schools with a high African-American population were more likely to take UC eligible courses, but were less likely to be admitted to the University of California. In addition, the study found that the racial isolation of Latino students in high school was associated with low rates of application to the University of California. The rates of applications of Latino high school graduates were more likely to come from Latino

students that attended a school in which “Latinos composed a very small fraction of the student body” as opposed to schools in which Latinos composed a moderate to large percentage of the student body (Martin et al., 2005, p. 320).

The University of California’s over-reliance on their use of using students’ standardized test scores when making admissions decisions presents considerable limitations in capturing a well-rounded perspective of students’ ability to be admitted to a UC campus, especially for African-American and Latino students. Johnson et al. (2008) noted that the SAT I Reasoning test is still the single, most overused variable in the UC Comprehensive Review process. The Ralph J. Bunche (2008) report further cited that the over-reliance on standardized test performance dilutes the impact that other non-academic indicators of merit “(e.g. tenacity, creativity, commitment to community service, or academic achievement within the context of personal hardships or challenges) could and should have” in the Comprehensive Review process (Johnson et al., 2008, p. 42). Research supports that the over-reliance on standardized test performance “adversely impacts underrepresented and economically disadvantaged backgrounds” due to the fact that standardized test performance can be attributed to a vast range of factors that include, but are not limited to “stereotype threat, poor schooling conditions, and low socio-economic status” (Johnson et al., p. 42; Allen, 2005; Briggs, 2001; Camara & Powers, 1999; Ewers, 2005; Geiser, 2008; Geiser & Studley, 2003; Geiser & Santelices, 2006, 2007; Kane 1998a; Losen, 2004; Orfield, 2004; Orfield & Frakenberg, 2008; Martin, Karabel, & Jaquez, 2005; Rendon et al., 2008; Steele, 1999; Teranishi, Allen, & Solarzano, 2004; Zwick 2002, 2004, 2007).



## **Admissions and Standardized Testing**

Over the past three decades, group differences on college admissions tests have been an active field of research. “More specifically, race and gender differences in the validity and predictive accuracy of college admissions tests have been studied intensely, both to understand the technical issues involved and also to grasp the potential implications of these differences for college admissions policies and practices” (Young, 2004, p. 299-300). The method of admitting students to institutions of higher education based on their test scores and previous academic achievements is an established practice that often serves to facilitate or inhibit the ability for students to participate in systems of higher education.

## **Standardized Admissions Tests Today**

The historical ties that the SAT I Reasoning exam has to the concept of innate natural intelligence coupled with the belief that such abilities can be defined and meaningfully measured have, often times, called the validity and fairness of the exam into question. Lohman (2004) in his analysis of the use of standardized tests in assessing underrepresented communities in college admissions noted that aptitude tests, like the SAT I Reasoning exam, rarely contain “specific content” or “conceptual” knowledge based questions that are indicative of today’s high school curriculum (p. 42). Many students today, attend high schools that emphasize content based curriculums that are not consistent in teaching students the necessary problem solving and critical thinking skills essential to do well on standardized admissions tests; this is especially true for students from economically disadvantaged areas (Lohman, 2004; ACT National Curriculum Survey, 2009).

Likewise, Perez (2004) in her examination of test alternatives in today's college admissions process noted that the debate over which testing instrument to require fails to acknowledge the larger issue at hand: all current admissions exams are not reflective of today's high school curriculum, and changing admissions requirements to require the American College Test (ACT)<sup>4</sup> or the SAT II Subject exam does not solve the problem. Ironically, the ACT and the SAT I Reasoning and SAT II Subject exam have been identified by the College Board to be solely based on the academic knowledge and skills typically taught in high school college preparatory curriculums" (Perez, 2004, p. 353). On the other hand, with the SAT I Reasoning exam, colleges and universities are simply perpetuating "a faulty paradigm that test scores equal merit and will narrow the pipeline through which traditionally underrepresented groups struggle to pass" (Ferguson, 2004, p. 26). Furthermore, Kirst (2004) in his commentary of the disconnect on how the SAT's play in our K-16 education system also noted that the educational standards and standardized tests that are set in various K-12 systems across the country are more closely aligned only with students that are enrolled in AP and Honors curriculums (p. 94). Despite the various changes and the evolution of the SAT I Reasoning exam, it still measures what it did back in 1926: developed math and verbal ability, and still is, at its very core, an intelligence test (Sedlacek, 2004, p. 2).

### **A Noncognitive Alternative**

Given the inequities within today's K-12 curriculum and the pervasive debate

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<sup>4</sup> The American College Test (ACT) is based on an analysis of what is taught in grades 7 through 12 in each of four areas – English, Math, Social Studies Reading, and Natural Science Reasoning (Zwick, 2002, p. 12).

surrounding the use of standardized testing, admissions officials are “continually looking for appropriate ways to assess individuals with unconventional or non-traditional backgrounds and experiences” (Sedlacek, 1998, p. 11). Sedlacek (2004), in his book, *Beyond the Big Test: Noncognitive Assessment in Higher Education*, examines the importance that noncognitive variables play in today’s college admissions process. Grounded in over thirty years of research, Sedlacek (2004) supports the integration and use of a supplemental noncognitive questionnaire in conjunction with a student’s high school record. He argues that noncognitive assessments can provide colleges and universities with information about a person’s potential to succeed that is not readily seen through the traditional standards of assessment (i.e. a student’s high school grade point average and standardized test scores). Sedlacek’s (2004) noncognitive assessment model (NCAM) allows colleges and universities the ability to evaluate incoming students on a broad range of significant attributes relating to adjustment, motivation, positive support systems, that have been shown to affect the learning outcomes and persistence of all students in and outside of a classroom environment. The noncognitive variables are as follows:

- **Positive self-concept:** Demonstrates confidence, strength of character, determination, and independence.
- **Realistic self-appraisal:** Recognizes and accepts any strengths and deficiencies, especially academic, and works hard at self-development; recognizes need to broaden his or her individuality.
- **Successfully handling the system (racism):** Exhibits a realistic view of the system on the basis of personal experience of racism; committed to

improving the social conditions of the existing system; takes an assertive approach to dealing with existing wrongs, but is not hostile to society and is not a “cop out”; able to handle racist system.

- **Preference for long-term goals:** Able to respond to deferred gratification; plans ahead and sets goals.
- **Availability of strong support person:** Seeks and takes advantage of a strong support network or has someone to turn to in a crisis or for encouragement.
- **Leadership experience:** Demonstrates strong leadership in any area of his or her background (e.g. church, sports, non-academic groups, gang leader, and so on).
- **Community involvement:** Participates and is involved in his or her community.
- **Knowledge acquired in a field:** Acquires knowledge in a sustained or culturally related way in any field (Sedlacek, 2004, p. 37).

### **Research Supporting the Use of Noncognitive Variables**

In recent years, much evidence has been generated to support the use of a noncognitive assessment model, particularly to better understand the factors contributing to the persistence and academic success of students who have not had the experience of having a typical middle- or upper-middle class upbringing. For example, Hernandez (2000) found that “validating students’ desires to succeed and encouraging their optimistic outlook was a central theme” for persistence in his study on first generation Latino college students (p. 581). Hernandez further cited that the

single most influential factor contributing to the persistence of the students' in his study related to the student's positive outlook on their abilities to succeed, a term that Sedlacek (2004) calls "positive self-concept and realistic self-appraisal"(p. 53).

Similarly, Rendon, Jalomo, and Nora (2000) also found that the presence of "validating agents" (e.g. teachers, counselors, administrators, a strong support system, etc.) in the lives of nontraditional students transformed them into powerful learners. The validating agents in their study took an active interest in the student's lives, provided them with the necessary encouragement and support in affirming their capabilities of doing academic work, and supported these students' in pursuing their academic endeavors and social adjustment in their new learning environments (Rendon, et al., p.146-7).

With respect to Sedlacek's concept of *successfully handling a "culturally-insensitive" or "racist" system*, Chang (1999) in a study conducted to determine the educational outcomes of a racially diverse student body, revealed that student's who socialized across different racial and ethnic communities and discussed racial/ethnic issues in- and outside of the classroom had higher retention rates than those students who did not participate in these interactions. The students who had these types of multicultural interactions in the study were also, overall, more satisfied with their college experience than those who did not have these experiences. In addition, the students who engaged in these types of multicultural interactions also exhibited higher, and more, positive effects on these students' intellectual and social self-concept (Chang, 1999; Hurtado, Milem, Clayton-Pedersen, & Allen, 1999).

In summary, what is of paramount importance for this proposed research

study is not to condemn one assessment model for another, but to systematically explore the benefits of employing a consistent noncognitive assessment model and giving it equal weight, as a method of increasing the predictive value of entrance assessment for *all* students, especially for those with nontraditional backgrounds and experiences.

### **Standardized Tests and the Courts**

In recent years, courts have had a significant impact on the formulation of public policy surrounding standardized testing in college admissions practices in seeking a means to assure that candidates are admitted to an institution of higher learning in a fair and equitable fashion all while attempting to admit an academically competitive and diverse student body. Many of the challenges surrounding the use of standardized admission testing have been particularly fueled by the growing legislative and judicial challenges facing affirmative action (Zwick, 2002, p. 130). Policies such as California's Proposition 209, Washington's Initiative 200, and court decisions such as *Hopwood v. Texas* have all banned the consideration of race as a factor to be admitted to their respective state's public colleges and universities (Zwick). "Fearing that minorities would be left out in the cold without the protective cloak of affirmative action, some educators and government officials have advocated to de-emphasize" the use of standardized admissions tests in today's college admissions process, arguing that the use of standardized admissions tests limit the opportunities for people of color to pursue a higher education (Zwick, p. 130). Bills reducing the roles of standardized admissions tests have been introduced in several states such as Georgia, Washington, Michigan, and even before the U. S. Congress in

2000. These efforts have met with mixed success due in part to the lack of psychometric expertise that many judges have on the topic of standardized testing to fully understand the issues at hand when making a ruling on such a complicated topic (Zwick).

Given the legal challenges facing admissions lawsuits, cases such as *Castaneda v. The Regents of the University of California* (1999/2003) and *Farmer v. Ramsey* (2001/2002) have raised the question of using a noncognitive variable approach as an alternative in considering race in today's college admissions process (Sedlacek, 2005). In the case involving *Castaneda v. The Regents of the University of California* (1999/2003), the National Association for the Advancement of Colored People's (NAACP) Legal Defense and Education Fund filed a lawsuit on behalf of African-American, Latino, and Pilipino American applicants to UC Berkeley, *Castaneda v. Regents of the University of California* (1999/2003) alleged that the university's admission procedures unfairly disadvantaged applicants of color due in part to the university's over reliance on standardized tests such as the SAT I Reasoning exam (*Castaneda v. University of California*, 1999/2003). The plaintiffs in the case also cited that the university's admissions practices gave unfair preferential consideration to students with access to special honors courses such as AP and International Baccalaureate (IB) courses that are less accessible in high schools largely attended by African-American, Latino, and Pilipino-American students (*Castaneda v. University of California*, 1999/2003). In lieu of pursuing further legal action with the NAACP Legal and Education Fund, UC Berkeley filed a consent decree with the plaintiffs to implement a "comprehensive review" to their admissions process "in

which all candidates are assessed and selected based on academic (i.e. HSGPA and standardized test scores) and non-academic criteria that would include, but not be limited to, the students' personal circumstances, hardships and challenges they may have overcome, demonstrated leadership ability, talent, and tenacity" (Consent Decree, 2003, p. 7).

In the case involving *Farmer v. Ramsay* (2001/2002), a White male, Rob Farmer, who had been denied admission twice to the University of Maryland, School of Medicine, brought the case before a federal court in Maryland (*Farmer v. Ramsay*, 2001/2002). Farmer contended that the School of Medicine manipulated the "non-cognitive" criteria in order to admit minority students with weak grades and test scores. The University of Maryland, School of Medicine was able to produce adequate evidence that all applicants with academic records (i.e. MCAT scores, undergraduate GPA), personal statements, and letters of recommendation similar to those of Farmer were denied admission. The Fourth Circuit Court of Appeals affirmed the original decision ruling in favor of the University of Maryland School of Medicine citing that Farmer would not have been admitted to the School of Medicine even if race had played no role in the decision process (*Farmer v. Ramsay*, 2001/2002).

The noncognitive variable method, as shown above, has yielded important attributes that have correlated well with a student's success and has been shown to be legal and fair to all applicants before a court of law. Most recently, the Supreme Court of the United States ruled in favor of the University of Michigan Law School in *Grutter v. Bollinger et al.* (2002) citing that the University of Michigan Law School



could consider race as one of many factors in admitting students, a similar logic used by Justice Powell in his dissenting opinion in the case involving *The Regents of the University of California v. Bakke (1978)* (Sedlacek, p. 10). What was of particular importance involving this case was the expert testimony of David White, Director of Testing for the Public a nonprofit education research corporation in California. White (2001) was able to determine, based on his company's research conducted over a 25-year period, that standardized tests like the SAT I Reasoning test and the Law School Admission Test (LSAT) were racially and culturally biased, primarily discriminating against students from African-American and Latino backgrounds, regardless of economic status. White (2001) noted that low-income white students received higher test scores than upper middle class African-American, Latino/a, Native-American, and other underrepresented minority students with similar high school and undergraduate grade point averages. White (2001) further noted that African-American, Latino/a, Native-American and other underrepresented minority students who overcome the inequality of educational opportunity in K-12 education and the racially hostile environment on college campuses to earn the same GPAs as their white counterparts score far lower on the LSAT. For example, "on average [African-American] students earned 9.2 points and Latino students earned 6.8 points lower on the Law School Admissions Test (LSAT) with similar undergraduate grade point averages as their White/Caucasian counterparts applying to the University of Michigan Law School" (White, 2001, p. 147). White's (2001) research is of particular importance because his findings are consistent with other researcher findings in the areas of disparities in standardized test performance amongst African-American, White/Caucasian, and

Latino test-takers (Briggs, 2001; Callam & Crocker, 2004; Camara & Powers, 1999; Ewers, 2005; Gandara & Lopez, 1998; Hernandez & Lopez, 2004; Kane 1998a, 1999b; Pearson, 1993; Sedlacek, 2004; Young, 2001; Zwick 2002, 2004, 2007).

### **Theory of Multiple Intelligence**

Sternberg's (1985), a psychologist at Yale University, triarchic theory human intelligence recognizes that the characteristics that influence a person's behavior, their readiness and motivation to learn, the ability to successfully use previously acquired knowledge appropriately are all factors of aptitude that are not readily seen in standardized admissions tests (Lohman, 2004; Sedlacek, 2004). Sternberg's (1985) theory suggests that intelligent individuals are able to capitalize, negotiate, and balance a set of *analytical, creative, and practical* abilities that would allow them to find ways to maximize their strengths while at the same time compensating for, and remediating, their weaknesses (Everson, 2004, p. 87).

The *analytic, or componential*, abilities of a person are characterized as the aspect of intelligence that is typically associated with the reasoning components of traditional literacy, math, and problem solving skills readily seen in high school grade performance and standardized tests like the SAT I Reasoning exam (Everson, 2004; Sedlacek, 1998, 2004; Sternberg, 1985). In contrast, one's *creative or experiential* abilities encompass an area of intelligence that accounts for one's ability to be adaptive and interpret information through a variety of contexts (Everson; Sedlacek; Sternberg). "Standardized tests, however, do not appear to measure this type of intelligence" (Sedlacek, 2004, p. 28). Lastly, the *practical or contextual* abilities that Sternberg (1985) has been able to identify as a formidable area of intelligence, that is

all too often overlooked in educational testing, relates to “a person’s ability to understand, adapt, and negotiate a ‘system’ to his or her advantage” (Sedlacek, 1998, p. 8). This last aspect of intelligence is especially critical in contextualizing the experience of a person from a nontraditional background. The manner in which one adapts and makes meaning of their new environment, one’s ability to overcome the social obstacles presented before them, and the manner in how a person cognitively and morally develops within the context of their new environment are all critical components of success for people from nontraditional backgrounds beyond the first year of college (Everson; Sedlacek).

### **Emotional Intelligence**

Outside of the field of education there has been considerable research in the field of business administration to show a correlation between the *emotional intelligence* of business leaders and the influence the productivity, nature of working relationships, and employee satisfaction of individuals in the workplace (Gardner, 2006). Goleman, Boyatzis, and McKee (2001) examined close to 200 international, global enterprises to study the relationship between the emotional intelligence among leaders in the organization, and how the emotional characteristics of the leader affects the work environments through the expression of their moods. Goleman’s research on emotional intelligence has been able to identify correlations linked to performance in the organization, and how leaders create organizational work environments through the expression of their moods. Goleman (2004) suggests that there are factors of everyone’s emotional intelligence that are innately hard-wired in our neurological and genetic make-up from birth.

However, Goleman (2006) also suggests that through our experiences we are able to re-learn and adapt our leadership style to maximize our emotional intelligence in the work place or in the classroom setting, a phenomenon that Sedlacek (1998, 2004) calls *the ability to negotiate or handle a system* which has been attributed to positively affect a students' persistence in the field of education. Furthermore, research has also found that emotional intelligence is crucial to the overall development of students in how they perform in and out of a classroom setting, as studies have found that students participating in social emotional learning programs perform at a higher level than those who do not (Goleman, 2004, 2006; Goleman, Boyatzis, & McKee, 2001; Sedlacek, 1998, 2004).

Given the range educational and social experiences and the diversity of today's high school students, Sternberg's (1985) theory of multiple intelligences coupled with Sedlacek's NCAM and Goleman's theory on Emotional Intelligence, offer a logical justification for using a noncognitive component to today's college admissions process in a fair and equitable manner.

### **The University of California and Noncognitive Variables**

Currently, the University of California's undergraduate admissions process incorporates a Noncognitive component in the Undergraduate Admissions Comprehensive Review process that attempts to "admit and enroll a student body that demonstrates strong academic achievement and exceptional personal talent that represents the broad diversity of talents, abilities, personal experience, and backgrounds characteristic of [the state of] California" (<http://www.ucsd.edu>, March 15, 2009).

The noncognitive variables that are considered are as follows:

- **Educational environment:** A disadvantaged educational/ school environment indicates that the applicant attends a California high school that is among the 4th or 5th quintile of all California public high schools using the following academic indicators: high school completion rate, percentage of students enrolled in college preparation classes, percentage of students enrolled in Advanced Placement/ Honors courses, percentage of students admitted to the UC or California State University (CSU) system, and percentage of students taking the SAT I Reasoning Test or the ACT exam.
- **Low family income:** Consideration will be given for applicants based upon family size and low income.
- **First generation college attendance:** Applicants for whom neither parent is a college graduate (2-year or 4-year).
- **Demonstrated leadership:** Extensive or recognized leadership roles in school and/ or community organizations/ activities.
- **Special talents/achievements/awards:** Noteworthy accomplishments in a public venue in visual and performing arts, communications, athletic endeavors, as well as demonstrated written or oral proficiency in a language other than the student's native language.
- **Community and volunteer service:** Demonstrated and substantial involvement in charitable work or community service.
- **Sustained participation in academic development preparation programs (EPP):** Consideration is given for active and sustained participation in

programs designed to improve academic achievement and access to educational opportunities. The criterion will be measured by time and depth of participation, and by the academic merit of the program. Such programs include EAOP, MESA, Puente, Upward Bound, AVID, and many more.

- **Special circumstances/personal challenges:** Circumstances that may be a positive or negative force in an applicant's life, and the applicant's response to unusual challenges, will be considered. These circumstances may include, but are not limited to, personal or family situation, the student's need to work full time, disability (physical or learning), veteran status, single parent household, foster care, personal growth, or life-altering event(s).

([www.ucop.edu](http://www.ucop.edu), March 15, 2009; [www.ucsd.edu](http://www.ucsd.edu), March 15, 2009)

### **Purpose of Study**

The purpose of this research is to examine the ways in which noncognitive factors are used in conjunction with standard measures of assessment in today's comprehensive admissions review process at the University of California. This research seeks to clarify whether if there is a differential impact on how African-American, White/Caucasian and Latino students are admitted via the University of California's Comprehensive Review process. This study further seeks to determine if there is a difference in the academic profile – i.e. HSGPA, Standardized Test Scores, a student's Eligibility in their Local Context [ELC], and Educational Environment – among African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process. Furthermore, this study seeks to determine if there are differences in the non-academic characteristics -

i.e. Social Environment (Parental Income), First generation college attendance, Demonstrated Leadership, Special Talents/Achievement/Awards, Community/Volunteer Service, EPP, Special Circumstances/Personal Challenges/Personal Growth - of African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process.

