THE IMPACT OF STANDARDIZED TESTING ON HIGH-ACHIEVING STUDENTS' POSTSECONDARY ACCEPTANCE OUTCOMES

By

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To my family: Baba, Mama, Zeina, & Jad: you have supported me through every journey with wisdom, patience, and understanding – this is for you

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LIST OF ABBREVIATIONS

Catholic 4yr Col. – L	Catholic 4-year College-Low Selectivity
Catholic 4yr Col. – M	Catholic 4-year College-Medium Selectivity
Catholic 4yr Col. – H	Catholic 4-year College-High Selectivity
CIRP	Cooperative Institutional Research Program
ETS	Educational Testing Service
FATHEDUC	Father's Highest Level of Education
FTIC	First-Time-In-College
HERI	Higher Education Research Institute at UCLA
HSGPA	High School Grade Point Average
INCOME	Household Income
MOTHEDUC	Mother's Highest Level of Education
Other Relig. 4yr Col. – VL	Other Religious 4-year College-Very Low Selectivity
Other Relig 4 yr Col. – L	Other Religious 4-year College-Low Selectivity
Other Relig 4 yr Col. – M	Other Religious 4-year College-Medium Selectivity
Other Relig. 4yr Col. – H	Other Religious 4-year College-High Selectivity
Private Uni. – L	Private University-Low Selectivity
Private Uni. – M	Private University-Medium Selectivity
Private Uni. – H	Private University-High Selectivity
Private Uni. – VH	Private University-Very High Selectivity
Public 4yr Col. – L	Public 4-year College-Low Selectivity
Public 4yr Col. – M	Public 4-year College-Medium Selectivity
Public 4yr Col. – H	Public 4-year College-High Selectivity
Public Uni. – L	Public University-Low Selectivity
Public Uni. – M	Public University-Medium Selectivity

Public Uni. - H	Public University High Selectivity
RACEGROUP	Race
TFS	The Freshman Survey
TOP	Test-Optional Admissions Policy
UCLA	University of California, Los Angeles

DEFINITION OF KEY TERMS

ACT	Formerly known as the American College Testing Program; one of two main standardized examinations utilized in the postsecondary admissions process
College Readiness	The level of preparation a student needs to enroll and succeed at an institution of higher learning (Geiser, 2009)
High-Achieving Students	Respondents on the HERI CIRP Freshman Survey who self-reported having an “A or A+” average in high school (CIRP)
SAT	Formerly known as the Scholastic Assessment Test; one of two main standardized examinations utilized in the postsecondary admissions process
Socioeconomic Status (SES)	The social standing or class of an individual or group as measured by a combination of education, income and occupation (American Psychological Association)
Standardized College Admissions Testing	Standardized testing used solely to make admissions determinations for undergraduate admissions applications (Zwick, 2007)
Test-Optional	An institutional admissions policy in which applicants can elect not to provide their standardized college admissions test score

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Standardized testing, specifically geared toward postsecondary admission, such as the SAT and ACT, was designed to measure readiness for higher education. The purpose of this study was to examine the degree to which ACT or SAT scores impact college acceptance outcomes for high-achieving students with similar high school GPA's. This research study also compared individual and familial variables and the parallel impact they have on postsecondary acceptance. Significant differences in acceptance outcomes were observed among the high-achieving student sample. The sample, largely homogenous with respect to high school grade point average (HSGPA) experienced notable differences in acceptance outcomes based on test scores (SAT and ACT). Higher scores were associated with acceptance to more selective institutions. Additionally, significant differences were observed in acceptance outcomes due to the demographic characteristics of gender, race, and parental demographics (parental educational attainment and household income).

CHAPTER 1
INTRODUCTION

Overview of the Topic

Attending an institution of higher education provides the most substantial conduit for economic and social mobility in the United States (Paulson & St. John, 2002; Thompson, 2017). The correlation between the attainment of a college degree, and earnings realized over a lifespan is indisputable (Baum, Ma, & Payea, 2013; Thompson, 2017). The type and selectivity of an institution also critically impacts intergenerational mobility (Thompson, 2017). Research consistently demonstrates that attendance in a higher quality postsecondary institution is positively associated with an increased four-year college graduation rate (Melguizo, 2008). Where first time in college (FTIC) freshmen matriculate can innumerably impact the future trajectory of their career and life decisions (Melguizo, 2008). To that end, the postsecondary institution to which a student applies and is admitted, and the factors that encompass the admissions decision-making process are of tremendous significance.

Statement of the Problem

This study aims to determine the extent to which standardized college admissions testing, namely the SAT and ACT, impact college acceptance outcomes for students that are deemed high achieving; furthermore, this study examines the impact that race, gender, and parental demographics have on postsecondary acceptance outcomes when controlling for standardized college admissions testing.

There is a significant benefit linked to a better educated populace, and as such, issues of unequal access to higher education are of great consequence (Baum, Ma, & Payea, 2013). Research has consistently demonstrated that the achievement of higher

education levels leads to decreased rates of joblessness and limits the impact of poverty (Paulson & St. John, 2002; Baum, Ma & Payea, 2013; Thompson, 2017). College graduates are more likely to be gainfully employed, and to pay taxes. They are less likely to be unemployed, incarcerated, or dependent on social safety-net programs. Higher education is also correlated with increased levels of civic engagement (Baum, Ma & Payea, 2013). Recognizing the implications, an examination is made within the current study of determining factors related to who will or will not be provided an opportunity to attain and share in the advantages of postsecondary education has serious and enduring repercussions.