Please note that what makes this study unique within the college admissions research is that this study focuses on the academic and non-academic factors that contribute to access to the University of California. The purpose here is to further determine the role and limitations that a student's academic and non-academic profile have in relation to adequately assessing the potential of intellectual excellence for nontraditional communities, and to identify if there is a differential impact that the Comprehensive Undergraduate Review Process has on the admissions process at the University of California.

### **Statement of Problem and Research Questions**

The research questions for this study examine how the University of California's application of the Comprehensive Review Process affects the pool and admissibility of African-American, White/Caucasian, and Latino college-bound students applying to the University of California. In addition, this study also seeks to examine whether the "percentage weight" given in the University of California's Comprehensive Review process affects how African-American, White/Caucasian, and Latino college-bound students are admitted to the University of California. The primary research questions explored in this study are:

R1 – What are the differences in the acceptance rates of African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process?

R2 – What are the differences in the academic profile – i.e. HSGPA, Standardized Test Scores, a student’s Eligibility within the Local Context (ELC) designation, and their Educational Environment – among African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process?

R3 – What are the presumed causal relationship between the *academic* variables – i.e. HSGPA, Standardized Test Scores, a student’s ELC designation, and Educational Environment – and *non-academic* variables - i.e. Social Environment (Parental Income), First generation college attendance (Parental Education), Demonstrated Leadership, Special Talents/Achievement/Awards, Community/Volunteer Service, EPP, Special Circumstances/Personal Challenges/Personal Growth – to determine admissions to the University of California under the Comprehensive Review process?

### **Summary**

This research paper will explore the role that academic variables and noncognitive factors play within the University of California’s undergraduate comprehensive admissions review process to see how these two distinct processes affect the candidacy of African-American, White/Caucasian, and Latino students applying to the University of California [UC]. Historically, the University of



California has used students' academic record – i.e. standardized test scores, HSGPA, ELC designation, and Educational Environment - as the dominant criterion for admissions, and as a means to increase the institutional diversity of its student body all while trying to remain academically competitive. Putting a stronger emphasis on the noncognitive components within the UC's comprehensive review process in a fair and equitable manner would improve the assessment of eligibility for *all* students, especially for those with nontraditional backgrounds and experiences.

### **Definition of Terms**

In this section, operational definitions of three terms frequently cited in this research study are provided:

**A-G coursework** - The following sequence of high school courses is required by the Academic Senate of the University of California as appropriate for fulfilling the minimum eligibility requirements for admission to the University of California. The "a-g" coursework requirements can be summarized as follows:

**(a) *History /social science*** – Two years, including one year of world history, cultures, and historical geography and one year of us history or one-half year of us history and one-half year of civics or American government.

**(b) *English*** – Four years of college preparatory English that include frequent and regular writing, and reading of classic and modern literature.

**(c) *Mathematics*** – Three years of college preparatory mathematics that include the topics covered in elementary and advanced algebra and two- and three-dimensional geometry.

*(d) Laboratory science* – Two years of laboratory science providing fundamental knowledge in at least two of these three disciplines: biology, chemistry, and physics.

*(e) Language other than english* – Two years of the same language other than English.

*(f) Visual & performing arts* – One year, including dance, drama/theater, music, or visual art.

*(g) College preparatory elective* – One year (two semesters), chosen from additional "a-f" courses beyond those used to satisfy the requirements above, or courses that have been approved solely for use as "g" electives.

([http://www.ucop.edu/a-gGuide/ag/a-g/a-g\\_reqs.html](http://www.ucop.edu/a-gGuide/ag/a-g/a-g_reqs.html), June 6, 2010)

**African-American** - For the purposes of the research study it is important to understand that the term African-American reflects a laden term that is being used to reflect the racial and ethnic descriptor used by the University of California on the undergraduate freshman application for the Fall 2007-2009 enrollment cycles.

**Latino** – For the purposes of the research study it is important to understand that the term Latino reflects a laden term that is being used to reflect the variety of ethnic descriptors encompass this demographic, beyond the Mexican-American/Chicano descriptor used by the University of California. It is important to note that Latinos are a heterogeneous group, representing a number of different national and ethnic origins, varying by social class, each with their own distinct histories, and differing from

country of origin (Chilman 1993; as cited in Hernandez & Lopez, 2004). “Racially, Latinos can be Black, Asian, Indigenous, White/European, or a mixture of these four. Latinos may come from one of 25 Spanish speaking countries, and although, the Spanish language is a common bond, variations exist from region to region, often with a mixture of dialects” (Hernandez & Lopez, p. 38). It is also important to note that Latinos differ not only in race, but also in socioeconomic background, educational attainment, immigration status, and origin of descent (Arbona & Novoy, 1990).

**Noncognitive/Non-academic** – The term noncognitive and non-academic will be used interchangeably throughout the course of this research study. The term noncognitive and non-academic is used here to refer to variables relating to adjustment, motivation, self-concept, values, and beliefs, rather than the traditional verbal and quantitative areas typically measured by standardized tests [and HSGPA] (McMillan & Schumacher, 2001; Sedlacek, 2004). “Noncognitive variables are useful for assessing all students, but they are particularly critical for assessing nontraditional students, since standardized tests and prior grades may afford only a limited view of their potential” (Sedlacek, 2004, p. 36).

**SAT I Reasoning** - The SAT I Reasoning exam here refers to the current version of the exam initiated by the College Board in March 2005. The current design of the exam serves to enhance its alignment with current high school curricula and emphasizes the need to use the necessary skills to be successful in college (Lawrence, Rigol, Essen, Jackson, 2004). To highlight some of the significant changes to the

exam, the “verbal reasoning” section of the exam has been renamed the “critical reading” section. The analogies section, which is not covered in most high school English courses, have been replaced with “short and long reading passages from a variety of fields, including science and the humanities” (Lawrence et al., p. 73).

The math section has also been changed to reflect the current high school curricula, “current SAT I Reasoning test takers are assumed to have had at least a year of high school algebra and geometry, but the math section of the new SAT I Reasoning will include items from more advanced courses such as second-year algebra”; concepts involving quantitative comparisons, that are not a part of classroom instruction have been eliminated (Lawrence et al., p. 73; Ewers, 2005).

The biggest change that the SAT I Reasoning exam has undergone is the implementation of a new 50-minute, 800 point, section involving a writing test along with multiple-choice questions on improving sentences and identifying errors in diction or grammar and a student essay. The writing test will measure basic writing skills, not creative writing ability, “students do not have to know technical grammatical terms, but must be able to fix bad sentences” (Rubin, 2005, p. 54).

The essay section of the exam involves a prompt that lays out a topic, and then asks an open-ended philosophical question to be answered in 25 minutes (Lawrence et al., 2005; Rubin, 2005). For example, in June 2005, “some students were given a paragraph explaining that many people intentionally forget their past to become successful, while others build their lives on personal histories. Then they were asked to write about this: ‘Do memories hinder or help people in their effort to learn from the past and succeed in the present?’” (Rubin, p. 54).

**Underrepresented and Nontraditional** – The term underrepresented and nontraditional will be used interchangeably throughout the course of this research study. Consistent with the operational term that Sedlacek (2004) provides, the term nontraditional refers to people who have had experiences that are not typical of those in traditional power groups, especially White/Caucasian, middle-class, heterosexual, males of European descent. The term nontraditional also refers, but is not limited, to people with cultural experiences different from those of White/Caucasian, middle-class, heterosexual, males of European descent, those with less power to control their lives, and who have experienced discrimination in the United States (Sedlacek, p. 4-5).

**White/Caucasian** - For the purposes of the research study it is important to understand that the term White/Caucasian reflects a laden term that is being used to reflect the racial and ethnic descriptor used by the University of California on the undergraduate freshman application for the Fall 2007-2009 enrollment cycles.

## Chapter II

### Literature Review

The review of the literature explores the factors that address reasons why a gap in standardized test performance occurs among African-American, White/Caucasian, and Latino test takers. This section of the research study further addresses identifiable factors and strategies that inform our literature on the areas of college preparation, and access for students with nontraditional backgrounds and experiences to four-year colleges and universities.

Several studies have examined why a persistent test-score gap exists. Researchers, social theorists, politicians have offered an array of reasons for these test-score differences. The first section of the literature review discusses an overview of research surrounding the issues and trends involving standardized testing. The second section of the literature review focuses on issues ranging from *socioeconomic*, *cultural*, *linguistic* as well as issues involving *test bias*. The third section of the literature review explores issues involving *academic preparedness*, *the quality of one's education*, and notions of *stereotype threat* to further the understanding as to why a performance gap exists amongst test-takers.

#### Overview of Research

One of the most prominent issues facing American higher education today is the use of standardized admissions testing in assessing a student's ability to attend the most selective colleges, graduate schools, and professional schools. For decades, college officials have used the Scholastic Assessment Test (SAT I Reasoning), and its cousin, the ACT, as a primary way of assessing "a student's academic development to

date, and to predict the likelihood of their success in college” (Lohman, 2004, p. 41). The use of standardized testing has become a prominent issue of today’s educational landscape, and concerns about the misuse of such tests have long been the subject of public concern (Atkinson, 2004; Martinez, 2004; Perez, 2004; Sedlacek, 2004). The vast majority of colleges and universities today use standardized testing as a means to help predict the performance outcomes of first-year college students (Zwick, 2002). “Good evidence suggests that standardized testing has the capacity to help predict first-year college grades, especially when used in conjunction with a student’s high school record. In addition, it is well documented that students from families with higher income levels generally score better than students from lower income families” on standardized tests like the SAT I Reasoning exam (Sedlacek, 1998, p. 5).

Furthermore, it is also important to note that standardized test scores only account for one of many factors used when predicting freshmen grades, and are far less representative in predicting the graduation and persistence rates of college students. Moreover, the body of research on “the validity of scores on the standardized admissions tests (SAT I Reasoning, ACT, and so on) has found that standardized admissions tests:

- Predict first-year grades fairly well for traditional students (i.e. White middle-class and upper-class males).
- Predict first-year grades less well for nontraditional students (i.e. cultural, racial, gender groups, etc.)
- Do not predict grades beyond the first year for any students, and
- Do not predict persistence or graduation well for any students in any year”

(Sedlacek, 2004, p. 59-60).

Yet, the methods in which colleges use to judge the academic merits of students today are no longer focused on how well they do in the classroom, but how well they do on a standardized testing instrument. Standardized testing has become such an established part of the academic and popular culture that the average outcomes of a student body's test performance are now used to assess the quality of high schools, colleges, state education systems, and neighborhoods (Zwick, 2002; Geiser, 2008); "even real-estate values fluctuate with the average [SAT I Reasoning] scores of the community's schools" (Lemann, 2004, p. 12).

Given the concerns regarding the use surrounding standardized testing as a means of assessment in today's college admissions process, there is still a widely held belief that doing well on these exams is the key of being admitted to the most selective colleges and universities in the country, "which, in turn, is widely believed to be the key to a life of prestige and prosperity" (Lemann, 1999b, p. 52). "The overwhelming role of standardized tests in determining access to higher education inevitably – and appropriately – gives rise to questions about the fairness and validity of the tests and about the accountability of the test makers" (Zwick, 2002, p. 13). The irony in all of this is that the SAT I Reasoning exam began as an effort to provide all students, regardless of background, the ability to benefit from a higher education (Atkinson, 2004; Lemann 1999a).

### **Issues and Trends**

"Since the 1960's, many scholars and organizations have urged the testing industry and institutions of higher education to make standardized tests and



admissions policies more equitable for all candidates” (Sedlacek, 1998, p. 6). Developing such a goal, however admirable, is easier said than done. It is an indisputable fact that the concerns surrounding the use of standardized admissions tests in today’s college admissions process has become "a focal point of racial tension" (Lemann, 1999b, p.54). The use of standardized testing has been seen as a damaging force in improving access to higher educational institutions among [African-American] and Latino test-takers. Widening gaps between men and women, urban and suburban students, and members of other various racial and ethnic groups have all shown that minority students, on average, earn lower scores than their [White/Caucasian] counterparts (Healy, 1999, p. A28); making these students less competitive for admission into highly selective colleges than their White counterparts (Duran, 1994).

There have been many explanations as to why a persistent test-score gap exists. Researchers, social theorists, politicians have offered an array of reasons for these test-score differences, ranging from, *socioeconomic* (Briggs, 2001; Camara & Powers, 1999; Ewers, 2005; Kane 1998a; Zwick 2004), *cultural* (Callam & Crocker, 2004; Hernandez & Lopez, 2004; Kane, 1998b), *linguistic* (Pearson, 1993; Gandara & Lopez, 1998; Callam & Crocker, 2004), and *test bias* (Bowen & Bok, 1998; Freedle, 2002; Schmidt & Camara, 2004; Sedlacek, 2004; Young, 2001; Zwick 2002, 2004) to shed light as to why a persistent test score gap exists amongst African-American, White/Caucasian, and Latino test-takers (Geiser, 2008; Zwick, 2002, 2004, 2007).

An exploration of the reasons attributed to this phenomenon begins to reveal that a persistent scoring gap between African-American, White/Caucasian, and Latino

test performance are related to an array of issues. Unfortunately, there is no cause and effect here. In fact, "even the matter of determining which groups are advantaged by standardized tests is less straight forward than it first appears" (Zwick, 2002, p. 112); topics including the issues of *academic preparedness, the quality of one's education* (Baron et al., 1985; Betts et al., 2000; Callam & Crocker, 2004; Casteel, 1997; Chapa & Lazaro, 1998; Ferguson, 1998a, 1998b; Gandara, 2004; Geiser, 2008; Jones, 1997; Rendon et al., 2000; Verdugo, 1986), and notions of *stereotype threat* (Aronson et al., 1999; Croizet et al., 2001; Massey et al., 2003; Spencer et al., 1999; Steele 1999a, 1999b; Steele & Aronson, 1998); have also contributed in the pursuit of understanding why a performance gap exists amongst African-American, White/Caucasian, and Latino test-takers.

#### **Analysis of Minority Test-Score Data**

“Differences in racial and ethnic group performance on standardized tests, including admissions tests, have been the focus of substantial research efforts since the civil rights movements of the 1960’s, and have been analyzed extensively in academic journals and in the popular press” (Zwick, 2002, p. 112). There is a strong belief between both liberal and conservative policy makers, that there is a precise logic in explaining why the persistence in the scoring gap exists. Policy makers on both the “right and the left usually assume that there is some fixed theory or doctrine to explain why [White/Caucasian test-takers] outperform [African-American and Latinos]” on standardized tests in the United States (The Effect of Quality K-12 Education on the SAT Scoring GAP, Summer 1999, p. 45); “the substantial racial gap in test scores

among African-American and Latinos has been one of the most consistent findings since the conception of the exam” (Lemann, 1999a, p. 56).

For instance, Nettles, Perna, and Millet (1998) noted that of the 210,076 African Americans and 164,142 Latinos taking the SAT I Reasoning exam in the 1996-1997 academic year, “58.2% of African-Americans and 46.3% of Latinos scored in the lowest quartile; and only, 5.5% of African-Americans and 10.2% of Latino test-takers placed in the highest quartile” (p. 105). Analysis of the SAT I Reasoning test score data also indicated that “only 25,406 (12.1%) of African-Americans and 33,246 (20.3%) of Latino test-takers achieved a combined score of 1100 or higher, compared to 563, 739 (41.4%) of their White/Caucasian counterparts” (Nettles et al., p. 105).

Llagas and Snyder (2003) also noted that in 2001, “African-Americans scored an average of 866 on the combined tests compared with 1058 for White/Caucasian test-takers, a gap that has increased by 7 points over the past decade. The gap also widened for those describing themselves [Other Latino] who lagged behind White/Caucasian test-takers by 138 points, Mexican-Americans who lagged behind by 156 points, and Puerto Ricans lagging behind by 144 points” (Llagas & Snyder, p. 63). Even though the racial gaps in SAT I Reasoning test performance may be attributed to an array of factors, there is considerable evidence to suggest that gap in test performance appears even before these students enter high school.

Data provided by the National Assessment of Educational Progress (NAEP) and the High School & Beyond Survey (HS&B) shows that the educational achievement patterns of African-American and Latino students’ begin to fall behind

that of White/Caucasian students at an elementary grade level, and persists well into adulthood (Duran, 1994; Jencks & Phillips, 1998). Results of the 2000 NAEP reading assessment showed that, “73% of White/Caucasian and 78% of Asian-American 4th graders performed at or above the ‘basic’ level, compared with 37% of African-Americans, 42% of Latinos, and 43% of Native-Americans; sadly enough, the 2000 4<sup>th</sup> grade mathematics results showed similar patterns” (Zwick, 2002, p. 113). Callam and Crocker (2004) further noted that students who were academically off-track by the third or fourth grade often lacked the essential literacy, math, and science skills necessary to make these students competitive college applicants upon high school completion.

### **Money Matters**

There has been a long debate among critics and supporters of standardized testing research that there is a direct correlation between the status of a student’s socioeconomic background and their test performance. Data from the High School and Beyond Survey noted that the graduating high school class of 1992 showed that African-American and Latino students were three times more likely to have incomes under “\$20,000 as opposed to their White/Caucasian and other [non-Latino] counterparts – 51% versus 17%” (Kane, 1998a, p. 24). In addition, the African-American and Latino youth that had test scores in the top “10% of the 1992 graduating high school class still only represented 6.8% of high scoring test-takers” (Kane, 1998b, p. 450).

The relationship between test score performance and the socioeconomic background of a student has been one of the most consistent findings confirmed by

researchers in this particular area of study, including research conducted by the College Board (Zwick, 2004). A 2001 research study conducted by the College Board on the association between family income and standardized test performance indicated that “average combined SAT I Reasoning score for college-bound seniors whose families earned less than \$20,000 was 887” (Zwick, p. 204). This same study also noted that students who came from families that earned more than \$100,000 a year had an average SAT I Reasoning score of 1126 (Zwick). Bok (2000) also noted that “among all students in America who come from families with incomes below \$15,000 and who have an SAT I Reasoning score above 1000, only one in six is [African-American] or [Latino]” (p. 109)

From the research presented above, critics of standardized testing have alluded to the notion that a relationship between test score performance and socioeconomic background occurs “because test coaching is available to only the wealthiest test-takers” (Zwick, 2002, p. 133). The impact of test-preparation coaching in boosting students’ SAT I Reasoning scores provides another central argument behind the movement to include other means of assessing students beyond the traditional academic standards of measurement associated with standardized test scores (Perez, 2004). Shirley Strum Kenny (2001), president of the State University of New York-Stony Brook, articulated this concern in a letter to the New York Times noting that, “the [SAT I Reasoning exam] often rewards test-taking ability more than the ability to do college work. Prominent schools too often ‘teach to the test’, and children of parents who can afford coaching buy an unfair advantage. When sixth graders are

doing practice problems for the [SAT I Reasoning] test, something has gone woefully awry” (Kenny, 2001; as cited in Perez, 2004, p. 351).

### **Coaching**

Commercial coaching has been the most controversial means of test preparation as of late due to the fact that it is costly, widely available, and often serves as a deterrent to test-takers from lower socioeconomic backgrounds (Briggs 2004). Concern over the use of coaching programs has been under great scrutiny within the popular press in recent years. “Test critic Alfie Kohn recently suggested that the verbal section of the SAT I [Reasoning] exam merely measures ‘the size of students’ houses’” (Kohn, 2001; as cited in Zwick, 2004). A 1997 Los Angeles Times article quoted a dean from the University of California stating that the “only thing the SAT I [Reasoning] exam predicts well now is socioeconomic status” (Colvin, 1997; as cited in Zwick, 2002). Howard Gardner, a professor of cognition and education at Harvard, also noted that “no matter what the test, it will always be possible to study for it and those with more disposable income and higher motivation will benefit” (Ewers, 2005, p. 69).

Both critics and supporters of standardized tests agree that particular forms of coaching do have the effect of improving a students’ performance on these types of exams. However, what is under dispute between these two groups is that there is an association made between the magnitude of a student’s score improvement in relation to the income and educational level of the test-taker’s family (Briggs, 2004).