Research Questions

In reviewing current research literature, the impact of standardized test results on students' postsecondary acceptance outcomes provided the foundational background for the research questions formulated. The practitioner in this study focused uniquely on the following research questions:

1. To what degree do standardized college admissions test scores impact college acceptance outcomes for high-achieving students?
2. Controlling for test scores, do race and gender impact college acceptance outcomes for high-achieving students?
3. Controlling for test scores, do parental demographics (household income and highest parental educational attainment) impact college acceptance outcomes for high-achieving students?

Limitations and Assumptions

Limitations

This study examined the relationship between high-achieving students' postsecondary outcomes and their postsecondary admissions standardized test scores. As such, the following limitations should be taken into consideration when reviewing the

results of this study. The postsecondary admissions outcome process is inherently complex, and consists of a significant number of longitudinal, and interactional aspects that can be difficult to measure (Hossler & Gallagher, 1987). This study does not examine these factors and their impact on the postsecondary admissions outcome.

Furthermore, although the normative sample was large, and the calculated standard error was small, there are limitations in regard to the validity and reliability of the CIRP Freshman Survey. Additionally, as the data utilized was obtained from the CIRP study, the use of secondary data precludes the ability to determine whether respondents' postsecondary outcomes were singularly based on standardized test scores, or other factors not explored in this study, such as athletics, romantic relationships, peer influence, family connections or other non-cognitive factors.

Assumptions

The most significant assumption that underlies this study is the utilization of secondary data. Practitioners and researchers should be cognizant of the intended utilization of instruments, specifically, the method in which they were designed to be used. For the purposes of this study, the practitioner made the assumption that the respondents' understanding of the questions utilized in the survey instrument mirrored that of the practitioner. Finally, the responses on the survey instrument were self-reported. Therefore the practitioner makes assumptions that the respondents were honest and truthful in their answers.

Significance of the Study

While there is abundant research literature regarding the SAT and ACT as variables in the college admissions process, to date no comprehensive study has been published contrasting high-achieving students' postsecondary acceptance outcomes

based on standardized admissions test scores. A thorough examination of high-achieving students' test scores that demonstrates a correlation between test scores and postsecondary acceptance outcomes would yield implications of great significance to educators, policy-makers, enrollment managers and college administrators seeking to understand the specific postsecondary acceptance outcomes of high-performing students. This correlation is meaningful as more postsecondary institutions move in the direction of employing test-optional admissions policies. Additionally, educators and leaders are able to gain additional insight into the necessary preparation and planning needed to help students who have discrepancies between their HSGPA and test scores. Particularly as admission to more selective institutions become more competitive, a greater awareness will enable education leaders to help students better meet their postsecondary goals and attain the outcomes they aspire to.

Summary

The purpose of this study is to determine the overarching impact of standardized college admissions testing on the postsecondary acceptances of high-achieving students. This research study also examines the effect of race, gender, and parental demographics (parental educational level and parental income level) on the postsecondary acceptance outcomes of the same population.

CHAPTER 2
REVIEW OF THE LITERATURE

Origins of Postsecondary Admissions Criteria

Cabrera and Burkum (2001) examined the evolution of postsecondary admissions in the United States, delineating the time periods into four distinct eras: subjectivity (1600's-1800's), uniformity (late 1800's to early 1900's), objectivity (1900's to 1960's), and holistic approach (1970's to present).

Era of Subjectivity. From the founding of Harvard College in 1636 until the early 19th century, admissions criteria were primarily determined by social background, moral character, religious denomination, and proficiency in Greek and Latin. College presidents conducted admissions interviews, with applicants often traveling for weeks at a time to take institution-specific entrance exams (Cabrera & Burkum, 2001; Crouse & Trusheim, 1988). Ultimately, the ability to pay tuition was a precluding criterion for most applicants (Cabrera & Burkum, 2001). As the number of colleges in the United States grew in scope, candidate interviews were delegated to faculty members, leading to increasing discrepancy in admissions standards (Cabrera & Burkum, 2001 ; Furuta, 2017).

Era of Uniformity. In 1893, a number of private universities voted to enact common admissions requirements and recommended a core high school curriculum to better prepare applicants for admission (Cabrera & Burkum, 2001; Atkinson & Geiser, 2009). In 1900, the College Entrance Examination Board (known as The College Board) was formed and the first standardized test, in the form of subject- specific essay questions was administered in 1901 (Cabrera & Burkum, 2001; Atkinson & Geiser, 2009; Gambino, 2013).

Era of Objectivity. As criteria for admissions became progressively uniform and objective, the interpretation of essays remained largely subjective. To that end, the College Board sought an alternative that was initially based off the works of Binet and Simon (Cabrera & Burkum, 2001; Crouse & Trusheim, 1988; Jencks & Crouse, 1982). When initially administered in 1926, the Scholastic Aptitude Test (SAT) was touted by supporters as a gauge of intelligence, an apparatus of social and educational opportunity, and a measure of future potential (Cabrera & Burkum, 2001; Lemann, 1995). During a period of time when admission to institutions of higher education was preeminently defined by status, the SAT was designed to differentiate between scholastic capability rather than fortune and birth, in order to classify gifted students who would have been otherwise overlooked (Lemann, 1995). A new system of meritocracy materialized with the advent of the SAT, which allowed for the classification of students on the "basis of academic potential rather than social status" (Jencks & Crouse, 1982; Alon & Tienda, 2007). In 1937, IBM developed technology that could grade SAT score cards by using electric currents to detect pencil marks, enabling the efficient, mass administration of the test (Cabrera & Burkum, 2001).

In the 1940's, the University of California's system elected to require the SAT, solidifying its role as a critical admissions criterion (Cabrera & Burkum, 2001). Over the course of the following 40 years, the SAT became a mainstay at higher education institutions throughout the United States; by the late 1960s, the annual administration of the exam was given to "more than half a million high school students" (Jencks & Crouse, 1982). The American College Testing Program, now known as the ACT, was created in 1959. While similar to the SAT in offering an objective measurement of verbal

and mathematical skills, its emphasis focuses on college-related knowledge and skills (Cabrera & Burkum, 2001).

Era of Holistic Approach. As a cost-effective mechanism through which aptitude could be assessed, standardized tests were viewed as the panacea to college admissions, particularly after World War II, when college enrollment soared (Alan & Tienda, 2007; Cabrera & Burkum, 2001 ; Crouse & Trusheim, 1988; Crouse & Jencks, 1982; Lemann, 1995).

However, standardized testing has fallen under strident criticism in recent years, as detractors have questioned their validity as a benchmark of college success (Cabrera & Burkum, 2001; Geiser & Santelices, 2007; Mendrinos, 2014). Critics argue that standardized postsecondary admissions tests have an inconsistent impact on racial minorities and women (Cabrera & Burkum, 2001; Geiser & Santelices, 2007; Mendrinos, 2014; Sanchez & Lin, 2017). Current literature suggests that HSGPA is a better predictor of college graduation rates, much more so than ACT or SAT test scores (Atkinson & Geiser, 2009; Belasco, Rosinger, & Hearn, 2015; Geiser & Santelices, 2007; HSS & Franks 2014). Edmunds (2010) found that students with greater high school GPA's but lower standardized test scores were as likely to persist to sophomore year as students with consistent achievement. Geiser and Santelices (2007) found that a significant amount of the SAT's extrapolative power originates from a direct relationship with students' high school demographics and socioeconomic background.

Current Admissions Practices

Currently within the college admissions process, higher education institutions employ a number of academic factors, which include high school GPA, standardized college admissions test scores, and class rank, in combination with other non-academic

factors, such as extracurricular involvement, first-generation status, recommendation letters, and personal essays. As the relationship between previous and future academic performance is essentially linked, most higher education institutions use high school GPA as a critical determinant within the admissions process. In combination with standardized test scores, which are presently utilized, these scores act as a critical decision-making factor in admitting a student to a particular college or university (Geiser & Santelices, 2007; Soares, 2012).

High School Grades in the Admissions Process

Numerous research studies indicate that the most robust and meaningful predictor of college grades are high school grades (Geiser, 2009). Specifically, high school GPA is significantly related to four-year graduation rates, freshman GPA, and overall GPA (Geiser & Santelices, 2007; Geiser, 2008). As high school and college grades measure similar outcomes (Geiser & Santelices, 2007), it is of natural consequence that this becomes a criterion in the postsecondary admissions process. Furthermore, utilizing high school grades to make admissions decisions yields "less adverse impact than standardized tests on disadvantaged and underrepresented minority students" (Geiser & Santelices, 2007, p. 1). Edmunds (2010) found high school GPA to be a clearer predictor of both persistence during the sophomore year and four-year college graduation rates than standardized test scores.

Test Scores in the Admissions Process

Employing standardized test scores is widely prevalent in college admissions decisions. "One reason why institutions consider using standardized test scores in making admissions decisions is to increase the proportion of their enrolled students who are academically successful" (Sawyer, 2007, p. 260). The utilization of standardized

testing provides a common metric that can be applied across numerous high school backgrounds and learning environments. The uptick in the average number of college applications submitted per student demographics the highlighted emphasis on standardized testing as a criterion in the admissions decision-making process (Clinedinst & Koranteng, 2017; Sawyer, 2007; Zwick, 2007). Increased application volume creates an additional filter on which college admissions officers can rely, particularly at more selective institutions (Clinedinst & Koranteng, 2017). Soares (2012) found that employing admissions test scores to determine admissions selection stratified postsecondary education admissions into a tiered system, creating unintended social disparity. Colleges with an increased test score threshold were more likely to attract and retain students (and families) of a higher socioeconomic status (Soares, 2012). Thus, the more selective a college became, the greater the concentration of high Socio-Economic Status (SES) students within that college's student body (Soares, 2012).

Standardized College Admissions Tests

The utility of standardized testing for postsecondary admissions rests on the assumption that the tests are dependent upon what is actually measured, and subsequently interpreting and applying those measurements (Kane, 2013). Most significantly, while the SAT and ACT both offer standard measurements of verbal and quantitative reasoning abilities aimed at determining college readiness, the content and structure differ considerably (Dickenson & Adelson, 2016). As of 2015, SAT and ACT takers surpassed 1.9 million (Belasco, Rosinger, & Hearn, 2015). A significant number of students attempted both exams, often taking them repeatedly to improve test scores

(Lewin, 2013). Both tests are norm-referenced, meaning they compare test-takers to each other, rather than measuring for knowledge mastery (Geiser, 2009)