In a recent study conducted by Briggs (2001) on a sample of 3,144 students who took both the Preliminary SAT I Reasoning (PSAT) and SAT I Reasoning exam

to determine the coaching effects of students' test performance on the SAT I Reasoning noted that students enrolled in a commercial coaching program only had a modest gain of 33 points on the math section, and 27 points on the verbal section of the SAT I Reasoning in comparison to students not enrolled in a commercial coaching program that had gains of 11 points on the verbal section, and 13 points on the math section. Results of Briggs' findings are significant due to the fact that Briggs has no formal affiliations or ties with researchers at the College Board or any testing agency that provides coaching services to the students he analyzed in his study.

Furthermore, Briggs' findings are also consistent with previous research conducted by the Educational Testing Service (ETS) which found that students enrolled in a commercial test-prep program showed a 29 point gain on the verbal section, and a 40 point gain on the math section of the SAT I in comparison to a 21 point gain on the verbal section and a 22 point gain on the math section experienced for uncoached students not enrolled in a commercial test-prep program (Camara & Powers, 1999). Even though, there is contradictory evidence to support a direct correlation on the coaching effects and a student's test performance outcome, there are some significant differences seen in the following areas:

- Students enrolled in commercial testing programs were more likely to engage in nearly all forms of test preparation, some at twice the rate, than students not enrolled in commercial testing programs (Briggs, 2001, 2004).
- Coached students were more likely to come from socioeconomic advantaged backgrounds. For instance, 72% of coached students were in

the top 25% SES index, in comparison to 46% of uncoached students (Briggs, 2001, 2004).

- Coached students tended to have parents who were better educated, and had jobs in what were considered prestigious occupations (Briggs, 2001, 2004).
- Coached students were more likely to have taken more foreign language, math, and science courses than un-coached students (Briggs, 2001, 2004; Camara & Powers, 1999).
- Coached students were also more likely to have paid a private tutor to help them with their homework and test-preparation material (Briggs, 2001, 2004; Camara & Powers, 1999).

The coaching effects in relation to a student's test performance however small, still shows a gain in a positive direction that clearly works to the advantage of the student. Martinez's (2004) commentary on Briggs's 2001 study of the coaching effects on a student's test performance noted that even the slightest gains in test performance, however modest, is enough to tip the balance of admissibility to the most selective colleges and universities towards a coached student's favor (p. 241).

Regardless of the coaching effect on standardized test performance, critics of these exams have suggested that the academic and social benefits associated with coaching and private tutoring instill a sense of discipline, self-confidence, and stronger study habits that these students would normally not receive in the classroom setting (Briggs, 2004).



## **A Cultural Perspective**

Among the countless variables that have been attributed to the under-performance on standardized admissions tests for African-American and Latino test-takers, measures involving the primary language of the test-taker and the cultural background of the student have played a significant role in the inaccurate predictions of these student's abilities to succeed in college, and their preparedness to take these exams (Perez, 2004). Even when course taking patterns and course difficulty are accounted for, Callam and Crocker (2004) found that the cultural differences and language barriers that many African-American and Latino students encountered in the classroom made these students feel ashamed of who they were, decreased their levels of self-esteem, and, often times, affected their performance in the classroom, especially on standardized tests (p. 32).

Pearson (1993) in her study conducted on the predictive validity of the SAT I Reasoning for 220 academically-qualified Spanish speaking Latino students and 892 non-Latino, non-Spanish speaking Latino Students at the University of Miami found that there were no significant gender or ethnic differences in academic performance, after four semesters of enrollment, in comparison to their non-Spanish speaking White/Caucasian counterparts (p. 347). Pearson's (1993) study is significant in building a case against the use of standardized tests in college admissions because even though both groups showed comparable academic performance over the course of four semesters in college, the Latino students in her study still reported an averaged combined SAT I Reasoning score that was 91 points lower than their [White/Caucasian] peers (p. 347). Even though the gap in test performance for the

Latino students in Pearson's (1993) study still remained even after 96% had reported having studied in the United States from the second grade on and 89% of the Spanish speaking Latino participants in her study reported that English was their best language (p. 345). Moreover, Pearson (1993) attributed the test performance gap merely to being bilingual and not to differences in academic preparation or potential due to the fact that the students in her study showed similarities in academic preparation and socioeconomic status (p. 345).

Yielding similar results, Gandara and Lopez's (1998) study of 48 high achieving, Spanish speaking Latino students and non-Spanish speaking Latino students on the effectiveness of college entrance exams in predicting completion of degree, or likelihood of doing postgraduate study among high achieving Spanish speaking Latino students also found that test performance on the SAT I Reasoning exam "yielded no significant relationship on either college grade point average, completion of degree, or likelihood of applying to graduate school" for these students (p. 25). These findings were significant due to the fact that close to two-thirds of the students in their study began their lives as Spanish speakers and later learned English, and the sample they were studying represented 38 different secondary schools in California. Moreover, many Latinos in their study "whose first language was Spanish had a tendency to have lower standardized test scores in comparison to other Latinos whose first language was English" (p. 18).

For many young Latinos, especially those of first generation immigrant descent, navigating the formal system of education is often a difficult task to undertake considering that these students live with the daily realities that get in the

way of learning the basic fundamental material taught in the classroom: some are mastering two languages, work full- or part-time jobs to help support their families, and are often faced with the struggle in maintaining their cultural loyalties as well as their obligations to their families (Callam & Crocker, 2004; Hernandez, 2000; Hernandez & Lopez, 2004). For many Latino students, surveys have shown that only “38% of Latino parents believe that schools give them the necessary information they need to help their children succeed in the classroom”; however, there is a disconnect in the ability that Latino parents have in helping their children advance along the educational pathway, fearing that once their children receive their educational degrees that it would result in their children leaving the family behind (Callam & Crocker, p. 40). In many Latino cultures, the family is seen as a source of support and strength, and the manner in which these students receive encouragement and support from this social network not only influences their willingness to apply to a four-year institution, but is also instrumental in affecting their persistence once admitted (Rendon et al., 2000, p. 140).

### **Academic Preparedness**

Even though the language and physical appearance of today’s African-American and Latino students may be different from one another, their stories are very similar. Many come from low-income backgrounds, tend to live in school districts that are strapped for resources, often lack the academic rigor and breadth of extracurricular activities that best prepare these students for higher learning, are usually tracked in curriculums that are unsuitable for college preparation, and are usually the first in their families to attend a four-year institution (Callam & Crocker, 2004; Chapa & Lazaro,

1998; Ferguson, 1998b; Rendon et al., 2000).

Currently, “35% of Latino students are enrolled in college preparatory or academic programs that will provide access to four-year institutions, as compared to 43% of Blacks, and 50% of Whites” (Callam & Crocker, 2004, p. 27). Critics of tracking have argued that the reason African-American and Latino students find themselves in lower academically challenged tracks is due in part to how they are perceived in the classroom by their teachers and peers (Callam & Crocker; Ferguson, 1998a; Steele & Aronson, 1998). Callam and Crocker (2004) further note that the cultural differences and language barriers that many African-American and Latino students encountered in the classroom made these students feel ashamed of who they were, decreased their levels of self-esteem, and, often times, affected their performance in the classroom, especially on standardized tests (p. 32).

There is extensive literature that suggests that teachers’ perceptions, expectations, and behaviors towards African-American and Latino students play a central role in determining how these students feel about their abilities to succeed in the classroom (Ferguson, 1998a). Verdugo (1986) noted that many of the Latino students that were placed in non-academically challenging curriculums were placed in those tracks because the teachers perceived them to be intellectually deficient (p. 333). Observational data on the effects of tracking and student engagement also found that teachers who taught students in more challenging academic curriculums had a tendency to be more enthusiastic, worked harder, were better prepared, and responded to students in a more supportive manner than teachers who taught less academically challenging curriculums (Oakes, 1985; as cited in Ferguson, 1998a).

Data from the National Center of Educational Statistics (NCES) (1996) further noted that students from families with higher levels of education and larger incomes were more likely to be enrolled in challenging curricula that would prepare these students to meet the rigors of a four-year institution (Ferguson, 1998b). This same data also indicated that “[African-American] and Latino students had a greater tendency to be enrolled in less academically challenging tracks”, making these students less competitive for admission into highly selective colleges and universities than their White/Caucasian counterparts (Ferguson, 1998b, p. 337).

Additionally, researchers on standardized tests have concluded that the reason why performance disparities occur at the K-12 is due in part to “the differences in enrollment in AP and Honors Courses, and the quality of education these students receive in the classroom” (Gandara, 2004, p. 168). A recent study published by Betts, Reuben, and Danenberg (2000) found that:

- 52% of the classes offered in economically disadvantaged schools were college preparatory material in comparison to 63% of the classes in the highest income schools (p. 70).
- School districts with families in the top socioeconomic indexes offered 50% more AP courses than schools in poorly funded school districts. Even when AP courses were offered in low-income schools that had a large student body of minority students, enrollments in these courses were significantly lower than in more affluent schools (p. 72).
- 22% of teachers who taught in poorly funded school districts at the K- 6 level, 17% at the 6-8th grade level, and 12% at the 9-12th grade level were

not fully credentialed. Whereas, only 2-4% of teachers that taught in school districts with families in the highest socioeconomic indexes were not fully credentialed at all levels (p. 205-6).

Furthermore, a report published by the W.K. Kellogg Foundation also found that “70% of pre-school teachers, currently teaching, asserted that they were not fully prepared to meet the needs of students with limited English proficiency or from diverse backgrounds” (Callam & Crocker, 2004, p. 39). The psychological impact of tracking and the effect of teacher’s perceptions of a students’ intellectual potential not only affects the levels of academic preparedness of the student in the classroom setting, but it can also produce a stereotype anxiety that may stay with the student well into their collegiate years (Steele & Aronson, 1998).

### **Teachers’ Perceptions and Expectations**

As students and teachers immerse themselves in the routine of schooling, there is considerable evidence to suggest, that teacher’ perceptions, expectations, and behaviors towards students of color have a tendency to be biased by the racial and socioeconomic characteristics of the student (Ferguson, 1998a). For example, Baron, Tom, and Cooper (1985) in a meta-analysis they conducted on the impact of teacher’s expectations on student performance found that “teachers had higher expectations for White students in nine out of their sixteen studies, and only favored Black students in one out of their sixteen studies” (as cited in Ferguson, 1998a, p. 277).

Even in the absence of bias, research has shown that the manner in which Black and Latino students respond to teachers’ expectations of them is very different compared to White students’ responses to similar expectations. Clifton Casteel (1997)

conducted a study of 1,689 (968 White, and 761 African American) 8th and 9th graders on whom they most wanted to please with their schoolwork, and found that 81% of all African-American females and 62% of all African-American males were more concerned in pleasing their “teachers”, as opposed to their White/Caucasian counterparts who were more concerned in pleasing their parents. Similarly, Jones (1997) also found that [African-American and Latino] students participating in a College Bridge Program noted that their teacher’s expectations of them weighed more heavily in their motivation to do well in the classroom (as cited in Ferguson, 1998, p. 300).

### **Stereotype Threat**

One reason why African-American, White/Caucasian, and Latino students respond so differently to teacher’s expectations of them despite identical classroom conditions may be a result of a phenomenon that social psychologist, Claude Steele, refers to as a “racial stereotype vulnerability”, also known as a “stereotype threat” (Jencks & Phillips, 1998); “Steele and Aronson’s findings strongly suggest that anxiety about racial stereotypes and intellectual competence can sometimes depress able [African-American and Latino] students’ test performance” (Jencks & Phillips, 1998, p. 35).

Similar to Cooley’s (1902) *Looking Glass Theory*, stereotype threat derives its power from a motive commonly experienced by all individuals, regardless of race, gender, age, or socioeconomic status that the intellectual performance of a person can be impaired by the social conditions that make ability stereotypes relevant and improved by the conditions of their environment (Spencer et al., 1999). In other

words, people behave or will perform in the manner in which they are being perceived, however positive or negative the stereotype might be, with respect to the environment in which the individual in question is currently present. “Stereotype threat arises when these performance motives are jeopardized by the awareness of an ability-impugning stereotype in a situation where that stereotype can be confirmed by low performance. Thus, because most people are motivated to feel and to appear competent, nearly anyone, regardless of race, class, or gender classification, can experience the pressure of stereotype threat in some situation and thus suffer the short-term consequence of impaired intellectual performance” (Aronson et al., 1999, p. 31).

In terms of standardized test performance, Steele and Aronson’s (1998) study on stereotype threat showed that African-American participants who were asked to identify their race before taking a diagnostic of their “intellectual ability” performed significantly worse than their White/Caucasian counterparts who were also asked to identify their racial classification. African-American participants taking the diagnostic under the pretenses of being assessed on their “measured verbal abilities and limitations” answered fewer items, spent more time on questions, got less items correct, and showed higher levels of anxiety related to their self-concept (Steele & Aronson, 1998, p. 419). Interestingly enough, African-American participants who were also asked to identify their race before taking the same diagnostic, but were told that they were being tested on their “problem solving skills” by the test administrator matched the performance of White/Caucasian students who were told that they were taking a diagnostic of their “intellectual ability” (Steele & Aronson, 1998).



Of all the stereotype threat and standardized test performance research conducted, perhaps the most interesting findings in this particular area of study is that the students who were identified to be “high-achieving, highly skilled, highly motivated, and confident were the most impaired by stereotype threat” (Steele, 1999b, p. 48). As mentioned earlier, a stereotype must be relevant to *one’s self* in order for it to be threatening; regardless of group association, a person must care about how their performance on a measure may potentially be negatively viewed by the mainstream in order for the stereotype threat to take effect (Aronson et al., 1999).

In his expert testimony on the *Gratz et al. v. Bollinger* case involving the University of Michigan’s admissions practices, Steele (1999a) noted that stereotype threat has a greater detrimental effect on high-achieving students because these students have a greater social and academic investment to their institution, and therefore work extremely hard to surpass the expectations set forth upon them by society that involve any negative stereotypes. Due to the fact that these students work so hard to disconfirm any negative stereotypes imposed upon them regarding their social, racial, socioeconomic classification, they are plagued with a host of threatening obstacles: distraction, self-consciousness, evaluation apprehension, test anxiety, and loss of motivation—all leading to a dramatic decrease in test performance (Aronson et al., 1999; Croizet et al., 2001; Massey et al., 2003; Spencer et al., 1999; Steele 1999a, 1999b; Steele & Aronson, 1998).

### **Test Bias**

There is considerable evidence to suggest that the differences in test scores on standardized admissions tests between African-American, White/Caucasian, and

Latino students are attributed to “test-bias” (Freedle, 2002; Schmidt & Camara, 2004; Zwick 2002, 2004). One of the greatest difficulties in raising the topic of “test-bias” is that much of the academic research, and much of what is written in the popular press, associate the topic “test-bias” to mean “lack of fairness” (Schmidt & Camara, 2004; Zwick, 2002). Most studies done on standardized admissions tests examine the “predictive validity” of the SAT I Reasoning exam. As the name suggests, in predictive validity studies, researchers use predictor variables, available at the time of application (e.g. HSGA and standardized test scores), like the SAT I Reasoning exam, to predict the outcome on some future criterion measure (e.g. first-year college grade point average) (Sedlacek, 2004, p. 17).

“In educational measurement, the most common statistical approach for validating an admission test is to estimate validity coefficients and regression equations” of the exam (Young, 2004, p. 290). Validity coefficients are the correlation coefficients between the predictor variable(s) and the criterion. A regression equation is used to predict how accurately the predictor variables forecast, and estimate, the criterion outcome for an individual based on their scores on the predictors (Young). “In the college admissions process, validity coefficients provide a measure of utility of an admissions test while the regression equations provide a measure of the accuracy in predicting students’ college grades” (Young, p. 290).

When researchers examine the SAT I Reasoning exam through this framework, they typically find that the actual grade point averages that African-American and Latino test-takers receive in their first-year in college are actually lower than originally predicted when looking at their standardized test score performance alone

(Geiser, 2008; Zwick, 2002). In addition, when researchers use the SAT I Reasoning exam to predict the grade point averages for White/Caucasian, first-year, college students, researchers, including those at the College Board, have consistently found that the SAT I Reasoning exam has a tendency to under-predict their actual first-year performance (Sedlacek, 2004; Zwick, 2002). Furthermore, Steele (1999a, 1999b) in his own research over a 10-year period on the effects of race and gender stereotyping on standardized test performance found that using the SAT I along with the high school grade point average only increases the predictive validity of first-year college grade performance by about 3% to 4%. Moreover, Steele (1999a) also found that, on average, the SAT I Reasoning exam measured only about 18% of the factors that contributed to first-year college grade performance, and that the predictive validity of the SAT I Reasoning exam in determining academic performance beyond the first year, persistence, graduation, and attainment of professional degrees for *all* students diminished substantially with each year after taking the exam (Steele, 1999a).

Likewise, William G. Bowen and Derek Bok (1998) in their critically acclaimed book *The Shape of the River* also found that the predictive value in using the SAT I Reasoning exam in college admissions to predict academic persistence, and college grade point average, beyond the first year was more effective for White/Caucasian students than for African-American students. In addition, Young (2001) in his review, and technical analysis, of race and gender differences in college admissions test performance over a 25-year period, starting in 1974 found that “the traditional academic measures used in college admissions (SAT I Reasoning scores

and HSGPA) are better correlated for first-year Asian-American and White/Caucasian college students than first-year African-American and Latino college students” (p. 24).

The problems surrounding the over- and under-prediction of African-American, White/Caucasian, and Latino test-takers in determining their first-year college grade performance is emblematic of the dilemmas surrounding the use of standardized tests in college admissions today. Even though the use of standardized admissions tests, along with a student’s high school record, has been shown to be the strongest predictors of success for these groups, the fact remains that an over-reliance on a student’s previous academic history and test score performance will only reward those students who have had the ability and access to take advantage of all the educational opportunities afforded to them by their K-12 experience. Given these findings, admissions committees need to consider supplemental measures that can provide colleges and universities with useful information regarding the academic potential of a candidate outside of the traditional measures of assessment that are currently used today.

### **The New SAT I: Looking Ahead**

Among the countless issues surrounding the use of standardized testing in college admissions lies the mystery of what the exam tells us about a student’s abilities and potential to succeed in college. The current version of the SAT I is now called the *SATI Reasoning Test*. The administrators of the exam claim that this new version of the SAT I Reasoning test is supposed to give colleges and universities insight to: (1) a students’ developed verbal and mathematical abilities to date, and (2) the likelihood in predicting the test-takers success in college (Lohman, 2004; Zwick,

2002). According to the College Board, the new SAT I Reasoning test is also supposed to be more reflective of today's high school curriculum and reinforce the standard math, reading, and writing skills necessary to be successful in college (Ewers, 2005; Lawrence et al., 2004).

Along with a new scoring system, boosting the new perfect score to 2400, the verbal section of the exam will undergo the most dramatic changes. The verbal section will no longer be called the "verbal reasoning" section, and will be renamed the "critical reading" section. The analogies section of the verbal portion will now be replaced with more questions on short and long reading passages from a variety of fields, including the sciences and the humanities, in order to reflect the emphasis of this new section (Ewers, 2005; Lawrence et al., 2004). In addition to this, the "critical reading" section will also have multiple-choice questions on improving sentences and identifying errors in diction and grammar, along with a 25 minute essay in which "students will be asked to take a position on an issue and support it with reasons and evidence from their reading, experience, or observation" (Lawrence et al., p. 73; Rubin, 2005). The essay will account for 30% of graded total for this new 800 point section, and will be graded on a scale of 1 to 6 by some 10,000 high school English teachers and college professors trained to score" this portion of the exam (Ewers, p. 68). Along with these changes, the math section will now include more advanced math questions from subjects like Algebra 2 in lieu of quantitative comparison questions that are not taught in the classroom (Ewers).

Much of the motivation that pushed the College Board to make these changes was due to the fact that critics of the old SAT I test felt that the exam was too

vulnerable to coaching and heavily focused on a students' aptitude instead of achievement, often impeding the performance of minority students to do well on the exam (Ewers, 2005; Ferguson, 2004). Originally, the "SAT I Reasoning" stood for Scholastic Aptitude Test, which was later changed to Scholastic Assessment Test; now, the SAT I [Reasoning] is no longer considered to be an acronym, but the name of the test" (Zwick, 2002, p. 8). In theory, the educational movement that initiated the use of standardized testing for the purposes of college admissions originally held the belief that a student's test performance would allow colleges and universities the ability to identify a diverse group of students not by their socioeconomic backgrounds, and the social privileges associated with them, but by virtue of their merits and academic talents (Lemann, 1999a, p. 47). However, the evidence presented above has clearly shown that a student's performance on standardized tests is not impervious to one's socioeconomic background and the social capital associated in attaining the necessary resources to do well on these exams.