SAT

When initially introduced, the SAT was an abbreviation of "Scholastic Aptitude Test." For a significant period, the SAT's emphasis on aptitude enabled college admissions officers to adopt the mindset that results were unalterable predictors of ability. This became problematic, as some test-takers who performed exceptionally well in high school began to receive sub-standard scores on the SAT (Atkinson & Geiser, 2009). In 1991, "aptitude" was replaced by "assessment," with ETS emphatically stating that the SAT was actually a measure of abilities acquired over an extended period of time (Crouse & Trusheim, 1988). With the retooling towards achievement, the utility of the SAT could be fashioned to determine the accumulated mastery of knowledge, identifying prodigies in lower performing high schools or those whose full potential was not demonstrated in a traditional environment (Jencks & Phillips, 1998). In 1995, ETS relinquished the idea that the SAT measured either achievement or aptitude, and renamed the test SAT Reasoning. They then claimed that it "developed reasoning" (Jencks & Phillips, 1998). Students taking the SAT today receive scores in reading and math.

ACT

The ACT, first administered in 1959, measures general educational achievement (ACT Inc., 2017). It is comprised of four tests: English, mathematics, reading and science. The composite score of the ACT is a mathematical average of all four subsections. The ACT also established benchmark scoring that is designed to establish specific sub-scores that indicate college readiness in each subject tested. Lichtenberger

and Dietrich (2012) examined the linkage between ACT benchmarks and postsecondary outcomes. The results indicated that the more ACT benchmarks that were met, the higher the rate of acceptance at selective colleges. They also found an increased rate of college graduation. Additional studies demonstrated that ACT scores were highly correlated to college freshman GPA, and related to notable creative accomplishments a number of years after the examination (Marsh, Vandehey, & Diekhoff, 2008; Dollinger, 2011).

Concordance between SAT and ACT

While each admissions test is on a different end of the aptitude-achievement spectrum, both admissions tests share overlapping constructs. Concordance tables can be utilized to examine the relationship between both tests, and also to evaluate concurrent or convergent validity. Test scores are considered concordant at a similar percentile rank for a test-taker who took both tests. ACT provides a concordance table (see Appendix D) to conduct comparisons between scores on both tests. As an example, a student obtaining a score of 32 on the ACT, would utilize the concordance table to obtain a predicted range of SAT scores. In this case, the SAT score range for an ACT score of 32 is 1400–1430 (ACT, 2014).

Predictive Validity

Research studies on predictive validity, or the extent to which measures of current performance impact future performance (Kane, 2013), have identified a correlation between students' admission test performance and their subsequent performance and achievement in the postsecondary environment (Bettinger, Evans & Pope, 2013; Buckley, J, Letukas, & Wildavsky, 2018; Mattern et al., 2011; Patterson & Mattern, 2012). The predictive validity of HSGPA and admissions test scores are

positively correlated with a number of college outcomes, including first-year college GPA, sophomore year persistence, and graduation from college (Allen, 2013; Kobrin et al., 2008; Mattern et al., 2011; Patterson & Mattern, 2012). Furthermore, existing research literature found that the relationship between increased test scores and increased HSGPA, with successful postsecondary outcomes, is consistent across race, gender, ethnicity, and socioeconomic status (Patterson & Mattern, 2011; Shaw, Marini & Mattern, 2013; Zwick & Sklar, 2005). Rubin (2014) found that course rigor in high school was more significant in determining academic merit and ability rather than standardized test scores or HSGPA. Atkinson & Geiser (2012) stated that:

> irrespective of the quality or type of school attended, cumulative grade point average (GPA) in academic subjects in high school has proved to be the best overall predictor of student performance in college. This finding has been confirmed in the great majority of 'predictive-validity' studies conducted over the years, including studies conducted by the testing agencies themselves (p. 24).

Test-Optional Admissions Policies

The majority of postsecondary institutions have historically utilized standardized test scores to make admissions decisions. But an increasing number of selective postsecondary institutions have shifted towards allowing applicants to elect not to submit standardized admissions test scores as part of the application process. This is commonly known as test-optional policies (TOP's) (Espanshade & Chung, 2012). The test-optional movement took root at private, liberal arts colleges that found it an appealing method to grow and diversify their applicant pool (Mendrinos, 2015). As of 2018, there were over 1,000 postsecondary institutions that deemphasized the utilization of standardized admissions test scores in admissions practices, with over 100 joining this group in the past four years alone (Syverson, Hiss & Franks, 2018; Fair Test

List, 2018). Syverson, Hiss, & Franks (2018) conducted an extensive, longitudinal study that examined data from 28 colleges and universities and 955,774 applicants. The researchers compared four-year colleges that utilized TOP's with their mandatory testing counterparts. The results demonstrated that standardized admissions tests failed to fully identify high-achieving applicants. Furthermore the study yielded notable results, specifically that:

a) more than a quarter of all applicants applying to test-optional colleges elected not to submit their test scores;

b) institutions with TOP's had gains in the number of underrepresented and minority applicants ultimately enrolling;

c) underrepresented, minority students did not submit scores in greater numbers;

d) While non-submitters (the term for those who did not submit scores) were accepted at marginally lower rates, those that were admitted were much more likely to enroll;

e) non-submitters graduated at equivalent or slightly higher rates than those who submitted test scores.