### **Alternatives to Testing**

It is very important to recognize that the factors that motivate students to apply to college, and persist in their respective institution often rely on factors that are strictly independent of academic talent or merit (Zwick 2002). For many years, researchers have done research on incorporating the use of noncognitive indicators in the college admissions process (Everson 2004, Sedlacek, 2004). Research in this area of study, particularly that of William E. Sedlacek, professor of education at the University of Maryland – College Park, has found that the use of noncognitive variables, if used together with a student's academic record (i.e. HSPGA, standardized

test scores, class rank, and quality of coursework), is able to provide a more holistic “biographical” and “situational-judgment” inventory of a student’s past experiences and accomplishments that has shown to increase the quality and diversity of the applicant pool of incoming students at certain 4-year and professional institutions across the country (Sedlacek, 2004).

### **Measuring a Noncognitive Assessment Model (NCAM)**

One of the greatest strengths of Sedlacek’s (2004) NCAM is that it has been studied and refined for more than thirty years (p. 12). Sedlacek’s (1998, 2004) NCAM is deeply rooted in the areas of multiple intelligences, “cognitive science and measurement theory, and its usefulness have been demonstrated in a range of research studies” (p. 12). Sedlacek’s (1998, 2004) NCAM has been shown to:

- Better predict the persistence and graduation rates for *all* students compared to other traditional standard measures of assessment (Fuertes, Sedlacek, & Liu, 1994; Sedlacek; Ting, 1997; Ting & Sedlacek, 2000).
- Better predict the academic performance of *all* students beyond the first year of college compared to other traditional measures of assessment (i.e. a student’s HSGPA and standardized test scores) (Fuertes, et al.; Sedlacek; Ting, 1997; Ting & Sedlacek, 2000).
- Better predict the academic performance of nontraditional students beyond the first-year of college (Fuertes, et al.; Sedlacek; Ting & Sedlacek, 2000).
- Measure attributes necessary to succeed beyond the first year of college that are not readily measured via standardized tests (Fuertes, et al.; Sedlacek; Ting, 1997; Ting & Sedlacek, 2000).

### **Research Supporting the Use of Noncognitive Variables**

Ting and Sedlacek (2000), in a study conducted on 894 first year (735 White/Caucasian and 79 African-American) students at North Carolina State University, found that seven of the eight non-cognitive variables were found to be predictive of the academic success and persistence for all of the students that participated in the study. “For White/Caucasian applicants, *self-concept* and *long-term goals* were the best predictors of college GPA, while self-concept and negotiating multicultural experiences were the best predictors of retention; for applicants of color, *self-concept*, *strong support person*, and *handling racism* were the best predictors of college grades and retention” (Sedlacek, 2004, p. 67; Ting & Sedlacek, 2000, p. 9-13).

Ting & Sedlacek’s (2000) findings supports previous institutional findings made by Hoey (1997) at North Carolina State University in which he found that the combination of a student’s noncognitive scores on their undergraduate freshman application coupled with their fall semester college GPA positively predicted 92 percent of the retention for African-American, White/Caucasian, Latino, Asian American, and American Indian students to determine the persistence rates of these students from their first to second year of college (as cited in Sedlacek, 2004, p. 68).

In addition, Fuertes, Sedlacek, and Liu (1994) in a longitudinal study, over a 10-year period, on first-year Asian-American students found that factors contributing to a student’s *self-concept*, *realistic self-appraisal*, and *commitment to community service* showed significant correlations (.05 level) with respect to their GPA in their first, third, and fifth semester in school. What is particularly interesting in this study is that the factors associated with their *realistic self-appraisal*, *long-term goals*,



*involvement in community service, acquired knowledge in a particular field, and the presence of a strong support system* were all factors contributing to the persistence of this particular population from their fifth semester and beyond (p. 76-8).

Similarly, the admissions committee of the Louisiana State University (LSU) Medical School reported that “*self-concept (97%), realistic self-appraisal (95%), leadership (84%), presence of a strong support system (83%), and handling racism (81%)* were the most useful indicators of “minority” student success” (Helm, Preto, & Sedlacek, 1997, p. 604). In the ten years since the introduction of incorporating a NCAM in the university’s admission process, the enrollment of students of color doubled to 21% while maintaining an 87% retention rate for this particular population (Sedlacek, 2004).

Likewise, The University of California at Irvine (UCI) has also employed a noncognitive assessment model, called the Personal Achievement Profile, along with a student’s standardized test score, and high school record as part of its admission selection process (Wilbur & Bonous-Hammarth, 1998). The university’s Personal Achievement Profile includes elements of Sedlacek’s noncognitive variables that are associated with leadership, demonstrated community service, and knowledge acquired in a particular field of study. The enrollment outcomes for these particular groups were of great significance since other schools within the University of California experienced sharp declines of enrollment for African-American and Latino students in this particular year due to the restrictions surrounding race-based admissions standards that were outlawed by the state in 1997 (Wilbur & Bounous-Hammath, 1998). Through the implementation of the Personal Achievement Profile, the university was

able to maintain the same percentage of enrollment for Chicano (7%), Latino (3%), and White/Caucasian (26%) students while experiencing a one percent gain for the enrollment of African-American (3%) students to the institution. Furthermore, incorporating the Personal Achievement Profile during the 1997-1998 UC undergraduate freshman recruitment cycle at UC Irvine they were able to admit, “60% of the freshman class on the strength of the academic profile alone, while the additional 40% of the class was selected on the basis of the Personal Achievement Profile” (Wilbur & Bounous-Hammath, 1998).

The SAT I Reasoning’s weak predictive power, its negative effects on educational equity, and its susceptibility to coaching clearly demonstrates that the traditional admissions predictors of HSGPA and SAT I Reasoning scores are less informative and less accurate in predicting first-year college GPA for African-American and Latino students than for White/Caucasian students (Perez, 2004; Young, 2004). “The flaws in the old and new SAT I Reasoning exam, and the introduction of the revised SAT I Reasoning exam in March 2005 should lead to one conclusion”: African-American and Latino students can benefit greatly from a more holistic admissions process that would take into account the academic achievements and accomplishments that are not normally captured by the traditional standards of assessment (i.e. HSGPA, standardized test scores, etc.), normally used by colleges and universities today when making recommendations for admission into their respective institutions (Perez, 2004, p. 353).

### **Summary**

The literature reviewed showed that most universities rely on HSGPA and

SAT I Reasoning scores to make admission decisions. Reliance on these factors has limited access for Latinos and African-Americans, creating inherent inequities in access to college. Second, college admissions tests have been shown to have weaknesses in predicting college grade performance or potential degree completion once admitted to institutions of higher education. Other noncognitive measures have been shown to be better predictors of college persistence and success beyond the first year, and have also served to increase the pool of admissible Latino and African-American students to institutions of higher education. Therefore this study intends to explore how increased use of noncognitive factors might affect the admissions of Latino and African-American students at the University of California.

### **Purpose of Study**

The purpose of this research is to examine the ways in which noncognitive factors are used in conjunction with standard academic measures of assessment in today's comprehensive admissions review process at the University of California. This research seeks to clarify if there is a differential impact on how African-American, White/Caucasian, and Latino students are admitted via the University of California's comprehensive review process. This study further seeks to determine if there is a difference in the *academic* profile – i.e. HSGPA, SAT I Reasoning Scores, a student's ELC, and Educational Environment – among African-American, White/Caucasian, and Latino students admitted to the University of California under the comprehensive review process. Furthermore, this study seeks to determine if there are differences in the *non-academic* characteristics - i.e. Community/Volunteer Service, Parental Income, Parental Education, Demonstrated Leadership, Special

Talents/Achievements/Awards, EPP, Special Circumstances/Personal Challenges/Personal Growth - of African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process. From the evidence presented above, several studies have shown that a student's SAT I Reasoning test-performance and HSGPA do have a limited ability, at best, to inform admission committees on the academic potential of African-American and Latino test-takers ability to succeed in college when making their decisions on admitting these students to their institutions. It is with great hope and aspiration that the consistent scoring application of non-academic variables in the college admissions process at the University of California will help close the enrollment gap of underrepresented students throughout the University of California today.

## **Chapter III**

### **Methodology**

The purpose of this research is to examine the ways in which non-academic variables are used in conjunction with standard academic measures of assessment in today's comprehensive admissions review process at the University of California. This research seeks to clarify whether if there is a differential impact on how African-American, White/Caucasian, and Latino students are admitted via the University of California's Undergraduate Admissions Comprehensive Review process. This study further seeks to determine if there is a difference in the academic profile – i.e. HSGPA, SAT I Reasoning scores, a student's ELC designation, and a student's Educational Environment – among African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process. Furthermore, this study also seeks to determine if there are differences in the non-academic characteristics - i.e. Parental Income, Parental Education, Demonstrated Leadership, Special Talents/Achievements/Awards, Community Service, Participation in Educational Preparation Programs (EPP), Special Circumstances/Personal Challenges/Personal Growth - of African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process.

The non-academic variables used in this study refer to variables associated with the experiential, contextual, and emotional intelligence of a candidate's ability to be considered for admissions at the University of California (Goleman, 1998, 2006; Sedlacek, 1998, 2004; Sternberg, 1985). Drawing upon the admissions guidelines set

forth by the University of California's Board of Admissions and Relations with Schools (BOARS), the Faculty Committee on Undergraduate Admissions have identified the following Freshmen Selection Operational Procedures as academic factors that the Office's of Admissions & Relations with Schools are able to consider for the Comprehensive Review process:

- HSGPA,
- Standardized Test Scores (i.e. SAT I Reasoning, SAT II Subject, ACT with Writing),
- A student's ELC designation,
- Educational Environment

In addition, the non-academic variables identified by the University of California's Board of Admissions and Relations with Schools (BOARS), the Faculty Committee on Undergraduate Admissions have determined the following Freshmen Selection Operational Procedures as non-academic factors that the Office's of Admissions & Relations with Schools are able to consider to exemplify the contextual, experiential, and emotional intelligences of a person under the Comprehensive Review Process:

- Parental Income (which is also referred to as Social Environment),
- Parental Education,
- Demonstrated Leadership,
- Special Talents/Achievements/Awards,
- Community/Volunteer Service
- Participation in Educational Preparation Programs (EPP),

- Special Circumstances/Personal Challenges/Personal Growth  
(<http://www.ucop.edu>, March 15, 2009; Fall 2009 UC Freshman Selection Process Operational Procedures, December 2, 2009).

### **Research Questions**

The research questions for this study examined how the University of California's application of the Comprehensive Review Process affected the pool and admissibility of African-American, White/Caucasian, and Latino college-bound students applying to one or more University of California undergraduate campus. In addition, this study also sought examine how the individual academic and non-academic factors set forth by the University of California's BOARS under the Comprehensive Review process affected how African-American, White/Caucasian, and Latino college-bound students were admitted across undergraduate campuses with similar scoring practices. The design of this research study was quantitative in nature, utilizing data gathered from a student's undergraduate freshman application to the University of California between the Fall 2007-2009 enrollment cycles. Descriptive statistics (i.e. means, standard deviations, etc.) were calculated for the variables in research questions one and two in this study.

The study employed a path analysis statistical design to determine if there was direct or indirect causality between the independent and dependent variables to determine the admissions of African-American, White/Caucasian, and Latino students at the University of California for question one through three. Creswell (2005) indicates that a path analysis is "a statistical procedure for testing a theory about a

casual sequence of three or more variables on an outcome variable” (p. 595). The primary research questions explored in this study were:

R1 – What are the differences in the acceptance rates of African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process?

R2 – What are the differences in the academic profile – i.e. HSGPA, SAT I Reasoning scores, a student’s ELC designation, and their Educational Environment – among African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process?

R3 – What are the presumed causal relationship between the *academic* variables – i.e. HSGPA, SAT I Reasoning Scores, a student’s ELC designation, and Educational Environment – and *non-academic* variables - i.e. Parental Income, Parental Education, Demonstrated Leadership, Special Talents/Achievement/Awards, Community/Volunteer Service, EPP, Special Circumstances/Personal Challenges/Personal Growth – to determine admissions to the University of California under the Comprehensive Review Process?

### **Independent and Dependent Variables**

The independent variable for research question one consisted of self-identified and self-disclosed information provided by the student applying to the University of California as it pertained to the applicants’ Ethnicity (i.e. African-American, White/Caucasian, Mexican-American, and Latino candidates). The dependent variable



in research question one is admissions to the University of California. Due to the dichotomous nature of research question one a statistical test was not conducted to determine if the differences of admissions rates among African-American, White/Caucasian, and Latino students admitted to the University of California during the Fall 2007-2009 via the Comprehensive Review process were significant.

Similar to research question one, the independent variables for research question two consisted of self-identified and self-disclosed information provided by the student applying to the University of California as it pertained to the applicants' Ethnicity (i.e. Black, White, and Mexican-American/Chicano/Latino candidates). Research question two had a total of five dependent variables as it pertained to the applicants': HSGPA, SAT I Reasoning Scores, ELC designation, Educational Environment, and Admissions. The HSGPA of the student was obtained by the student's high school transcript, and re-calculated by UCOP to reflect the HSGPA of a student's academic performance on UC-approved course-work during their 10<sup>th</sup> and 11<sup>th</sup> grade year. The student's SAT I Reasoning Scores reflected the standardized test scores that the campus site received from the College Board. Similar to the calculation of the students' HSGPA, the ELC designation is given to students that fall within the top 4% of their high school class as determined by a student's academic performance on UC-approved course-work during their 10<sup>th</sup> and 11<sup>th</sup> grade year. The students' Educational Environment was identified and confirmed by UC Office of the President (UCOP), the Department of Education, and the Board of Admissions and Relations with Schools (BOARS) to determine the type of high school environment

that the student attended. The fifth dependent variable in research question two is admissions to the University of California.

The independent variables for research question three consisted of the *academic*— i.e. HSGPA, SAT I Reasoning Scores, a student’s ELC designation, and Educational Environment – and *non-academic* components - i.e. Parental Income, Parental Education, Demonstrated Leadership, Special Talents/Achievement/Awards, Community/Volunteer Service, EPP, Special Circumstances/Personal Challenges/Personal Growth of the UC undergraduate freshman application. Information in determining a students’ HSGPA, SAT I Reasoning Scores, ELC designation, and Educational Environment were stated above. The independent variables as it pertained to a student’s Parental Income, Parental Education, Demonstrated Leadership, Special Talents/Achievement/Awards, Community/Volunteer Service, EPP, and Special Circumstances/Personal Challenges/Personal Growth consists of self-identified and self-disclosed information provided by the student applying to the University of California. The dependent variable in research question three is admissions to the University of California.

### **Design**

In order to maintain the confidentiality of the UC campus site that participated in this research study, the campus site will be referred to as UC Confidential (UCC) for the remainder of this research study. The quantitative design of this research study utilized information provided by UCC that included data gathered from a student’s UC undergraduate freshman application. The data provided had information for 15 ethnic groups, 4 of which were used in this research study:

Black, White, Mexican-American, and Latino. Asian-American students were not included in this study as the research around standardized test-performance indicated that Asian-American students perform at, or out-perform, White/Caucasian students on the SAT I Reasoning exam on a consistent basis. In addition, the representation of Asian-American students within the student body at UCC does not indicate that this ethnic group is underrepresented.

Using descriptive statistics and a path analysis statistical procedure allowed the researcher to not only explore the relationship that the non-academic variables had in determining admissions for African-American, White/Caucasian, and Latino in the Comprehensive Review process, but it also allowed the researcher to analyze the role that the academic variables had in determining the admissibility of African-American, White/Caucasian, and Latino students to the University of California (McMillan & Schumacher, 2001; Creswell, 2005). The quantitative nature of this study allowed the researcher to determine potential causality between *non-academic variables* related to Parental Income, Parental Education, Demonstrated Leadership, Special Talents/Achievements/Awards, Community Service, Participation in Educational Preparation Programs (EPP), Special Circumstances/Personal Challenges/Personal Growth and *academic variables* such as HSGPA, SAT I Reasoning Scores, ELC, Educational Environment – among African-American, White/Caucasian, and Latino students admitted to the University of California via the Comprehensive Review process.

**Site/Context**

The site of this research was conducted at one University of California campus site that used a scoring practice for admissions under the Comprehensive Review guidelines by BOARS that was consistently implemented at four out of the nine undergraduate University of California campuses from the Fall 2007-2009. UCC was selected as the site of the research study due to the fact that it was the only campus to agree to participate, after extensive attempts to contact the University of California's Office of the President, as well as contacting the individual undergraduate Office's of Admissions and Relations with Schools' throughout the University of California.

After extensive review of the admissions scoring practice at UCC, it was found that the scoring practices currently used to admit students at UCC were consistent with University of California campuses located in the northern, central, and southern regions of the state of California. The quantitative analysis of extant data at UCC allowed the researcher to determine how the academic and non-academic variables were used in the Comprehensive Review process to determine a candidate's admissibility to the University of California.

**Participants**

In order for students to be considered for undergraduate admissions at the University of California, students seeking admissions must complete an undergraduate admissions application. Students are able to apply to more than one UC campus at the time of completing the application. The data gathered to conduct the study are

questions asked on the UC undergraduate freshman application in order to determine eligibility for admissions at the University of California.

The participants for this study consisted of first-time, first-year African-American, White/Caucasian, and Latino high school students who applied to UCC between the Fall 2007-2009 enrollment cycles. Students classified as those seeking to be *admitted by exception* to UCC were excluded from this research study, as these students' applications may not be reviewed through the same Comprehensive Review format as designated by the University of California's undergraduate admissions minimum eligibility requirements.

In addition, students who identified as multi-ethnic were unable to be included in this study. A separate study would need to be done to accommodate such students due to the variables involved. Data samples included participants seeking admissions from a variety of academic disciplines, majors, ability levels (e.g. students with learning disabilities, merit & regent scholars, etc.), and demographic characteristics (e.g. ethnicity as self identified by the student on the UC undergraduate freshman application). Furthermore, students who did not disclose Parental Income and Parental Education, or who identify as *independent or wards of the court* were not included in this study in order to not compromise the internal validity of the research study.

As demonstrated in Table 1, given the filters applied above, the sample of White/Caucasian students included in this research study were aggregated per year: 2007 (N=14,616), 2008 (N=14,702), and 2009 (N=14,095) for a total population of NW=43,413. In addition, the sample for African-Americans students included in this research study was: 2007 (N=1,472), 2008 (N=1,651), and 2009 (N=1,639) for a total

population of NAA=4,762. Furthermore, when the researcher obtained the data set for Latino students, it was noted that Latino students were separated in two very distinct categories: a) Latino and b) Mexican-American. In order to maintain the integrity of the internal validity of the study a decision was made keep these two sets of students separate. As a result, the sample for Latino students included in this research study were as follows: 2007 (N=1,720), 2008 (N=1,881), and 2009 (N=1,922) for a total population of NL=5,523. Moreover, the sample for Mexican-American students that were included in this research study was as follows: 2007 (N=4,869), 2008 (N=4,923), and 2009 (N=5,915) for a total population of NMA=15,707.

Students applying for admission to the University of California during the Fall 2007-2009 enrollment cycles were the focus of the study because the university administrators at UCC in which the research took place informed the researcher that the manner in which the freshman applications were scored for these three cohorts of students did not change over this period of time.

Table 1:  
Fall 2007-2009 Participant Numbers, by Ethnicity

<b>Ethnicity</b>	<b>Year</b>	<b>N</b>	<b>Sum</b>	<b>% of N</b>
White/Caucasian	2007	14616	23.2%	21.1%
	2008	14702	23.9%	21.2%
	2009	14095	20.3%	20.3%
	Total	43413	67.4%	62.6%
African-American	2007	1472	1.5%	2.1%
	2008	1651	1.4%	2.4%
	2009	1639	1.4%	2.4%
	Total	4762	4.3%	6.9%
Mexican-American	2007	4869	6.9%	7.0%
	2008	4923	6.6%	7.1%
	2009	5915	7.3%	8.5%
	Total	15707	20.9%	22.6%
Latino	2007	1720	2.4%	2.5%
	2008	1881	2.6%	2.7%
	2009	1922	2.4%	2.8%
	Total	5523	7.5%	8.0%
Total	2007	22677	34.1%	32.7%
	2008	23157	34.6%	33.4%
	2009	23571	31.3%	34.0%
	Total	69405	100.0%	100.0%

**Data Collection**

The data for analysis was collected by UCC's Office of Admissions and Relations with Schools' (OARS) database containing all relevant pieces of information related to this study with the understanding that the researcher, nor members of the researcher's dissertation committee, would disclose the site location. Access to this information was made available via permission from essential university administrators at UCC. The information obtained included a students' ethnicity, Parental Income/Social Environment, Parental Education, HSGPA, SAT I Reasoning scores, ELC designation, Educational Environment, Community/Volunteer Service, Demonstrated Leadership, Special Talents/Achievements/Awards, Educational Preparation Programs (e.g. Upward Bound, GEAR UP, AVID, etc.), and Special Circumstances/Personal Challenges/Personal Growth. The data obtained was collected for the Fall 2007-2009 enrollment cycles to reflect the current scoring practices across these three enrollment cycles for the academic and nonacademic variables on the UC undergraduate freshman application.