The momentum shift towards TOP's evolved as a result of overlapping changes, particularly, research and interpretation of academic outcomes and widening scope of testing as a more limited determinant of academic potential (Syverson, Hiss, & Franks, 2018). Across the postsecondary spectrum, TOPs have proven to be beneficial and constructive tools that support enrollment practices (Syverson, Hiss & Franks, 2018)

Discrepant Performance

A review of the literature indicated that there are scenarios in which HSGPA and test score performance combinations are inconsistent. This phenomena is generally defined as "HSGPA discrepant," where a student's HSGPA is significantly higher than their performance on standardized admissions testing, or "test score discrepant" in which their test scores are significantly higher than their HSGPA performance (Buckley

et al., 2018; Mattern et al., 2011, Patterson & Mattern, 2012; Shaw, Marini & Mattern, 2013).

Research on discrepant performance generally categorizes the discrepancy by standard deviation. Students with standardized admissions test scores and HSGPA that fall within one standard deviation are labeled as having consistent academic achievement, students with standardized admissions test scores greater than one standard deviation of their HSGPA are labeled as "test score discrepant," and students with HSGPA greater than one standard deviation of their standardized admissions test score are labeled as "HSGPA discrepant" (Buckley et al., 2018; Edmunds, 2010; Geiser & Santlices, 2007; Patterson & Mattern, 2012). HSGPA discrepant students were more likely to be female, minority, and have low socioeconomic status (Buckley et al., 2018, Holland, 2014; Kobrin & Patterson, 2011; Patterson & Mattern, 2012; Sanchez, 2010). Sanchez and Lin (2017) found a direct correlation between these variables, identifying 66% of students with lower ACT composite scores and higher high school GPA's to be female, and greater than 50% to be minority and have low socioeconomic status. The researchers also found that less than 9% of minority students tended to have consistently high HSGPA and high test score correlation (Sanchez and Lin, 2017).

Hiss and Franks (2014) reviewed 123,000 student records from 33 public and private postsecondary institutions that chose to go test-optional. They found that students' college GPAs varied less than .05, and that there was only a variance of .6% in college graduation rates between students who initially submitted admissions test scores and those who did not. They also found that students who scored lower on admissions tests but had a stronger HSGPA, were more likely to achieve in college as

opposed to those who had higher standardized admissions test scores and a mediocre HSGPA (Hiss & Franks, 2014). The researchers also noted that elevating HSGPA over standardized testing was of greater benefit to a significant number of minority, first generation, and low SES students (Hiss & Franks, 2014)

The researchers concluded that students with solid HSGPA's, even without standardized admissions test scores, were more likely to succeed in college as compared to students with lower HSGPA's and higher admissions test scores. Furthermore, students in the latter group were more likely to have a lower college GPA and less likely to ultimately graduate (Hiss & Franks, 2014).

Syverson, Hiss and Franks (2018) conducted a meta-analysis of discrepant performance-related research that revealed that across the studies examined, between 11% and 18% of the sample population demonstrated discrepant performance.

Model of College Choice

Significant research has examined college decision-making models over the past three decades (Hossler et al., 1998; Kinzie et al., 2004; Paulsen, 1990). Several frameworks have been used to describe the process of college choice. Hossler and Gallagher (1987) developed a three-stage model which focuses on three conceptual phases: predisposition, search and choice (Hossler and Gallagher, 1987).

Figure 1-1. Model of College Choice (Hossler & Gallagher, 1987)

The predisposition stage, generally occurs between 7th and 9th grade, and is characterized by the decision to pursue college attendance rather than alternative educational attainment paths such as technical or trade school, military service, or direct

entry into the workforce (Hossler & Gallagher, 1987; Hossler & Stage, 1992). An intensified focus on academic preparation and coursework necessary for postsecondary attendance becomes important at this stage, in addition to the development of college aspirations (Hossler & Gallagher, 1987).

The search stage occurs in 10th–12th grade of high school enrollment (Hossler & Gallagher, 1987). This phase is characterized by an increased concentration on finding information and literature related to colleges, delineating criteria of interest, and narrowing choices. This time period of gathering information plays a critical role in the college choice process as students build a list of colleges based on specific benchmarks (Hossler & Gallagher, 1987). The choice stage culminates in the college selection process, and occurs in the 12th grade; at this phase, the student has applied to a number of institutions and is preparing to make a decision regarding which postsecondary institution to attend (Hossler & Gallagher, 1987).

College Choices Of High-Achieving Students

After identifying the appropriate framework for understanding the college-choice process that students experience as they make postsecondary enrollment decisions, factors that influence this pivotal life decision become paramount. DesJardins et al. (2006) provided appropriate terminology for a wide range of smaller influential factors identified throughout the college-choice literature that falls within the larger categories. In addition, McDonough (1997) identified an independently influential concept, bounded rationality, that explained the relationship between types of influential characteristics (DesJardins et al., 2006, p. 383; Hossler et al., 1998; Kinzie et al., 2004; McDonough, 1994; Paulsen & St. John, 2002). Student characteristics directly impact a student's perspective and experience. The literature has shown that gender, race, ethnicity,

parental education, and socioeconomic status notably influence postsecondary acceptance outcomes of enrolling freshmen (Geiser & Santelices, 2007; Zwick & Himelfarb, 2011).

Socioeconomic Status

Within the study of student characteristics in college-choice literature, socioeconomic status is the most commonly researched factor. The literature recognizes the significant, and often complex, ways that socioeconomic status affects the college choice process This research recognizes that students from higher socioeconomic backgrounds tend to apply to and choose from more selective universities (Goenner & Snaith, 2004; Rubin 2014) Additionally, socioeconomic status has a greater impact on the college-choice process of students by coloring their lens of opportunity with a financial shade, meaning that students will consider options within the framework of affordability and cost of attendance (Paulsen & St. John, 2002; Ruben, 2014). Soares (2012) found significant correlation between family income and average standardized test scores. Students from the lowest SES quartile scored 100 points lower than students whose annual income was in the median range of income. They also found that students whose family income was in the highest 5% tended to score more than 200 points higher than those in the lowest SES sub-group. In another study, Geiser and Santelices refuted claims that HSGPA was more likely to be correlated with SES status. The researchers found that:

> The SAT-V correlated at the .32 level with family income, and at the .39 level with parents' education; similarly, SAT-M scores correlated respectively at .24 and .32, but HSGPA correlated with family income at the .04 level, and with parents' education at the .06 level (p. 2).

Hoxby and Avery (2012) examined a sample of 35,000 high-achieving students in the lowest SES (defined by students with standardized admissions test scores in the highest 10% and parental SES in the lowest quartile), and found that these students are less likely to apply to the most selective institutions. This phenomena, commonly referred to as "undermatching," occurred primarily because applicants did not have an awareness of the admissions process, did not know how to utilize application-fee waivers, applied to a limited number of colleges, or did not have awareness of the financial aid process (Hoxby & Avery, 2012; Rubin, 2014).

Parental Educational Attainment

Similar to socioeconomic status, parental education plays a complex role in the admissions decision-making process of students (Cabrera & LaNasa, 2000). The postsecondary parental educational experiences of parents impacted students directly in their understanding of costs and financing an education as well as indirectly in their ability and support to navigate steps to college admission (McDonough, 1994).

Race/ethnicity, parental education, and household income correlate strongly with standardized admissions testing scores. As a result, test scores accentuate socioeconomic and racial disparities among applicants more so than other selection criteria. The hard and soft cost of testing, particularly for minority and low-income applicants, is disproportionate with any marginal benefit it provides as an indicator of how students will perform.

College Selectivity

Students with higher academic ability are more likely to enroll in more selective colleges and universities (Brand & Halaby, 2006; Rubin, 2014). Furthermore, Hispanic and African American students who attend extremely selective colleges are more likely

to attain a degree (Bills, 2003). The perception and reality that a superior quality education enables graduates of more selective institutions to obtain more economically desirable skills and abilities (Rubin, 2014). Second, notwithstanding of ability or aptitude, an institution's "brand name" may attract potential employers seeking highly-capable graduates (Rubin, 2014). Institutions ranking higher in selectivity can provide access to alumni networks, adding significant benefit in social capital through employment opportunities, mentoring, and inside information. Rubin (2014) also found that more selective institutions have a greater inclination to give preference in college admissions towards high SES students. Students not in need of financial assistance were grouped and categorized into separate "pools" and had a greater likelihood of being admitted (Rubin, 2014, p. 2). DesJardins, Ahlburg, and McCall (2006) examined institutional admissions practices across the U.S. and concluded that selective colleges base their admissions decision-making on institutional goals, diversity level, and academic congruency. They found that test score thresholds and individual reviews varied across college type and student type (DesJardins et al., 2006).

CIRP Freshman Survey

The Cooperative Institute Research Program's Freshman Survey, governed by the Higher Education Research Institute at UCLA, is administered annually to over 400,000 entering freshmen at more than 700 two and four-year universities and colleges (Keup, 2004). First published in 1966, the CIRP Freshmen Survey is one of the oldest surveys still continually administered today to college students. The representative and comprehensive nature of the battery has led to extensive use by researchers and practitioners wanting to gauge various issues confronted by incoming college freshmen (Keup, 2004).

CHAPTER 3
METHODOLOGY

A summary of the methodology utilized is presented in this chapter. The research design, data source, sample, data collection, and data analysis methods are all described in detail.

Research Design

Through the utilization of a correlational research design, this particular research design will apply multinomial logistic regression to determine whether substantial discrepancies exist in postsecondary acceptance outcomes between high-achieving students with lower test scores on the ACT and SAT and high-achieving students with higher test scores on the ACT and SAT. The independent variables are based on (1) students' cumulative high school GPA (HSGPA) (2) students' individual characteristics, including race/ethnicity, gender, and (3) parental demographics, including parents' educational attainment, and family income. Utilizing this particular design enables the investigation of potential roots of the phenomenon being researched, evaluating individuals for whom a trait is existent compared to similar individuals for whom the trait is existent to a lesser extent or absent entirely (Creswell, 2009).

The research data used originates from the Cooperative Institutional Research Program (CIRP) 2006 Freshman Survey, managed by the Higher Education Research Institute (HERI) at the University of California Los Angeles (Eagan, Lozano, Hurtado, & Case, 2016). Annually administered, the CIRP is given at approximately 800 institutions of higher learning to roughly 400,000 freshmen. The Freshman Survey consists of items that relate to college choices, future goals, and demographic information (Including but not limited to parental demographics, race, and religious preferences). The CIRP also

collects information regarding established behaviors in high school, educational preparedness, college expectations, factors in admissions, faculty and peer interaction, student goals and values, demographic characteristics of students, and financial concerns associated with postsecondary education (Eagan, Lozano, Hurtado, & Case, 2016).

Data Source

Data from The Freshman Survey (TFS) were collected from the Higher Education Research Institute at UCLA (HERI) data archives. The practitioner requested and was granted access to the database for the purpose of conducting this study. The TFS data files available for download are relatively massive (SPSS files), consisting of all survey data from 1966 to 2006. As such, a great deal of computational memory and power was devoted to the creation of subsets. The most recently available data (2006) was used for the current study.