**Data Analysis**

This study's focus was to determine how the University of California's Undergraduate Comprehensive Admissions Review process affected the access to the University of California across ethnicity. Analysis for this study included the use of a descriptive statistical technique to analyze and determine if any of the academic or non-academic variables presented in this study contributed to admissibility to the University of California via the Comprehensive Review process through the use of cross-tabulation tables. McMillan and Schumacher (2001) stated that the benefit of



using a descriptive statistical technique allows researchers to “transform a set of numbers or observations into indices that describe or characterize the data” (p. 206).

### **ANOVA**

In order to determine if a statistically significance difference between the independent and dependent variables, as it pertained to HSGPA and SAT I Reasoning Scores, for research question two was present, the researcher conducted a one-way ANOVA along with a Tukey Honestly Significant Difference (HSD) to determine if the observed differences within HSGPA and SAT I Reasoning performance were significant (Kachigan, 1991; Huck, 2008; Field, 2009).

### **Path Analysis**

For the third research question, the researcher used a path analysis statistical technique to examine the comparative strength of direct and indirect relationships among the academic and non-academic variables used by the University of California to determine admissions under the Comprehensive Review process (Keith, 1988; Lleras, 2005). Given the nature of research question three, using a path analysis statistical technique allowed the researcher to break apart (i.e. decompose) and separate the various academic and non-academic variables affecting a student’s admissibility to the University of California into direct effects and indirect components (Keith, 1988; Lleras, 2005). Unlike a multiple regression model, which can only specify one response variable at a time to a specific outcome variable, a path analysis estimates as many regression equations as needed to relate all the proposed relationships among the academic and non-academic variables in research question

three to determine admissions to the University of California under the Comprehensive Review process.

Similar to research questions one and two, the data for research question three included Latino, Mexican-American, African-American and White/Caucasian students that applied for undergraduate freshman admissions to the University of California under the Comprehensive Review process for the Fall 2007-2009. All non-academic and academic variables were entered as independent variables, except a students' ELC status because a students' ELC designation is the calculated HSGPA of a student's 10<sup>th</sup> and 11<sup>th</sup> academic record on UC-Approved coursework. The dependent variable for research question three was admissions to the University of California via the Comprehensive Review process.

In order to provide meaningful results for research question three, the researcher made a number of cognitive inferences on the initial path model by taking into consideration all of the relevant literature related to college admissions research as well as taking into account the academic eligibility requirements set forth by UCOP along with the non-academic factors as identified by the University of California's BOARS and the Faculty Committee on Undergraduate Admissions under the Comprehensive Review process to present an initial path model proposed for admissions to the University of California. More specifically, taking into consideration the relevant literature reviewed in chapter two on the relationship of a student's family income and first generation status affecting their competitiveness in the college admissions landscape, the proposed path model seeks to examine the role of the relationship that Parental Income and Parental Education has on the academic and

other-nonacademic variables in research question three in determining admissions to the University of California (Bok, 2000; Bowen & Bok, 1998; Briggs, 2001; Callam & Crocker, 2004; Camara & Powers, 1999; Chapa & Lazaro, 1998; Contreras, 2003; Ewers, 2005; Ferguson, 1998b; Geiser & Santelices, 2006, 2007; Kane 1998a; Rendon et al., 2000, 2008; Zwick, 2004).

As a result, not only did the researcher make a number of cognitive inferences on the presumed relationships that the *academic* and *non-academic* variables had within research question three, but the researcher took into account in greater depth the role that Parental Income and Parental Education had on the *academic* and *other non-academic variables* in the proposed path model, given the literature reviewed in chapter two above. The initial path model proposed for research question three can be seen in Figure 1 below, with greater emphasis stressed on the proposed effect that Parental Income and Parental Education had on the *academic* and *non-academic* variables to determine admissions to the University of California under the Comprehensive Review process.

Lastly, the Statistical Package for the Social Sciences (SPSS) version 17 was used to conduct the quantitative analysis, and Inspiration 9 software was used to create the figures in this research study in order to facilitate readability of the data.

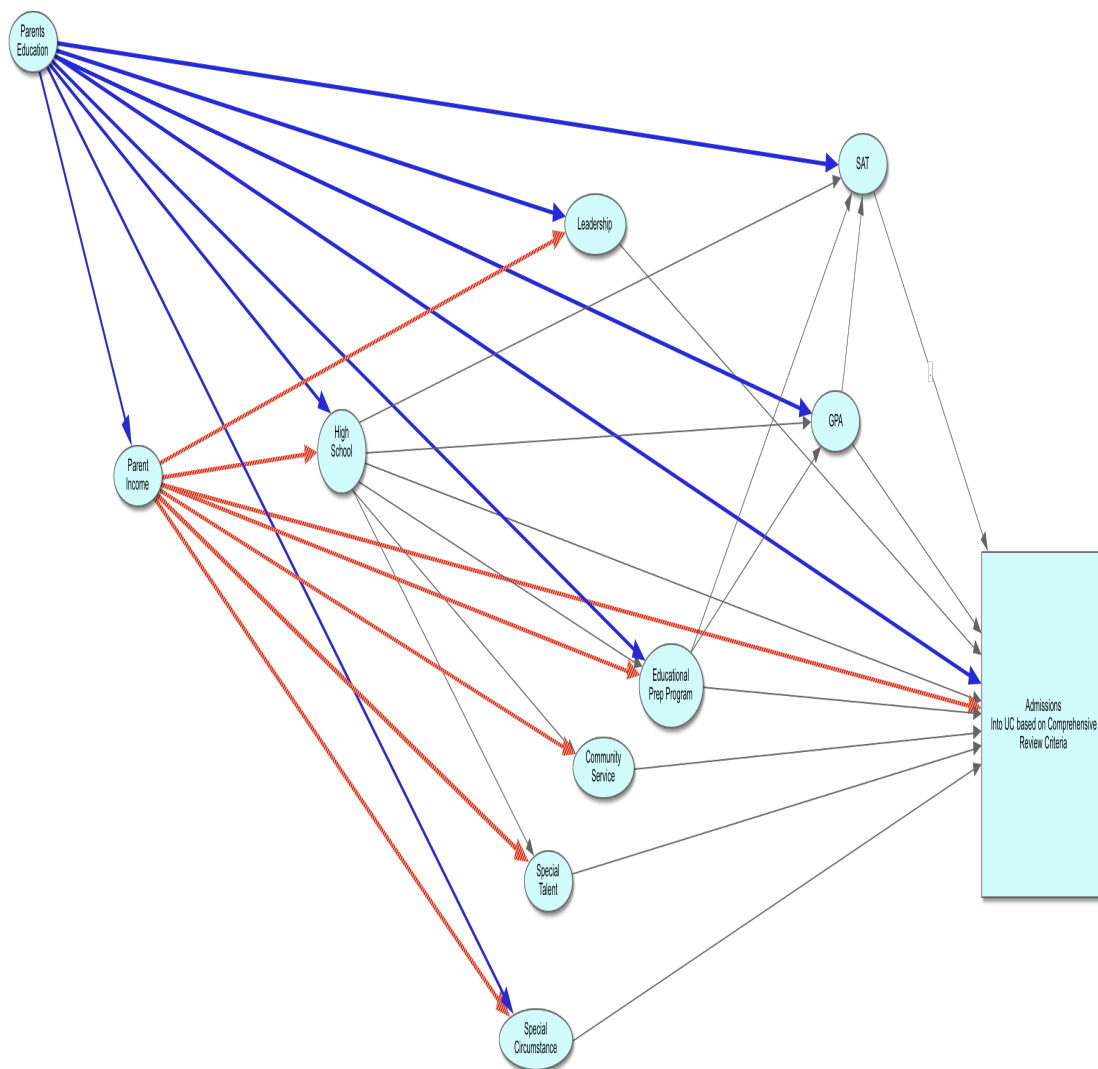


Figure 1:

Proposed Path Model

## **Coding**

Coding of the variables preceded analysis. The students' SAT I Reasoning scores, HSGPA, ELC designation, and Educational Environment classification were coded as continuous variables. Factors associated to students' ethnicity, Parental Income, Parental Education, Community/Volunteer Service, Demonstrated Leadership, Special Talents/Achievements/Awards, EPP, Special Circumstances/Personal Challenges/Personal Growth, Admission/Non-Admission were coded as categorical variables, and were given particular coding values that were consistent with the UCC's Undergraduate Admissions Comprehensive Review Training Manual for the 2007, 2008, and 2009 enrollment cycles.

## **Limitations to Study**

This research design presented several limitations. The sample proposed for this study consists of only students who voluntarily identify themselves as African-American, White/Caucasian, and Mexican-American or Other Latino, and does not take into consideration students who choose not to identify with a particular ethnic group. In addition, the data did not allow the researcher to identify students who were English Language Learners. In addition, the data obtained to conduct this study was not raw, and may have been filtered or altered by UCC's OARS' Admissions Analyst due to the fact that the researcher was not present at the time in which the data was compiled.

Another limitation to this study is the noncognitive processes that relate to other aspects of a person's *experiential intelligence* that may not readily be coded for implementation or approved as viable non-academic guidelines as determined by the

UC's BOARS Faculty Committee on Undergraduate Admissions for UC Freshman Selection by OARS throughout the University of California system. Factors including a student's way of learning, motivation to study, decision to get involved in school are all elements influencing academic performance and persistence that may not necessarily be captured by the UC Freshman Application and the Freshman Selection Operational Procedures currently in place (Ting & Sedlacek, 2000). Furthermore, McMillan and Schumacher (2001) also note that affective instruments like the non-academic portions of the University of California undergraduate freshman application are susceptible to *faking* or *socially desirable responses*, "in which subjects answer items in order to appear normal or most socially desirable rather than responding honestly" (p. 256).

While the findings in chapter four may offer useful information as to how the University of California currently admits students under UCC's current scoring guidelines, the findings from this study may or may not produce similar outcomes if this study were to be replicated at another UC undergraduate campus that employs a different scoring rubric via the Comprehensive Review process. This study also does not take into account how external readers are recruited, selected, and trained to read and score the UC undergraduate freshman application, nor does it take into account how an external reader's demographic profile effects how they read and score the undergraduate freshman application to determine admissions to the University of California.

Considering that the researcher conducted a path analysis for this research study, it is important to note the limitations that come along with using a path analysis

statistical technique. “Like any research technique, a number of assumptions are required to do a path analysis and the viability of the results depends on the degree to which these assumptions are met” (Keith, 1988, p. 359). Keith (1988) noted that path analysis does not provide information concerning the direction of the causation. The results of a path analysis does very little towards letting the researcher know whether they were right or wrong in how they proposed their initial path model (Keith, 1988). A path analysis allows the researcher to make assumptions and their inferences much more explicit than in other statistical techniques. This is important because the path analysis allows the researcher "to more exactly state theory, to more precisely test theory, and to more intelligently modify theory" (Keith, p. 349) Lastly, using a path analysis is not intended for discovering causation, it is intended to be used as a manner to test a causal model proposed by the researcher (Keith, 1988, Lleras, 2005).

Chapter four provides a full description of the findings of this research study, and chapter five offers a discussion of the findings and the implications for practice.

## CHAPTER IV

### Results

The purpose of this research was to examine the ways in which the non-academic variables were used in conjunction with the academic variables in today's undergraduate comprehensive admissions review process at the University of California. This research sought to clarify whether there was a differential impact on how African American, White and Latino students were admitted via the University of California's comprehensive review process.

This study further sought to determine if there was a difference in the academic profile – i.e. HSGPA, SAT I Reasoning Scores, a student's ELC designation, and Educational Environment – among African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process. Furthermore, this study sought to determine if there was a differential impact in the *academic variables* - i.e. HSGPA, SAT I Reasoning Scores, a student's ELC designation, and Educational Environment – and *non-academic variables* - i.e. Parental Income, Parental Education, Demonstrated Leadership, Special Talents/Achievements/Awards, Community Service, Participation in Educational Preparation Programs (EPP), Special Circumstances/Personal Challenges/Personal Growth – in determining the admissibility of African-American, White/Caucasian, and Latino students admitted to the University of California via the Comprehensive Review process.

### Data

The data for analysis was collected by UCC's OARS' database containing all



relevant pieces of information related to this study. Data retrieved for each student included three categories of variables as indicated on the UC undergraduate freshman application: ethnic identification as indicated by the student, the student's academic profile as well as the non-academic variables as indicated on the UC undergraduate freshman application. The academic profile used in this research study included the students' HSGPA, SAT I Reasoning Scores, ELC designation, and their Educational Environment. The set of nonacademic variables included the students' Parental Income, Parental Education, Demonstrated Leadership, Special Talents/Achievement/Awards, Community/Volunteer Service, EPP, and Special Circumstances/Personal Challenges/Personal Growth.

#### **Research Question One.**

Research question one (R1): – *What are the differences in the acceptance rates of African-American, White/Caucasian, and Latino students admitted to the University of California under the Comprehensive Review process?*

Table 2 displays the data for research question one in two distinct manners: the data are aggregated by ethnicity and by year. When aggregating the data by race, Table 2 demonstrates that 38.4% (N=16,677) out of a total population of White/Caucasian students (NW=43,413) that applied to the University of California during the Fall 2007-2009 enrollment cycles were admitted. In comparison, 21.7% (N=1,035) of African-American (NAA=4,762), 33.4% (N=5,535) of Mexican-American (NMA=15,707), and 33.7% (N=1,862) of Latino students (NL=5,523) that applied to the University of California during the Fall 2007-2009 enrollment cycles were granted admissions, respectively. From the data demonstrated in Table 2 it is

evident that White/Caucasian students had higher rates of being admitted to the University of California under the Comprehensive Review process than their Mexican-American, Latino, and African-American counterparts.

Due to the dichotomous nature of the dependent variable in research question one no statistical test was conducted to determine if the differences of admissions rates among African-American, White/Caucasian, and Latino students admitted to the University of California during the Fall 2007-2009 via the Comprehensive Review process were significant.

Table 2:

## Students Admitted to the University of California for Fall 2007-2009

Ethnicity	Admit for Fall	Year			Total
		2007	2008	2009	
White/Caucasian	Count	6044	5763	4870	16677
	% within admit	36.2%	34.6%	29.2%	100.0%
	% within year	41.4%	39.2%	34.6%	38.4%
	% of Total	13.9%	13.3%	11.2%	38.4%
African-American	Count	392	329	314	3685
	% within admit	37.9%	31.8%	30.3%	100.0%
	% within year	26.6%	19.9%	19.2%	77.4%
	% of Total	8.2%	6.9%	6.6%	77.4%
Mexican-American	Count	1799	1601	1782	10398
	% within admit	34.7%	30.9%	34.4%	100.0%
	% within year	36.9%	32.5%	30.1%	66.2%
	% of Total	11.5%	10.2%	11.3%	66.2%
Latino	Count	636	646	580	3621
	% within admit	34.2%	34.7%	31.1%	100.0%
	% within year	37.0%	34.3%	30.2%	65.6%
	% of Total	11.5%	11.7%	10.5%	65.6%

### **Research Question Two.**

Research question two (R2) states: R2 – *What are the differences in the academic profile – i.e. HSGPA, SAT I Reasoning Scores, a student’s ELC, and their Educational Environment – among Black, White, and Latino students admitted to the University of California under the Comprehensive Review process?*

A comparison of African-American, White/Caucasian, and Latino students’ academic profile yielded results that supported previous literature on the academic characteristics exhibited by African-American, White/Caucasian, and Latino students at the K-12 level (Duran, 1994; Bowen & Bok, 1998; Betts et al., 2000; Llagas & Snyder, 2003; Massey et al., 2003; Kozol, 2005).

#### ***High School Grade Point Average.***

During the Fall 2007-2009 the freshman undergraduate admissions guidelines for the University of California capped a students’ HSGPA by taking into consideration no more than 8 honors and/or AP courses. When comparing the HSGPA for students admitted to the University of California across ethnic/racial guidelines, data in Table 3 demonstrates that, White/Caucasian students admitted to the University of California had a mean (*M*) HSGPA of  $M_{HSGPA}=4.1033$  for the Fall 2007 (NW=6,024),  $M_{HSGPA}=4.1165$  for the Fall 2008 (NW=5,751), and  $M_{HSGPA}=4.1384$  for the Fall 2009 (NW=4,856).

In comparison, African-American students admitted to the University of California during this same time period had a mean (*M*) HSGPA of  $M_{HSGPA}=3.9759$  (NAA=390) for the Fall 2007,  $M_{HSGPA}=3.9991$  for the Fall 2008 (NAA=329), and  $M_{HSGPA}=3.9854$  for the Fall 2009 (NAA=314).

In addition, Mexican-American students that were admitted to the University of California during this time period had a mean (*M*) HSGPA of  $MHSGPA=3.9579$  ( $NMA=1,799$ ) during the Fall 2007,  $MHSGPA=3.9719$  ( $NMA=1,954$ ) for the Fall 2008, and  $MHSGPA=3.9891$  ( $NMA=1,782$ ). Lastly, when analyzing the data for Latino students admitted during this time period, their mean (*M*) HSGPA was  $MHSGPA=3.9959$  ( $NL=633$ ) during the Fall 2007,  $MHSGPA=4.0167$  ( $NL=643$ ) for the Fall 2008, and  $MHSGPA=4.0686$  ( $NL=577$ ).

### ***SAT I Reasoning Scores.***

For the Fall 2007-2009, the admissions guidelines to the University of California required students to submit their ACT or SAT I Reasoning Scores along with submitting their test scores for two SAT II Subject exams. In order to minimize the threat to the internal validity of this study, the data for analysis with respect to analyzing a students' standardized test scores was limited to the SAT I Reasoning Scores. This was done because not every student takes the same SAT II Subject exams. In addition, the data obtained by UCC only provided the researcher with SAT I Reasoning and SAT II Subject scores for the students in this study.

When comparing the SAT I Reasoning scores of White/Caucasian students admitted to the University of California from Fall 2007-2009, Table 3 demonstrates that, White/Caucasian students had a mean SAT I Reasoning Score of  $MSATI=2004.38$  ( $NW=6,044$ ) during the Fall 2007,  $MSATI=2010.58$  ( $NW=5,763$ ) during the Fall 2008, and  $MSATI=2032.23$  ( $NW=4,869$ ) during the Fall 2009. In comparison, African-Americans admitted to the University of California had a mean SAT I Reasoning

Score of *MSATI*=1799.87 (*NAA*=392) during the Fall 2007, *MSATI*=1814.09 (*NAA*=329) for the Fall 2008, and *MSATI*=1845.19 (*NAA*=314) for the Fall 2009.

Additionally, Mexican-Americans admitted to the University of California for the Fall 2007-2009 had a mean SAT I Reasoning Score of *MSATI*=1697.56 (*NMA*=1,799) for the Fall 2007, *MSATI*=1711.97 (*NMA*=1,954) for the Fall 2008, and *MSATI*=1718.78 (*NMA*=1,782) for the Fall 2009. Lastly, when analyzing the data for Latino students admitted during this time period, Latino students had a mean SAT I Reasoning Score of *MSATI*=1829.30 (*NL*=636) for the Fall 2007, *MSATI*=1823.49 (*NL*=646) for the Fall 2008, and *MSATI*=1879.67 (*NL* =580) for the Fall 2009.

***Eligibility in the Local Context (ELC).***

Beginning with the Fall 2001 frosh class, the University of California instituted the Eligibility in the Local Context (ELC) program as one of three paths to freshman eligibility to the University of California in which the top 4% of students in each participating California high school class will be designated UC-eligible and granted admissions to a designated University of California campus based on their UC-approved “a-g” coursework requirement taken while in high school (<http://www.ucop.edu/sas/elc/>, April 18, 2010). “ELC is determined during the summer between the junior and senior years of high school. Students are notified of their eligibility in the fall semester of their senior year of high school before they apply to the University” (<http://www.ucop.edu/sas/elc/eligibilityinfo.html>, April 18, 2010).

In order for a student to be eligible for admissions to the University of California in the ELC context, students must fulfill the following requirements:

- Attend an eligible high school that participates in the ELC program and have his or her transcript submitted to UC with the school's ELC submission packet
- Have a UC-calculated grade point average of 3.0 or higher
- Complete a specific pattern of 11 UC-approved “a-g” courses by the end of the junior year
- Rank in the top 4% of the expected graduating class, based on a UC-weighted grade point average that includes all UC-approved “a-g” courses taken in the 10th and 11th grades
- Graduate from high school with a UC-calculated GPA of 3.0 or higher
- Complete all coursework requirements for freshman admission by the end of senior year
- Take two SAT II Subject Tests and either, the ACT Assessment plus Writing, or the SAT I Reasoning Test no later than December of the senior year of high school.
- Apply to the University by the November 30 application deadline (<http://www.ucop.edu/sas/elc/requirementsinfo.html>, April 18, 2010).

Analyzing data for African-American, White/Caucasian, and Latino students that were admitted to the University of California for Fall 2007-2009 indicates that N=2,299 out of the NW= 6,044 White/Caucasian students admitted to the University of California during the Fall 2007 were ELC eligible, for Fall 2008 N=2,243 out of NW= 5,763 of White/Caucasian students granted admissions were ELC eligible, and in

the Fall 2009 N=2,056 out of Nw=4,869 White/Caucasian students admitted to the University of California were ELC eligible.

Comparatively, N=153 African-American students out of NAA=392 admitted to the University of California ELC eligible; for Fall 2008, N=119 out of the NAA=329 African-American students admitted were ELC eligible, and for the Fall 2009, N=119 out of the NAA=314 African-American students admitted during this admissions cycle were ELC eligible.

In addition, for Mexican-American students admitted to the University of California during this time period, N=980 out of NMA=1,799 were ELC eligible during the Fall 2007, N=1,031 students out of NMA=1,954 admitted in the Fall 2008 were ELC eligible, and N=974 out of NMA=1,782 admitted in Fall 2009 were ELC eligible.

When analyzing the data for Latino students during the Fall 2007-2009, Table 3 indicates that, N=269 out of the NL=636 students admitted to the University of California in Fall 2007 were ELC eligible; N=268 out of NL=646 students admitted during the Fall 2008 were ELC eligible, and N=284 out of NL=580 students admitted in the Fall 2009 were ELC eligible.

Lastly, the campus site that provided the data to conduct this research study assigns points of 300 to applicants whose transcripts were designated by the University of California's Office of the President (UCOP) as being eligible for admissions through the ELC program. The point allocation towards admissions are dichotomous in nature, applicants in the top 4% of their high school's graduating class – as determined by UCOP - are automatically assigned 300 points on the UC



undergraduate freshmen application and those that fall between the top 5-12.5% who are not assigned the ELC designation are given zero points via the Comprehensive Review Process.

***Educational Environment.***

As part of the University of California's admissions guidelines, the University of California takes into consideration the location of the applicant's secondary school and residence as a factor in determining admissions in order to provide geographic diversity to the overall student population and to account for the wide variety of educational environments existing in California. Currently, UCC assigns points to students graduating from disadvantaged educational environments that fall within the 4th or 5th quintile Academic Performance Index of all California public high schools as indicated by the Department of Education "by using the following academic indicators: high school completion rate, percentage of students enrolled in college preparation classes, percentage of students enrolled in Advanced Placement/ Honors courses, percentage of students admitted to the UC/CSU, and percentage of students taking the SAT I Reasoning Test or the ACT with Writing" (<http://www.ucsd.edu/prospective-students/admissions/undergraduate-admissions/freshmen/process.html>, April 23, 2010).

Currently, the scoring guideline for admission under the Educational Environment guideline on the University of California undergraduate freshman application is dichotomous in nature. Students that attend schools within the top three quintiles are allocated zero points on this particular section of the undergraduate

freshman application. For applicants that graduate from 4<sup>th</sup> or 5<sup>th</sup> quintile schools, UCC automatically assigns 300 points to the students that fall within this category.

The summary provided in Table 3 of the Academic Profile for African-American, White/Caucasian, and Latino students admitted to the University of California during the Fall 2007-2009 was not able to fully capture the number of students admitted to the University of California that were assigned Educational Environment points in an aggregated manner. As a result, the researcher, conducted further analysis of African-American, White/Caucasian, and Latino students admitted to the University of California during the Fall 2007-2009 by conducting a cross tabulation of the data.

An analysis of the data in Table 4 demonstrates, that N=386 (6.4%) White/Caucasian students out of NW=6,042 admitted during the Fall 2007 were assigned Educational Environment Points; during the Fall 2008 N=342 (5.9%) out of NW=5,763 White/Caucasian students admitted were assigned Educational Environment points, and N=296 (6%) out of NW=4,870 White/Caucasian students admitted during the Fall 2009 were assigned Educational Environment points.

In comparison, when analyzing the data in Table 4 for African-American students, N=103 (26.2%) out of NAA=392 students admitted during the Fall 2007 were assigned Educational Environment points; for the Fall 2008, N=96 (29.1%) out of NAA=329 African-American students admitted were assigned Educational Environment points; and N=97 (30.9%) out of NAA=314 African-American students admitted were assigned Educational Environment points.

In addition, when analyzing data for Mexican-American students during the Fall 2007-2009, Table 4 demonstrates that N=874 (48.6%) out of NMA=1,799 students admitted during the Fall 2007 were assigned Educational Environment points; for the Fall 2008, N=961 (49.2%) out of NMA=1,954 students admitted during the Fall 2008 were assigned Educational Environment points; and N=904 (50.8%) out of NMA=1,781 students admitted during the Fall 2009 were assigned Educational Environment Points.

Lastly, data for Latino students indicates that N=172 (27.1%) out of NL=635 students admitted during the Fall 2007 were assigned Educational Environment points; for the Fall 2008, N=209 (32.4%) out of NL=646 students admitted during the Fall 2008 were assigned Educational Environment points; and N=170 (29.3%) out of NL=580 students admitted during the Fall 2009 were assigned Educational Environment points.

From the data presented in above for students issued Educational Environment points by the University of California, one can determine that African-American students were about four times more likely to attend a 4<sup>th</sup> or 5<sup>th</sup> quintile school than their White/Caucasian counterparts, whereas, Mexican-American students were about eight times more likely to attend 4<sup>th</sup> or 5<sup>th</sup> quintile schools than their White/Caucasian counterparts.

In order to determine if the difference between the HSGPA and SAT I Reasoning Score of African-American, White/Caucasian, and Latino students admitted to the University of California via the Comprehensive Review process during the Fall 2007-2009 was statistically significant, a calculation of two one-way

ANOVAs were conducted comparing these students' HSGPA and SAT I Reasoning Scores. Tukey's HSD was used in conjunction with the one-way ANOVAs to determine the statistical significance of the differences of the HSGPA and SAT I Reasoning Scores of African-American, White/Caucasian, and Latino students being admitted to the University of California via the Comprehensive Review process. Based on the one-way ANOVA conducted on the students' HSGPA and SAT I Reasoning Scores, group differences on these two variables were found to be statistically significant: *HSGPA*,  $F(3, 68989) = 1681.902, p < .01$  and *SAT I Reasoning Scores*,  $F(3, 68843) = 7409.370, p < .01$ .

Overall, the *MHSGPA* for students admitted to UCC from the Fall 2007-2009 accounted for a .13 point difference between White/Caucasian students ( $NW=4.11$ ) and African-American students ( $NAA=3.98$ ). In comparison, the *MHSGPA* between Mexican-American ( $NMA=3.97$ ) and White/Caucasian ( $NW=4.11$ ) students admitted to the University of California during the Fall 2007-2009 accounted for a 0.14 point difference. Lastly, the *MHSGPA* between White/Caucasian ( $NW=4.11$ ) and Latino ( $NL=4.02$ ) students admitted during this time period accounted for a .09 point difference between these two groups.

The reason why the differences between *MHSGPA* between these groups are significant to note is due to the fact that, under the current admissions guidelines, the University of California grants extra points for students taking honors and AP courses while in high school. However, there is a considerable body of literature that has found that high schools in economically disadvantaged areas had high proportions of African-American and Latino students enrolled in their student body, and offered the

fewest honors and AP courses that affected the academic competitiveness of these two groups applying to the University of California (Bok, 2000; Bowen & Bok, 1998; Contreras, 2003; Johnson et al., 2008; Kozol, 2005; Martin et al., 2005; Massey et al., 2003; Rendon et al., 2008; Solarzano & Ornelas, 2004). Another reason why the *MHSGPA* point differential is significant to note is due to the fact that *HSGPA* has been consistently found to be the single, most significant predictor in determining admissions to the University of California (Contreras, 2003; Geiser 2008; Geiser & Santelices, 2006, 2007; Geiser & Studley, 2003; Johnson et al., 2008).

Similar to research question one, due to the dichotomous nature of two of the dependent variable in research question two – Educational Environment and ELC designation - no statistical test was conducted to determine if the differences of these two variables among African-American, White/Caucasian, and Latino students admitted to the University of California during the Fall 2007-2009 via the Comprehensive Review process were significant.

Table 3:

## Academic Profile of Students Admitted to UC for Fall 2007-2009

<b>Ethnicity</b>	<b>Year</b>	<b>Admit</b>	<b>SAT I</b>	<b>EEP</b>	<b>ELC</b>	<b>HSGPA</b>
White/Caucasian	2007	M	2004.38	19.17	300.00	4.1033
		N	6044	6042	2299	6024
		SD	169.524	73.371	.000	.20973
	2008	M	2010.50	17.80	300.00	4.1165
		N	5763	5763	2243	5751
		SD	171.262	70.886	.000	.19872
	2009	M	2032.23	18.23	300.00	4.1384
		N	4869	4870	2056	4856
		SD	166.870	71.685	.000	.18767
	Total	M	2014.62	18.42	300.00	4.1181
		N	16676	16675	6598	16631
		SD	169.745	72.026	.000	.20017
African-American	2007	M	1799.84	78.83	300.00	3.9759
		N	392	392	153	390
		SD	225.869	132.208	.000	.26731
	2008	M	1814.09	87.54	300.00	3.9991
		N	329	329	119	329
		SD	239.665	136.584	.000	.24239
	2009	M	1845.19	92.68	300.00	3.9854
		N	314	314	119	314
		SD	250.867	138.835	.000	.29727
	Total	M	1818.13	85.80	300.00	3.9861
		N	1035	1035	391	1033
		SD	238.574	135.631	.000	.26926

Table 3 (continued):

## Academic Profile of Students Admitted to UC for Fall 2007-2009

<b>Ethnicity</b>	<b>Year</b>	<b>Admit</b>	<b>SAT I</b>	<b>EEP</b>	<b>ELC</b>	<b>HSGPA</b>
Mexican-American	2007	M	1697.56	145.75	300.00	3.9579
		N	1799	1799	980	1799
		SD	240.472	149.981	.000	.27002
	2008	M	1711.97	147.54	300.00	3.9719
		N	1954	1954	1031	1954
		SD	244.542	150.018	.000	.26788
	2009	M	1718.78	152.27	300.00	3.9891
		N	1782	1781	974	1782
		SD	236.237	150.025	.000	.26731
	Total	M	1709.48	148.48	300.00	3.9729
		N	5535	5534	2985	5535
		SD	240.685	150.006	.000	.26864
Latino	2007	M	1829.30	81.26	300.00	3.9959
		N	636	635	269	633
		SD	250.324	133.427	.000	.26251
	2008	M	1823.49	97.06	300.00	4.0167
		N	646	646	268	643
		SD	251.898	140.456	.000	.25464
	2009	M	1849.67	87.93	300.00	4.0686
		N	580	580	284	577
		SD	250.880	136.674	.000	.23125
	Total	M	1833.63	88.82	300.00	4.0257
		N	1862	1861	821	1853
		SD	251.152	136.994	.000	.25205

Table 4:

## Educational Environment Points for Fall 2007-2009

<b>Ethnicity</b>	<b>Year</b>	<b>Admit</b>	<b>0</b>	<b>300</b>	<b>Total</b>
White/Caucasian	2007	Not Admitted for Fall	8247	319	8566
		Admit for fall	5656	386	6042
		Total	13903	705	14608
	2008	Not Admitted for Fall	8380	332	8712
		Admit for fall	5421	342	5763
		Total	13801	674	14475
	2009	Not Admitted for Fall	8712	309	9021
		Admit for fall	4573	296	4870
		Total	13285	605	13891
African-American	2007	Not Admitted for Fall	870	209	1079
		Admit for fall	289	103	392
		Total	1159	312	1471
	2008	Not Admitted for Fall	975	324	1299
		Admit for fall	233	96	329
		Total	1208	420	1628
	2009	Not Admitted for Fall	982	324	1306
		Admit for fall	217	97	314
		Total	1199	421	1620



Table 5:

## ANOVA for HSGPA and SAT I Reasoning for Fall 2007-2009

			SS	df	MS	F	Sig.
Admit * Ethnicity	Between Groups (Combined)		145.906	3	48.635	193.977	.000
	Within Groups		17400.672	69401	.251		
	Total		17546.577	69404			
HSGPA - Capped at 8 honors * Ethnicity	Between Groups (Combined)		836.391	3	278.797	1681.902	.000
	Within Groups		11435.823	68989	.166		
	Total		12272.214	68992			
SAT I (Reasoning Score) * Ethnicity	Between Groups (Combined)		1.230E9	3	4.100E8	7409.370	.000
	Within Groups		3.809E9	68843	55331.57 6		
	Total		5.039E9	68846			

Table 6:

## ANOVA of Academic Profile with Tukey HSD

Dependent Variable	(I) Ethnicity	(J) Ethnicity	<i>M</i> Difference		Sig.	99% Confidence Interval	
			(I-J)	SE		Lower Bound	Upper Bound
Admit	White/Caucasian	African-American	.169*	.008	.000	.15	.19
		Mexican-American	.058*	.005	.000	.05	.07
		Latino	.052*	.007	.000	.03	.07
	African-American	White/Caucasian	-.169*	.008	.000	-.19	-.15
		Mexican-American	-.111*	.008	.000	-.13	-.09
		Latino	-.117*	.010	.000	-.14	-.09
	Mexican-American	White/Caucasian	-.058*	.005	.000	-.07	-.05
		African-American	.111*	.008	.000	.09	.13
		Latino	-.006	.008	.895	-.03	.01
	Latino	White/Caucasian	-.052*	.007	.000	-.07	-.03
		African-American	.117*	.010	.000	.09	.14
		Mexican-American	.006	.008	.895	-.01	.03

\*. The mean difference is significant at the  $p < 0.01$  level.

Table 6 (continued):

## ANOVA of Academic Profile with Tukey HSD

Dependent Variable	(I) Ethnicity	(J) Ethnicity	<i>M</i>		Sig.	99% Confidence Interval	
			Difference (I-J)	SE		Lower Bound	Upper Bound
HSGPA - Capped at 8 honors	White/Caucasian	African-American	.32384*	.00624	.000	.3078	.3399
		Mexican-American	.20635*	.00380	.000	.1966	.2161
		Latino	.15316*	.00584	.000	.1382	.1682
	African-American	White/Caucasian	-.32384*	.00624	.000	-.3399	-.3078
		Mexican-American	-.11749*	.00676	.000	-.1348	-.1001
		Latino	-.17068*	.00808	.000	-.1914	-.1499
	Mexican-American	White/Caucasian	-.20635*	.00380	.000	-.2161	-.1966
		African-American	.11749*	.00676	.000	.1001	.1348
		Latino	-.05319*	.00639	.000	-.0696	-.0368
	Latino	White/Caucasian	-.15316*	.00584	.000	-.1682	-.1382
		African-American	.17068*	.00808	.000	.1499	.1914
		Mexican-American	.05319*	.00639	.000	.0368	.0696

\*. The mean difference is significant at the  $p < 0.01$  level.

Table 6 (continued):

## ANOVA of Academic Profile with Tukey HSD

Dependent Variable	(I) Ethnicity	(J) Ethnicity	<i>M</i>		Sig.	99% Confidence Interval	
			Difference (I-J)	SE		Lower Bound	Upper Bound
SAT I (Reasoning score)	White/Caucasian	African-American	273.335*	3.636	.000	263.99	282.68
		Mexican-American	298.896*	2.202	.000	293.24	304.55
		Latino	190.914*	3.376	.000	182.24	199.59
	African-American	White/Caucasian	-273.335*	3.636	.000	-282.68	-263.99
		Mexican-American	25.561*	3.939	.000	15.44	35.68
		Latino	-82.421*	4.697	.000	-94.49	-70.35
	Mexican-American	White/Caucasian	-298.896*	2.202	.000	-304.55	-293.24
		African-American	-25.561*	3.939	.000	-35.68	-15.44
		Latino	-107.982*	3.700	.000	-117.49	-98.48
	Latino	White/Caucasian	-190.914*	3.376	.000	-199.59	-182.24
		African-American	82.421*	4.697	.000	70.35	94.49
		Mexican-American	107.982*	3.700	.000	98.48	117.49
Mexican-American		-50.110*	1.542	.000	-54.07	-46.15	

\*. The mean difference is significant at the  $p < 0.01$  level.

**Research Question Three.**

Research question three (R3) states: R3 – *What are the presumed causal relationship between the academic variables – i.e. HSGPA, SAT I Reasoning Scores, a student’s ELC, and Educational Environment – and nonacademic variables - i.e. Parental Income, Parental Education, Demonstrated Leadership, Special Talents/Achievement/Awards, Community/Volunteer Service, EPP, Special Circumstances/Personal Challenges/Personal Growth – to determine admissions to the University of California under the Comprehensive Review Process?*

One of the primary goals for this research study was to examine the ways in which the academic variables were used in conjunction with the non-academic variables to determine admissions for students applying to the University of California via the undergraduate comprehensive admissions review process.

***Path Analysis Revisited.***

For research question three, the researcher used a path analysis statistical procedure which allowed the researcher to not only explore the relationship that the non-academic variables play in the comprehensive review process, but it also allowed the researcher to see the role that academic variables had in determining the admissibility of Black, White, and Latino students to the University of California (McMillan & Schumacher, 2001; Creswell, 2005). The quantitative nature of this study also allowed the researcher to determine the proposed path model between the *non-academic variables* - Parental Income, Parental Education, Community/Volunteer Service, Demonstrated Leadership, Special Talents/Achievements/Awards, EPP, Special Circumstances/Personal Challenges/Personal Growth - and *academic*

*variables* - HSGPA, SAT I Reasoning Scores, a student's ELC designation, and Educational Environment – among African-American, White/Caucasian, and Latino students admitted, or denied admissions, to the University of California via the Comprehensive Review process seen in Figure 1 above.

Table 7 provides several pieces of information regarding the direct and indirect causal relationships of the academic and non-academic variables to determine admissions to the University of California.

*Overall Strength of the Path Analysis Model.*

The full conceptual path model prior to running the path analysis statistical technique was presented in Figure 1 in chapter three. Upon conducting the path analysis, the results of the statistical technique are summarized in Figure 2 below. Based on the path model summary in Figure 2, the researcher examined the error vectors associated with each dependent (endogenous) variable and found that six of the endogenous variables had moderate error vectors: Admissions ( $ev = .72$ ), SAT I Reasoning Scores ( $ev = .74$ ), Parental Income ( $ev = .82$ ), Educational Environment ( $ev = .88$ ), EPP ( $ev = .89$ ), and Special Circumstances/Personal Challenges/Personal Growth ( $ev = .94$ ). While the four other endogenous variables had weak error vectors: HSGPA ( $ev = .98$ ), Community Service ( $ev = .99$ ), Special Talent/Achievement/Awards ( $ev = .97$ ), and Demonstrated Leadership ( $ev = .98$ ).

Further analysis of the decomposition table – in Table 7 - indicated that five independent (exogenous) variables – HSGPA, Parental Income, Educational Environment, Parental Education, and EPP – exhibited high non-casual scores that indicated strong predictor scores for the proposed path to admissions. In addition, two

endogenous variables exhibited moderate non-causal scores that indicated moderate predictor scores for the proposed path to admissions: SAT I Reasoning Scores and Special Talent/Achievement/Awards. Lastly, Community/Volunteer Service and Demonstrated Leadership exhibited weak non-causal scores that indicated weak predictor scores for the proposed path to admissions for research question three.