Data Collection

As the study focused on high-achieving students, only those with a self-reported high school GPA of “A” or were retained. Further, all survey responses collected from 2-year colleges (public or private) were omitted due to the relatively low representation of such institutions in the data. Thus, the final sample consisted of 103,267 unique survey responses. Due to item non-response, however, not all statistical processes utilized all cases.

Data Analysis

All data filtering was conducted using R3.3.1. The SPSS files obtained from the HERI data archives were read into R using the functions available as part of the foreign package. Once the appropriate cases and variables were determined, a final CSV file

was written. The file, which consisted of 103,267 cases and 10 variables (SUBJID, COMPGROUPI, AGEI, RACEGROUP, GENDER, ACTCOMP, SATCOMP, INCOME, MOTHEDUC, and FATHEDUC), was then imported into SAS 9.4, for further statistical analysis.

Acceptance outcomes were measured using COMPGROUP1, which is a classification of institution type and institution selectivity. Institution type consisted of public and private universities, as well as public, private/nonsectarian, Catholic, and other religious 4-year colleges. Selectivity consisted of very low, low, medium, high, and very high. Some institution/selectivity pairs (such as very low selectivity public universities and very high selectivity Catholic 4-year colleges) were not represented in the data.

Test scores were measured using SAT and ACT composite scores. At the time of the 2006 data collection, SAT scores ranged from 400 to 1600 in increments of 10, while ACT scores ranged from 1 to 36 in increments of unity. Any test scores that did not adhere to these scoring constraints were omitted (at the procedure level). The survey item corresponding to test scores was, “What were your scores on the SAT and/or ACT?"

RACEGROUP and GENDER were used to measure the demographic constructs of race and gender. The race categories were White, Black, Hispanic, Asian, and "Other." Due to their low representation among high-achieving students, American Indians and those reporting, "Two or more race/ethnicity” were included in the "Other" category. The gender categories were Male and Female.

Parental demographics were measured using INCOME, MOTHEDUC, and FATHEDUC, which are measures of household income and parental educational attainment (for the mother and father, respectively). Due to the high degree of (ordinal) correlation (Y = 0.61 , r = 0.59) between the respective parental educational attainment measures, a variable representing highest parental educational attainment was created by taking the maximum of both parents' educational attainment. This created variable appears as PARENT.EDU in the tables and figures throughout this study. The survey items corresponding to household income and parental educational attainment were, "What is your best estimate of your parents' total income last year? Consider income from all sources before taxes," and "What is the highest level of formal education obtained by your parents?"

Age was measured using a recode of the AGEI categorical variable. The total number of categories was reduced (due to low cell counts) from ten to four: "less than or equal to 17," "18," "19," and "greater than or equal to 20." The survey item corresponding to age read, “How old will you be on December 31 of this year?"

CHAPTER 4
RESULTS

Summary

The purpose of this study was to determine to what degree standardized college admissions test scores impacted college acceptance outcomes for high-achieving students, and the impact that race, gender, and parental demographics have on college acceptance outcomes. A review of college admissions practices, standardized college admissions testing, college choice model theory, and college selectivity literature provided context for this study. Data from the UCLA Higher Education Research Institute's CIRP Freshman Survey were analyzed and the methodology and design was addressed in Chapter 3. The specific questions examined included:

1. To what degree do standardized college admissions test scores relate to college acceptance outcomes for high-achieving students?
2. Controlling for test scores, do race and gender relate to college acceptance outcomes for high-achieving students?
3. Controlling for test scores, do parental demographics (household income and highest parental educational attainment) relate to college acceptance outcomes for high-achieving students ?

Findings

A main focus of this study was to determine the quantitative connection between standardized college admissions test scores and postsecondary admissions outcomes for high achieving students. The findings in this study indicate a significant relationship.

Descriptive Statistics

One-Way Frequencies (Categorical and Ordinal Variables)

From Figure 4-1, we see that a large number of high-achieving students chose to attend a highly selective public university (22.37%). The least common choice was "Other Religious 4 yr. Colleges — very low," which accounted for only 0.52% of total

choices. Overall, we see that within each institution type, acceptance outcomes are skewed left with respect to selectivity, indicating that the high-achieving students preferred to attend more selective institutions.