In contrast, four out of the five predictors that showed excellent strength on the path analysis were fixed variables – i.e. HSGPA, Parental Income, Parental Education, and Educational Environment - that were scored and decided by UCOP, BOARS and the Faculty Committee on Undergraduate Admissions that had no input from the external readers hired to read applications for each respective enrollment cycle. These fixed variables that are automatically assigned points not only eliminates the potential of any personal bias that external readers may have when assigning points to an applicant across the above categories, but it currently accounts for close to 81% of the score allocation towards a candidate's potential admission to UCC (UCC Undergraduate Admissions Comprehensive Review Training Manual, 2007, 2008, 2009).

Even though the purpose of the path model was to examine the comparative strength of the direct and indirect relationships among the academic and non-academic variables to determine admissions to the University of California, some of the more salient findings of the path model were the relationships that the academic and non-academic variables had on one another. Figure 2 shows that Parental Income accounted for close to 25% of the variance in contributing to a student's HSGPA. Similarly, when looking at the relationship between a student's Parental Education and

HSGPA, Figure 2 shows that Parental Education accounted for close to 28% of the variance in contributing to a student's HSGPA. However, when examining the relationship between a student's Parental Education and their Parental Income, Parental Education accounted for 59% of the variance in determining the income of the student's parent(s). In addition, when examining a student's Parental Income to the Special Circumstances/Personal Challenges/Personal Growth that students' endure, Parental Income accounted for 32% of the variance in determining the Special Circumstances/Personal Challenge/Personal Growth of a student. Lastly, when looking at a student's Educational Environment in relation to their involvement in an Educational Preparation Program (EPP), Figure 2 shows that the Educational Environment of the student accounted for 23% of the variance of a student's participation in an Educational Preparation Program.

These findings are of particular importance because the findings of the path model are consistent with previous research surrounding academic preparation that found that a student's academic preparation was directly related to the student's parental education, parental income as well as the academic and social resources available to the student within their respective educational environments (Bok, 2000; Bowen & Bok, 1998; Coleman, 1966; Kozol, 2005; Massey et al., 2003; Rendon et al., 2008).



Table 7:

## Decomposition Summary of Path Analysis

<b>Ultimate Dependent/ Endogenous Variable 1 = (Admissions)</b>	<b>1/2</b>	<b>1/3</b>	<b>1/4</b>	<b>1/5</b>	<b>1/6</b>	<b>1/7</b>	<b>1/8</b>	<b>1/9</b>	<b>1/10</b>	<b>1/11</b>
Original Co-variation (OC)	.570	.234	.021	.398	.055	.205	.231	.007	.061	.099
Direct (Beta)/ Coefficients	.441	.115	.124	.331	.128	.115	.109	.119	.105	.091
Indirect (ID)	.130	.000	.050	.000	-.060	.000	.000	-.08	.000	-.02
Total Causal (TC)	.571	.115	.174	.331	.068	.115	.109	.039	.105	.071
Non Causal (NC)	-.001	.119	-.153	.067	-.013	.090	.122	-.032	-.044	.028

1. Admissions to the University of California (Ultimate Dependent/Endogenous Variable)
2. HSGPA
3. Community Service
4. Parental Income/Social Environment
5. SAT I Reasoning Scores
6. Educational Environment (i.e. High school)
7. Special Talent/Achievement/Awards
8. Demonstrated Leadership
9. Parental Education (i.e. First Generation)
10. Special Circumstances/Personal Challenges/Personal Growth
11. Educational Prep Programs (EPP)

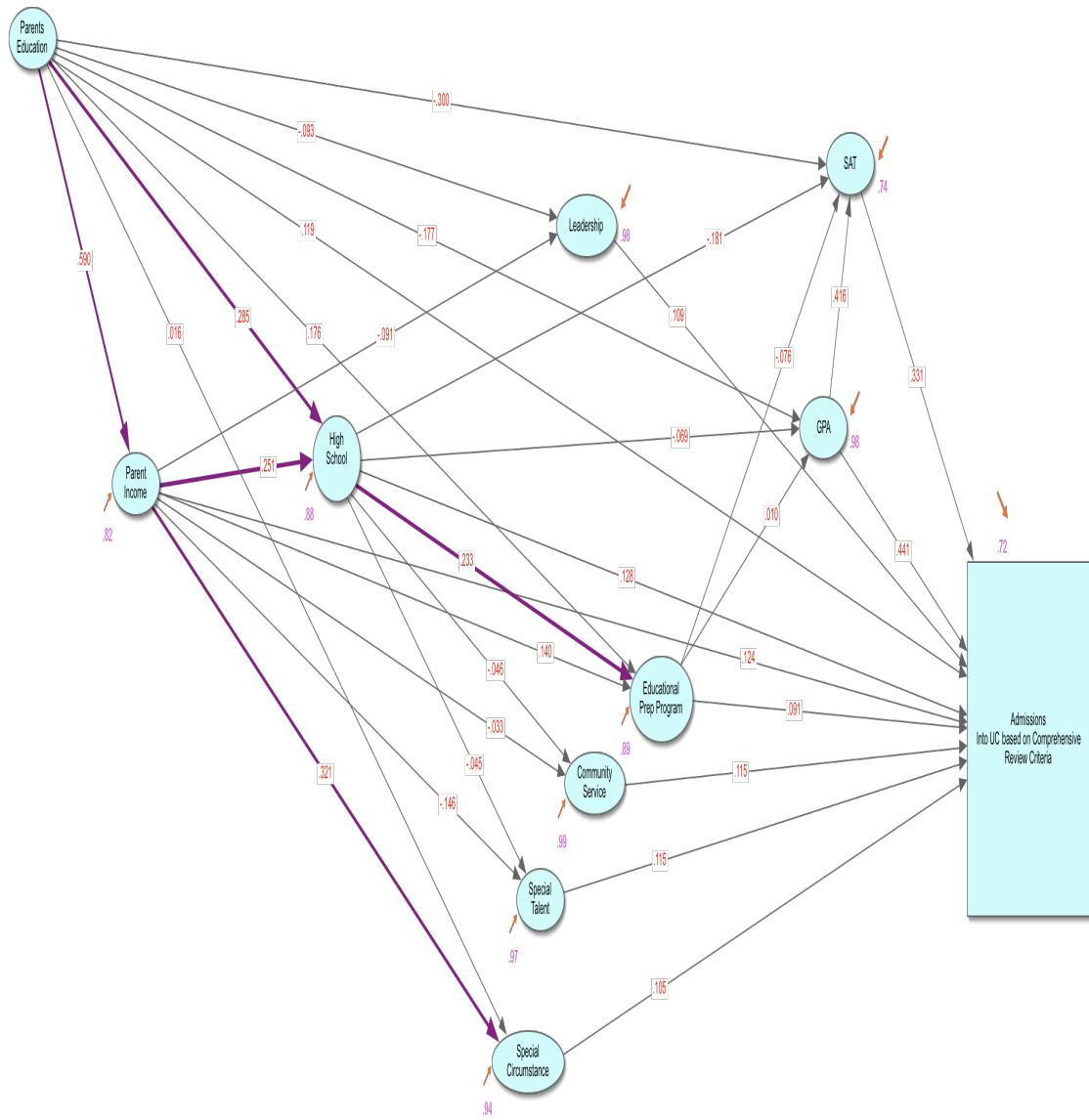


Figure 2:  
Results of Path Analysis

Table 8:

ANOVA on Academic and Non-Academic factors to determine Admissions

<i>Variable</i>	<i>Model</i>	<i>SS</i>	<i>df</i>	<i>M</i>	<i>F</i>	<i>Sig.</i>
HSGPA	Regression	5695.696	1	5695.696	33356.029	.000 <sup>a</sup>
	Residual	11850.882	69403	.171		
	Total	17546.577	69404			
Community/ Volunteer Service	Regression	6111.835	2	3055.918	18547.579	.000 <sup>b</sup>
	Residual	11434.742	69402	.165		
	Total	17546.577	69404			
Parental Income	Regression	6497.190	3	2165.730	13602.909	.000 <sup>c</sup>
	Residual	11049.388	69401	.159		
	Total	17546.577	69404			
SAT I Reasoning Scores	Regression	7234.675	4	1808.669	12172.497	.000 <sup>d</sup>
	Residual	10311.903	69400	.149		
	Total	17546.577	69404			
Educational Environment (i.e. High School)	Regression	7614.565	5	1522.913	10641.211	.000 <sup>e</sup>
	Residual	9932.013	69399	.143		
	Total	17546.577	69404			

a. Predictors: (Constant), HSGPA - capped at 8 honors

b. Predictors: (Constant), HSGPA - capped at 8 honors, community services points

c. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points

d. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score

e. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points

Table 8 (continued):

ANOVA on Academic and Non-Academic factors to determine Admissions

<i>Variable</i>	<i>Model</i>	<i>SS</i>	<i>df</i>	<i>M</i>	<i>F</i>	<i>Sig.</i>
Special Talent/ Achievement/ Awards	Regression	7855.471	6	1309.245	9375.503	.000 <sup>f</sup>
	Residual	9691.106	69398	.140		
	Total	17546.577	69404			
Demonstrated Leadership	Regression	8034.964	7	1147.852	8374.761	.000 <sup>g</sup>
	Residual	9511.613	69397	.137		
	Total	17546.577	69404			
Parental Education (i.e. First Generation)	Regression	8215.519	8	1026.940	7637.454	.000 <sup>h</sup>
	Residual	9331.058	69396	.134		
	Total	17546.577	69404			
Special Circumstances/ Personal Challenges/ Personal Growth	Regression	8386.969	9	931.885	7060.147	.000 <sup>i</sup>
	Residual	9159.609	69395	.132		
	Total	17546.577	69404			
Educational Prep Programs (EPP)	Regression	8503.162	10	850.316	6524.841	.000 <sup>j</sup>
	Residual	9043.415	69394	.130		
	Total	17546.577	69404			

f. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points, special talent points

g. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points, special talent points, leadership points

h. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points, special talent points, leadership points, first generation college points

i. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points, special talent points, leadership points, first generation college points, special circum/personal challenge points

j. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points, special talent points, leadership points, first generation college points, special circum/personal challenge points, pre-collegiate program points

Table 9:

## Model Summary for Path Analysis

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
HSGPA	.570 <sup>a</sup>	.325	.325	.413
Community Service	.590 <sup>b</sup>	.348	.348	.406
Parental Income	.609 <sup>c</sup>	.370	.370	.399
SAT I Reasoning Scores	.642 <sup>d</sup>	.412	.412	.385
Educational Environment	.659 <sup>e</sup>	.434	.434	.378

a. Predictors: (Constant), HSGPA - capped at 8 honors

b. Predictors: (Constant), HSGPA - capped at 8 honors, community services points

c. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points

d. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score

e. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points

Table 9 (continued):

## Model Summary for Path Analysis

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
Special Talent/ Achievement/ Awards	.669 <sup>f</sup>	.448	.448	.374
Demonstrated Leadership	.677 <sup>g</sup>	.458	.458	.370
Parental Education	.684 <sup>h</sup>	.468	.468	.367
Special Circumstances/ Personal Challenges/ Personal Growth	.691 <sup>i</sup>	.478	.478	.363
EPP	.696 <sup>j</sup>	.485	.485	.361

f. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points, special talent points

g. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points, special talent points, leadership points

h. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points, special talent points, leadership points, first generation college points

i. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points, special talent points, leadership points, first generation college points, special circum/personal challenge points

j. Predictors: (Constant), HSGPA - capped at 8 honors, community services points, parental income points, SAT I reasoning score, education environment points, special talent points, leadership points, first generation college points, special circum/personal challenge points, pre-collegiate program points

## **CHAPTER V**

### **Discussion**

The purpose of this research was to examine the ways in which the non-academic factors were used in conjunction with the academic factors in today's undergraduate comprehensive admissions review process at the University of California. This research sought to clarify whether there was a differential impact on how African-American, White/Caucasian, and Latino students were admitted via the University of California's comprehensive review process. This study further sought to determine if there was a difference in the academic profile among African-American, White/Caucasian, and Latino students admitted to the University of California under the comprehensive review process.

This chapter provides a discussion of the results of this study. This chapter will address the findings of the research questions in order. In addition, this chapter will also identify the limitations of the study. Lastly, this chapter will close by outlining the implications for practice as well as recommendations for future research.

### **Summary of Findings**

The findings presented in this study has barely scratched the surface in developing a full and satisfying explanation for the differences in admissions rates to the University of California among African-American, White/Caucasian, and Latino students under the Comprehensive Review process.

The findings in research question one demonstrates that out of a total population N=69,405 of African-American, White/Caucasian, and Latino students that applied for admissions during the Fall 2007-2009, White/Caucasian students

accounted for 24% (NW=16,677) of the students admitted to the University of California during this time. Comparatively, African-American students accounted for 1.5% (NAA=1,035) of the students admitted during this time. Whereas Mexican-American and Latino students accounted for 7.5% (NMA=5,182) and 2.7% (NL=1,862) of students admitted to the University of California via the Comprehensive Review process during the Fall 2007-2009.

It is clear from the results of this research study that statistically significant differences in the HSGPA and SAT I Reasoning test performance of African-American, White/Caucasian, and Latino students exist by the time these students are applying for admissions to the University of California, which subsequently may affect their ability to be admitted. For instance, the mean HSGPA for students admitted to the University of California from the Fall 2007-2009 were as follows: a) White/Caucasian (NW=16,677;  $M_{HSGPA}=4.11$ , b) African-American (NAA=1,035;  $M_{HSGPA}=3.98$ ), c) Mexican-American (NMA=15,707;  $M_{HSGPA}=3.97$ ), and d) Latino students (NL=5,523;  $M_{HSGPA}=4.02$ ). What is particularly salient to the standardized test performance of students' admitted to the University of California from the Fall 2007-2009 is that White/Caucasian students outperformed African-American, Mexican-American, and Latino students. White/Caucasian students had a mean SAT I Reasoning score of  $MSATI=2014$ , whereas Latino test-takers had a mean score of  $MSATI=1833$  which accounted for a 181 point difference between these two groups on this exam. In addition, when you compare the mean scores for White students and those of Mexican-American and African-American students on the SAT I Reasoning test, Mexican-American students had a mean score of  $MSATI=1709$  which accounted



for a 305 point difference, and African-American students had a mean SAT I Reasoning score of  $MSATI=1818$  that accounted for a 196 point difference from their White counterparts.

It is evident from the results of research question two that the HSGPA, ELC designation, and the Educational Environment that students are exposed to may shed light on the academic preparation of the students applying to the University of California. Furthermore, the findings in research question two also provides information as to the quality and quantity of educational resources available to students in order to prepare them to be admitted to the University of California.

One of the more salient findings in this research study was the amount of White, Black, and Latino students who were admitted to the University of California that had attended 4<sup>th</sup> and 5<sup>th</sup> quintile API high schools. From the students admitted to the University of California during Fall 2007-2009, 6.1% (N=1024 out of a total NW=16675) of White/Caucasian students attended 4<sup>th</sup> and 5<sup>th</sup> quintile schools. In comparison, 28.5% (N=296 out of a total NAA=1035) of African-American students that were admitted during this time period attended 4<sup>th</sup> and 5<sup>th</sup> quintile schools. In addition, 49.4% (N=2739 out of a total NMA=5534) of Mexican-American students that were admitted during the Fall 2007-2009 attended 4<sup>th</sup> and 5<sup>th</sup> quintile schools. Lastly, when comparing these numbers to Latino students admitted during this time period, 29.6% (N=551 out of a total NL=1861) attended 4<sup>th</sup> and 5<sup>th</sup> quintile schools.

As mentioned earlier, the results of research question two are important in that it supports previous literature on the academic characteristics exhibited by African-American, White/Caucasian, and Latino students at the K-12 level (Duran, 1994;

Bowen & Bok, 1998; Betts et al., 2000; Llagas & Snyder, 2003; Massey et al., 2003; Kozol, 2005). Massey, Charles, Lundy, and Fischer (2003) in their multi-institutional study on academic achievement of African-American, White/Caucasian, and Latino students found that African-American and Latino students had a higher propensity of attending educational environments that actively harmed these students' capacity for learning that exposed these two populations to "deleterious and maladaptive environments in economically disadvantaged areas that were characterized by violence, social disorder, and provided these students with lower-quality K-12 educations", in comparison to their White/Caucasian counterparts (p.15).

Geiser (2008) further concluded that HSGPA proved to be the strongest predictor for students of being admitted to the University of California, especially for students from economically disadvantaged and underrepresented backgrounds. In addition, Geiser also found that a student's HSGPA also served as a good predictor to determine a student's persistence and academic performance beyond the first year of college. Geiser further noted that the predictive superiority of a students' HSGPA was consistently evident across all entering classes, academic disciplines, and undergraduate campuses in the UC system between 1996 and 2001 (Geiser 2008; Geiser & Studley, 2003; Geiser & Santelices, 2006, 2007).

Another key finding to this study with respect to these students' academic profile were the gaps in HSGPA and standardized test performance that were found to be statistically significant at  $p < .01$ . Even though differences within standardized test performance were found to be statistically significant for research question two, standardized test performance still presented to have a moderate effect in determining

admissions for African-American, White/Caucasian, and Latino students for research question three which will be explored further in this chapter.

The gap in HSGPA across African-American, White/Caucasian, and Latino students is important to note is directly related to how the University of California calculates the grade point average by capping their calculation by including no more than eight UC-approved honors or AP courses taken during the 10<sup>th</sup> and 11<sup>th</sup> grade. Even though the research did not indicate the number of UC-approved honors or AP courses completed by the participants in the study, Massey et al. (2003) found that White students took an average of 3.01 AP courses upon graduating from high school in comparison to Latino and Black students that had only taken 2.62 and 2.03 AP courses respectively. Other determinants that have been noted to contribute to the number of AP or honors courses taken in high school have been attributed to parental education, parental income, child-rearing patterns, and the educational and social environments that the student is exposed to while in high school (Bowen & Bok, 1998; Betts et al., 2000; Geiser & Santelices, 2006, 2007; Massey et al., 2003; Kozol, 2005; Trounson, 2006).

However, an interesting point to note regarding AP and honors course involvement was Geiser and Santelices' (2006) study on the role of advanced placement and honors course involvement had in admissions to the University of California found that even though students who were enrolled in AP or honors were more likely to be admitted to the University of California, however once enrolled at the University of California, mere enrollment in AP classes in high school had no effect in determining the academic performance of students during or beyond the first

year in college. Geiser and Santelices (2006) further noted that the University of California should not award bonus points to a student's HSGPA for simply completing an AP or honors course, but that the bonus points should only be awarded to the student upon demonstrating actual mastery of the AP subject matter by achieving a passing grade on the AP subject exam.

Another key finding with respect to HSGPA to be noted is the ELC designation assigned to students applying to the University of California at the end of their 11<sup>th</sup> grade year. Out of the total population sample used in our research study, N=69405, 9.5% of White/Caucasian (NW=6598), 0.5% of African-American (NAA=391), 4.3% of Mexican-American (NMA=2985), and 1.1% of Latino (NL=821) students admitted to the University of California during the Fall 2007-2009 were designated as ELC eligible for admissions under this program. This finding is important for this research study because the University of California, as a response to diversify the student body as well as ameliorate the effects of Proposition 209, uses the ELC program as a means to “stimulate applications from targeted [rural and urban] schools that have historically provided few students to the University of California” (University of California Eligibility in the Local Context Program Evaluation Report, May 2002). A collective review of the information for research question two, reveals that the educational environment to which Black and Latino students are exposed not only contributes to their ability to take a rigorous course curriculum, but may also affect their ability to obtain a competitive HSGPA or be designated as ELC eligible to make them strong viable applicants to the University of California.

The findings for research question three presents important information in understanding the role that academic, and non-academic, variables have in determining admissions to the University of California via the Comprehensive Review process. While the findings in the path model offer useful information to specify the system of relationships that academic and non-academic variables have on one another in determining admissions to the University of California, one can draw some conclusions and draw upon further inferences as to why these systems of relationships exist.

The path analysis model demonstrated in Chapter 4, in Figure 2 above, illustrates that the association between the students' Educational Environment, Demonstrated Leadership, Special Circumstances/Challenges/Personal, Special Talents/Achievements/Awards, Community/Volunteer Service, EPP, HSGPA, and SAT I Reasoning test performance and Admissions to the University of California is due to the fact that these endogenous variables are influenced by the students' Parental Education and Parental Income. There is an abundant body of literature that dates back to Coleman (1966) who found that group differences on academic achievement for African-American, White/Caucasian, and Latino students was strongly influenced by their accumulated experiences within the home environment as it pertained to parental education, parental income, and the occupational status that these parents had all exerted a powerful influence on these students' social, emotional, and intellectual development (Briggs, 2004; Bowen & Bok, 1998; Contreras, 2003; Kane, 1998b; Kozol, 2005; Massey et al., 2003; Zwick, 2004). From the path analysis model in Figure 2, it is evident that the non-academic and academic variables used by the

University of California via their Comprehensive Review process are not acting as independent predictors of one another when determining admissions to their institutions. The implications of these findings are consistent with Bowen and Bok's (1998) multi-institutional study on race-neutral admissions practices in which they found that the numerical measures of academic qualification (i.e. SAT I Reasoning scores and HSGPA) had an important role in selecting applicants to institutions of higher education, but they were by no means the only factors that institutions of higher education should consider when attempting to select a student body that had a diverse set of backgrounds, talents, and experiences.

### **Limitations to the Study**

This study posed several limitations. The first limitation to note is the fact the data that the researcher obtained was second hand data provided by UCC's Admissions Analyst that may have filtered some of the data prior to conducting this research study. In addition, the data in this study does very little to inform the researcher regarding the differences of the academic and non-academic profiles of these students across gender. This study also does not take into account whether the students attended a private, public, charter, or magnet school nor did this study allow the researcher to identify if the students were native English speakers or if they were English Language Learners. This study also did not allow the researcher to take into account students who identified as multiethnic nor did the data allow the researcher to aggregate the findings by domestic vs. international or out-of-state vs. in-state applicants who were seeking admissions to the University of California as first time freshmen candidates at the time of the study.

With respect to standardized test performance, the researcher was limited to only assessing standardized test performance on the SAT I Reasoning test and not on ACT or SAT II Subject test performance. Given the fact that not all students take the same SAT II Subject exams as well as the fact that students are given the option to submit an ACT or SAT I Reasoning score for admissions, for the sake of maintaining the internal validity of the study, a decision was made to only report the mean differences on the SAT I Reasoning exam.

As previously stated, self-reported information on the non-academic variables on the UC undergraduate freshman application are fairly susceptible to *socially desirable responses* in which students answer items to appear normal or socially desirable for admissions purposes as opposed to responding honestly in an attempt to increase their likelihood for admissions to the University of California (McMillan & Schumacher, 2001). The likelihood that students falsely reported information on the non-academic component of the undergraduate freshman application is highly probable, and it is an important limitation to note, especially when comparing students across these variables.

Lastly, this study also provides little information to the researcher to further espouse the type of Educational Preparation Programs (EPP) students participate in prior to completing their high school careers. Examples of EPP may include, but are not limited to, special interest programs in science, language, performing arts, summer enrichment, research based, or academic development which may or may not be limited to students from particular ethnic, social, or socioeconomic backgrounds.

## **Implications for Practice**

The findings for this research study have provided information that has shed light on the admissions patterns that the University of California currently undertakes. Even though the University of California has made an attempt to ameliorate the effects of Proposition 209, this study does little to inform how the Comprehensive Review process is initiated and applied at the other eight undergraduate UC campuses. The University of California needs to be more transparent with the information that they provide K-12 educators, students, parents, and the general public as to how their Comprehensive Review is instituted as well as how the undergraduate freshman applications are scored across the individual UC undergraduate campuses via the Comprehensive Review Process. In addition, given the weight of admissions on the academic profile, and taking into account the educational environments that students attend at the K-12 level, the University of California should consider capping the HSGPA at the 4.0 when calculating a candidate's HSGPA. Capping a student's HSPA at 4.0 would provide underrepresented students, like African-American and Latino students, applying to the University of California a stronger likelihood of being competitively eligible for admissions under the Comprehensive Review process (Contreras, 2003).

In addition, this study illustrates the disparities in access and academic achievement, particularly for African-American and Latino students, applying to the University of California. Given the disparities in academic achievement amongst African-American and Latino students, K-12 educators need to standardize their curriculum so that *all* their course offerings, including electives, meet the UC



minimum eligibility a-g course requirements in order to make these students academically eligible for admissions to the University of California. Furthermore, K-12 educators should consider standardizing a peer learning community component to their peer mentoring programs that stretch beyond assisting incoming freshman with their transition from middle school to high school. There needs to be stronger emphasis in pairing students within their freshman, sophomore, and junior years with high school seniors who are navigating the college admissions process. In doing this, K-12 educators could benefit by fostering a community of learning and trust among peers. Massey et al. (2003) found that students' HSGPA and academic engagement in AP coursework was positively and strongly correlated with the quality of academic support that students received in their educational environments as well as the peer support these students received to increase their academic effort while in school.

In addition, given the central importance of peer effects on academic engagement, Massey et al. (2003) also found that the degree of involvement that parents had in *social and cultural capital formation* was also positively related to a student's HSGPA and academic engagement. According to Bourdieu and Wacquant (1992) *social capital* can be described as the tangible benefits and resources that accrue to people by virtue of their inclusion in a social structure. *Cultural capital* refers to the knowledge of "norms, styles, conventions, and tastes that pervade specific social settings and allow individuals to navigate them in ways that increase their odds of success" (Massey et al., 2003, p. 6). There is an extensive amount of research that has shown that the accumulated experiences in the home and a parent's active involvement in the formation of a *social and cultural capital* mindset on their children

had a powerful influence on a child's social, emotional, and intellectual development (Bowen & Bok, 1998; Brooks-Gunn & Chase-Lansdale, 1991; Coleman, 1966; Dunn, 1983; Guo & Harris, 2000; Hofferth & Phillips, 1991; Kozol, 2005; Massey et al., 2003; McEwen, Roper, Bryant, & Langa, 1990; Sedlacek, 1998, 2004; Tierney, 1992). Given the disparities of the number of African-American and Latino applicants that are being admitted to the University of California, K-12 educators must be more intentional in developing and maintaining networks with parents to further inform them of the importance of pursuing a college education as well as further inform parents of the necessary steps and procedures in how they can better assist their students to navigate the college admissions pipeline. Through the formation of these networks, K-12 educators can facilitate a social and cultural capital mindset amongst parents which, in turn, can be passed down from the parents to their children in order to facilitate a network of support amongst the parents, K-12 educators, and students so that they can all work together – both formally and informally – to assist their students successfully navigate their educational environment in order to have students make the most of their academic experience.

From the findings in the proposed path model, it is evident that the University of California employs a more traditional path to their admissions practices by placing close to 74-76% of their decision to admit students solely on the academic profile of the student (UCC Undergraduate Admissions Review Training Manual, 2007, 2008, 2009). The scores on the path model may be a potential reflection on an external reader's training, or the external reader's demographic profile that may contribute to a reader's bias towards an applicant by the manner in which they read and score the UC

undergraduate freshman application to determine admissions. The potential for personal bias, oversight, or scoring error are all factors to consider when examining the outputs across the following non-academic variables in determining a candidate's admissions to the University of California: Community/Volunteer Service, Demonstrated Leadership, and Special Talents/Achievements/Awards. For instance, the variables that demonstrated moderate or weak predictors in research question three were variables that were scored and assigned scores by external readers that based their scoring allocation on a rubric where personal bias may have influenced the scoring on particular candidates applying to the University of California.

In addition, the path model presented findings to support that the Parental Income and Parental Education of a student applying to the University of California strongly influenced these students' Educational Environment, Demonstrated Leadership, Special Circumstances/Challenges/Personal, Special Talents/Achievements/Awards, Community/Volunteer Service, EPP, HSGPA, and SAT I Reasoning test performance. Given the nature of the impact that Parental Income and Parental Education had on these non-academic variables, it is recommended that the University of California place an equal weight to that of a students' academic profile in determining admissions to the University of California.

With respect to a students' standardized test performance serving as an indicator for admissions, the path model showed the standardized test performance only had a moderate effect on determining admissions, however, only became much stronger when standardized test performance was influenced by Parental Education and Parental Income. The reason why this finding is so important to note is that even

though SAT I Reasoning scores had moderate effects on determining admissions, the manner in which the University of California uses this variable in selecting students still has a stronger role as a predictor variable in the admissions process than a student's Parental Education and Parental Income. This is why the researcher, recommends that the University of California move forward with having the SAT I Reasoning exam be an option and not a requirement for admissions in future enrollment cycles. Most recently, the University of California have made some changes in moving towards a test-optional admissions practice, however, we know very little as to the impact this will have in how students are admitted across ethnic or socioeconomic lines.

#### **Freshman Admission Requirements for Fall 2012.**

During the Winter 2009, the Regents of the University of California, introduced changes to the undergraduate admissions requirements that will be effective for students' applying for the Fall 2012. Under the new policy, all California high school seniors who:

- complete 15 UC-required college-preparatory ("a-g") courses, with 11 of those done by the end of 11th grade,
- maintain a GPA of 3.0 or better (weighted by honors/AP bonus points) in these courses, and
- take the ACT with Writing or SAT I Reasoning Test

will still be encouraged to apply and will be entitled to a comprehensive review of their application that will emphasize each students' academic achievements, but also account for a wide range of personal accomplishment and educational contexts.

In addition, students within this pool of applicants will be guaranteed admissions to a designated UC campus if they fall within the following categories:

- Those who fall in the top 9% of all high school graduates statewide (*CA only*), and
- Those who rank in the top 9% of their own respective high school graduating class.

The main changes to the admissions policy for Fall 2012 are as follows:

- Students will no longer be required to take two SAT II Subject Tests for admission. However, students can still choose to submit their scores for consideration as part of their application, just as they do now with AP scores. The Subject Tests may also be recommended for certain majors, depending on the UC campuses that the student applies to.
- All applicants will need to complete 11 of the 15 required "a-g" courses by the end of their junior year. Currently, this is required only of students who are designated ELC candidates by ranking in the top 4% of their high school class.
- ELC designation will no longer only be limited to the top 4%, but will increase to the top 9% of the students' class rank within their respective high schools.
- Under the Master Plan of Higher Education, the University of California will only admit the top 10% of high school graduates in comparison to the top 12.5% as it is designated currently.
- Under the new policy, students will no longer be guaranteed admissions to the University of California if they become eligible by examination alone.

(<http://www.universityofcalifornia.edu/educators/counselors/admininfo/freshman2012/advising/>, May 1, 2010).

### **Implications for Future Research**

As a result of the findings to this study, five primary recommendations for future research will continue the work that this dissertation study has started. The first recommendation will be to conduct a comparison study at the other undergraduate UC campuses within similar tiers of selectivity to see if there are differences in the diversity of the applicant pool based on how those campuses admit students under their respective campus-based Comprehensive Review selection criteria.

The second recommendation for future research on the Comprehensive Review process should aggregate the data not only between gender, but should also aggregate the data for students attending public versus private institutions in order to determine if there are differences in the academic and non-academic profile of students being admitted to the University of California. Future research should also take into consideration if there are differences among the academic and non-academic variables for international versus domestic students in determining admissions to the University of California as well as determining the differences for students that identify as native English speakers versus English Language Learners.

The third recommendation for future research needs to be conducted on how external readers are selected and trained to read the applications. Having an understanding of the demographic data (i.e. race, gender identification, socioeconomic background, marital status, etc.) along with their current occupational status and current position held within their respective place of employment may shed further

light to see if the profile of the external readers effects how they allocate points on the non-academic components of the UC freshman application.

A fourth recommendation for future research is with respect to how external readers are trained to read the non-academic components of the UC undergraduate freshman application. Having an understanding on the amount of hours of training that external readers go through and seeing if there is a re-calibration of the external readers' scoring methods will shed further light on the inter-reader reliability that external readers have throughout the UC-system.

Lastly, a fifth recommendation for future research is to further examine the scoring patterns and differences that each ethnic group has been assigned across the non-academic variables of the UC undergraduate freshman application via the Comprehensive Review process. Examining the non-academic traits and characteristics of each ethnic group will allow educators to further understand how African-American, White/Caucasian, and Latino students differ on these variables, and, in turn, provide more information as to how their social and family backgrounds may affect their ability to be admitted to the University of California.

### **Summary**

It is difficult to say what the University of California has done to ameliorate the effect of Proposition 209 and meet the needs of California's Master Plan of Higher Education. The inconsistencies on how the academic variables are weighed and how external readers are trained to review the non-academic variables of the UC undergraduate freshman application across the UC system may play a role in the enrollment rates of students from underrepresented, first generation, and economically

disadvantaged communities that only serve to narrow the path to access to the University of California for the communities mentioned above.

What is so compelling about the findings in this research study is that disparity of the academic profile, which serves to determine the admissions of African-American, White/Caucasian, and Latino students, is not an isolated to UCC; it is a system-wide phenomenon. For instance, in the Fall 2006, the Office of Admissions and Relations with Schools at UCLA only admitted 96 African-American students to their frosh class, which accounted for 1.1% of the entering freshman class (NUCLA=4,852) (Trounson, 2006). In addition, the enrollment rates of African-American students at UCSD and UC Berkeley have had consistent enrollment rates that range from 1-3% of its freshman class over the last five years (Trounson, 2006). As for Latino students, the situation has not fared any better. With respect to the University of California, only 1 in 25 Latino students are eligible to apply to the UC system in comparison to 1 in 8 White/Caucasian students and 1 in 3 Asian-American students in a post Prop 209 admission criteria (Karabel, 1998). This is especially disturbing due to the fact that recent studies have indicated that the representation of Latinos in American higher education has remained stagnate for the past 25 years, and are far from reaching proportional representation in American higher education in any meaningful way (Hernandez & Lopez, 2004; Callam and Crocker, 2004).

As the University of California has become increasingly selective in their admissions practices, it has become necessary for the University of California to re-examine the process in determining a student's candidacy for admissions. The



University of California must find a more comprehensive admissions model that allows and encourages admissions committees to place value and take into account every student's family and socioeconomic background with equal measure to their academic profile. By re-evaluating the weight of these two variables in the Comprehensive Review process, the University of California, would be able to increase their enrollment from a talented applicant pool of underrepresented, first generation, economically disadvantaged students in order to enroll a student body that are a stronger reflection of the broad diversity of talents, abilities, personal experiences, and background characteristics of the State of California.

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## Appendix

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### University of California (UC) Minimum Eligibility Requirements for Freshman Admissions for California Residents and Non-California Residents

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#### UC Eligibility Requirements – California Residents

There are three paths to satisfying the University of California’s minimum eligibility admission requirements for freshman students:

- a) Eligibility in the Statewide Context,
- b) Eligibility in the Local Context, and
- c) Eligibility by Examination Alone.

#### A. Eligibility in the Statewide Context

Most students attain UC eligibility under *Eligibility in the Statewide Context* guidelines. Eligible students must satisfy the: 1) *subject*, 2) *scholarship*, and 3) *examination* requirements described below.

##### 1. Subject Requirement

Students must complete or have validated 15 units of high school courses to fulfill the Subject Requirement. As least seven of those 15 units must be taken or validated in the last two years of high school. (A unit is equal to an academic year, or two semesters, of study.)

The University accepts only “a-g” courses that appear on the official UC Certified Course List for the California high school the student attended. The UC-certified course list is available at [the "A-G" Course List Web site](https://pathways.ucop.edu/doorways/list/) (<https://pathways.ucop.edu/doorways/list/>).

The “a-g” subject requirements are as follows:

- a. History — 2 years required
- b. English — 4 years required
- c. Mathematics — 3 years required, 4 years recommended
- d. Laboratory Science — 2 years required, 3 years recommended
- e. Language Other Than English — 2 years required, 3 years recommended
- f. Visual and Performing Arts — 1 year required
- g. College Preparatory Electives — 1 year required

##### 2. The Scholarship Requirement

The Scholarship Requirement defines the grade point average (GPA) students must attain in the “a-g” subjects and the *SAT I Reasoning Test* (or *ACT Assessment plus Writing*) and *SAT II Subject Test* scores that must be earned to be eligible for

admission to the University. Students qualifying for admission in the statewide context must present an “a-g” GPA and test score total that meets the criteria for the 2006 Eligibility Index\*.

## Eligibility Index

### California Residents

“a-g” GPA	Test Score Total <sup>1</sup>	“a-g” GPA	Test Score Total <sup>1</sup>
2.80–2.84	2860	3.15–3.19	2122
2.85–2.89	2698	3.20–3.24	2050
2.90–2.94	2548	3.25–3.29	1990
2.95–2.99	2440	3.30–3.34	1942
3.00–3.04	2338	3.35–3.39	1912
3.05–3.09	2260	3.40–3.44	1882
3.10–3.14	2188	≥3.45	1858

### Nonresidents

“a-g” GPA	Test Score Total <sup>1</sup>
3.40–3.44	1882
3.45–3.49	1858

<sup>1</sup>The University calculates the test score total as follows:

**SAT Reasoning Test** The University uses the highest scores in critical reading, mathematics, and writing from a single sitting and adds them to the two highest SAT Subject Test scores from two different subject areas. The total of all five exam components (critical reading + math + writing + subject test 1 + subject test 2) equals the test score total.

**ACT Assessment plus Writing** The University takes the highest mathematics, reading, science, and combined English/writing score from a single sitting and converts them to equivalent SAT scores. To give the ACT writing component equal weight to the SAT writing exam, the University multiplies the sum of the converted math, reading, and science scores by two-thirds, then adds the converted English/writing score. This subtotal is then added to the two highest SAT Subject Test scores from two different subject areas to reach the test score total ( $[\text{math} + \text{reading} + \text{science}] \times 0.667 + \text{English/writing} + \text{subject test 1} + \text{subject test 2}$ ).

\*Eligibility Index may be found at the University of California, Office of the President website at:

<http://www.universityofcalifornia.edu/educators/counselors/admininfo/freshman/advising/admission/scholarship.html>

**Honors Courses** The University assigns extra points for up to four years of UC-approved honors-level and advanced placement “a-g” courses taken in the last three years of high school: A=5 points, B=4 points, C=3 points. A grade of D in an honors or advanced placement course does not earn extra points. No more than two yearlong, UC-approved, honors-level courses taken in the 10th grade may be given extra points.

Acceptable honors-level courses include advanced placement courses, Higher Level and designated Standard Level International Baccalaureate courses, and college courses transferable to the University.

### **3. Examination Requirement**

Freshman applicants must submit the following test scores to the UC campus in which they are applying to by January of their senior year:

- Either the *ACT Assessment plus Writing* (must be from the same sitting) or the *SAT I Reasoning Test*. The critical reading, mathematics, and writing scores on the *SAT I Reasoning Test* must be from the same sitting.
- Two *SAT II Subject Tests*, in one of the following areas: history, literature, mathematics (level 2 only), language other than English, or science.

### **B. Eligibility in the Local Context**

Through the Eligibility in the Local Context (ELC) path, the top four percent of students at each participating California high school are designated UC eligible and guaranteed admission to one of UC's general campuses.

To be considered for ELC, students must complete 11 specific units of the subject requirement by the end of their junior year. Together with the participating high school, the University identifies ELC students on the basis of GPA in the required course work.

The 11 units include one unit of history/social science, three units of English, three units of mathematics, one unit of laboratory science, one unit of language other than English, and two units chosen from among the other subject requirements.

### **C. Eligibility by Examination Alone**

To qualify for Eligibility by Examination, students must satisfy the same examination requirement as those who are eligible in the statewide context. They must complete the *SAT I Reasoning Test* (or *ACT Assessment plus Writing*) and two *SAT II Subject Tests*. They must achieve a test score total, calculated according to the UC Eligibility Index of at least 3450 (nonresidents must present a total of 3550 or higher).

Additionally, students who take the *SAT I Reasoning Test* must score at least 580 on the critical reading, mathematics, and writing components; and those who take the *ACT Assessment plus Writing* must score at least 25 in mathematics, science, reading, and English/writing. As well, for each of the two *SAT II Subject Tests*, they must score at least 580.

Students may not qualify for Eligibility by Examination if they have completed a transferable college course in any academic subject covered by the *SAT II Subject Tests*. An applicant who is currently attending high school may qualify for admission to the University by examination alone without completing a high school program.

***UC Eligibility Requirements – Nonresidents of California***

There are two paths to UC eligibility for nonresidents at the freshman level. The first is through Eligibility in the Statewide Context, and the other is through Eligibility by Examination Alone, with the following exceptions: Eligibility in the Statewide Context Students must have a 3.4 or higher GPA in the “a-g” subjects and a test score total to match the GPA of 3.4-3.5.