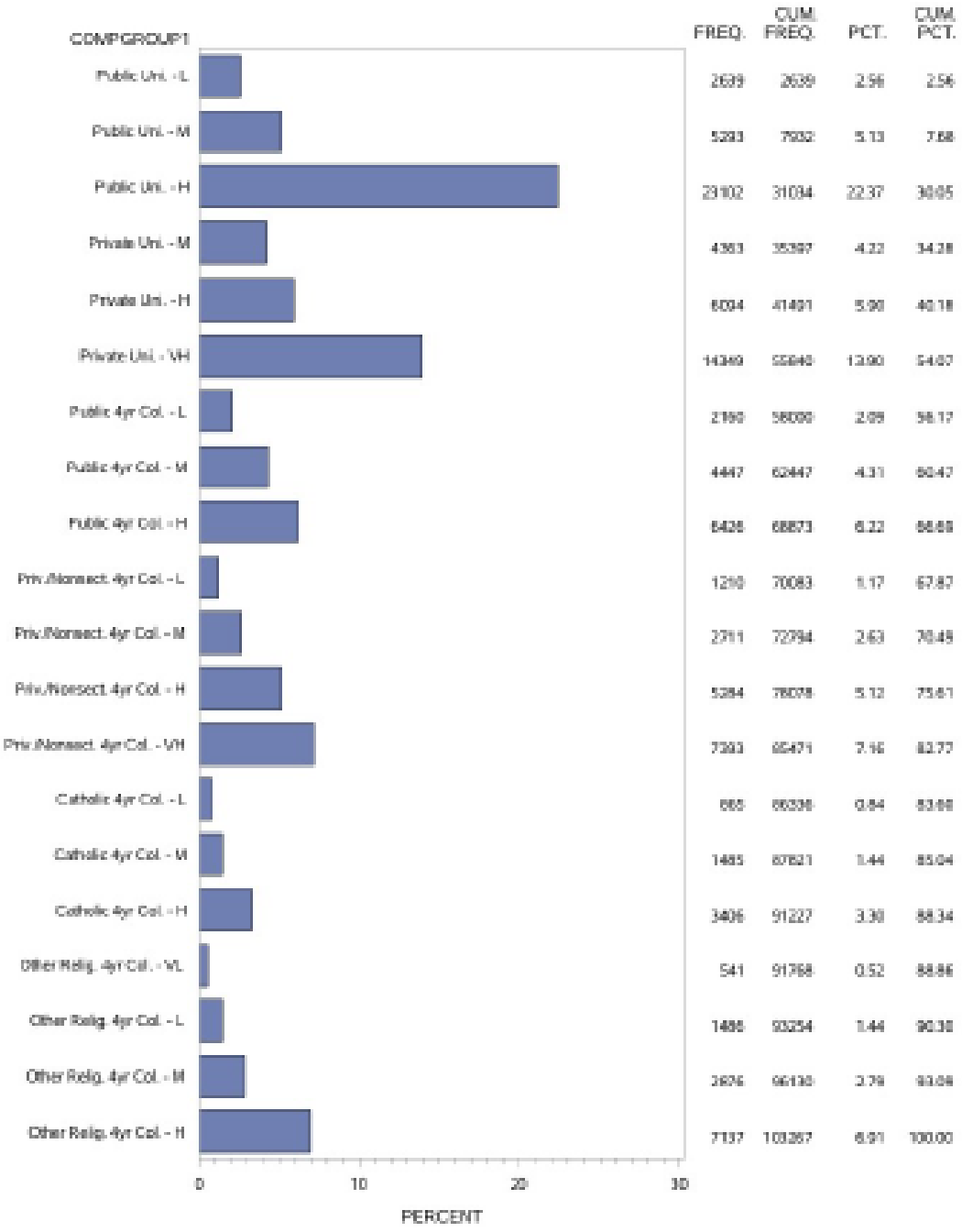

Figure 4-1. Distribution of College Acceptance Outcomes

From Figure 4-2, we see that most of the high-achieving students were white (74%), with Asians, Blacks, and Hispanics accounting for only 9.76%, 3.52%, and 4.03% respectively. A total of 4,537 students did not provide a response to the race question. Additionally, in Figure 4-3, we see that 62.76% of the high-achieving students were female, and that 131 students failed to provide a response to the gender question.

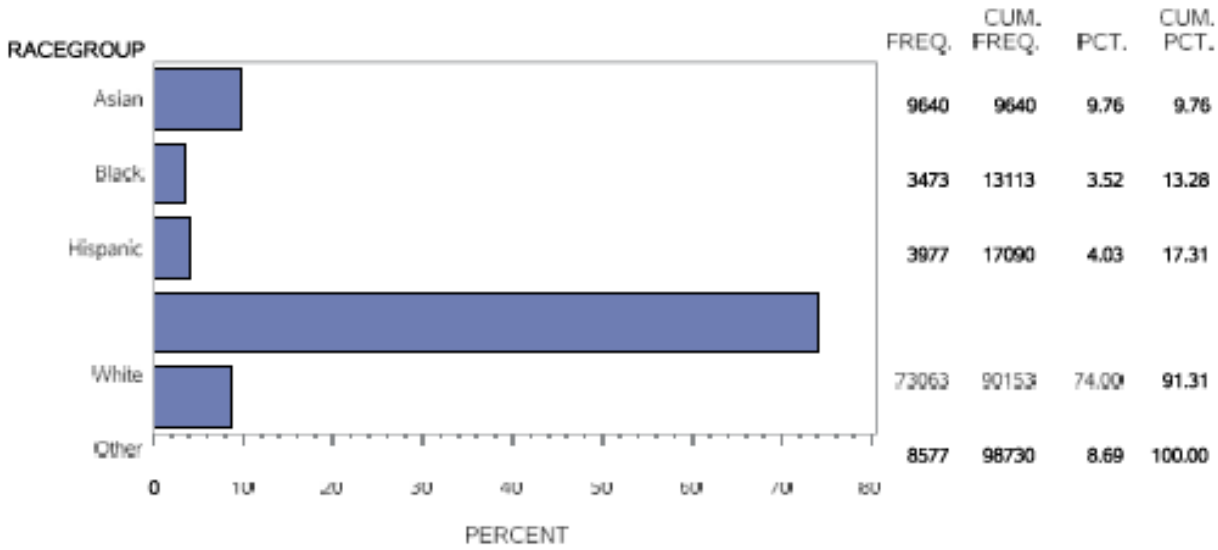

Figure 4-2. Distribution of Race

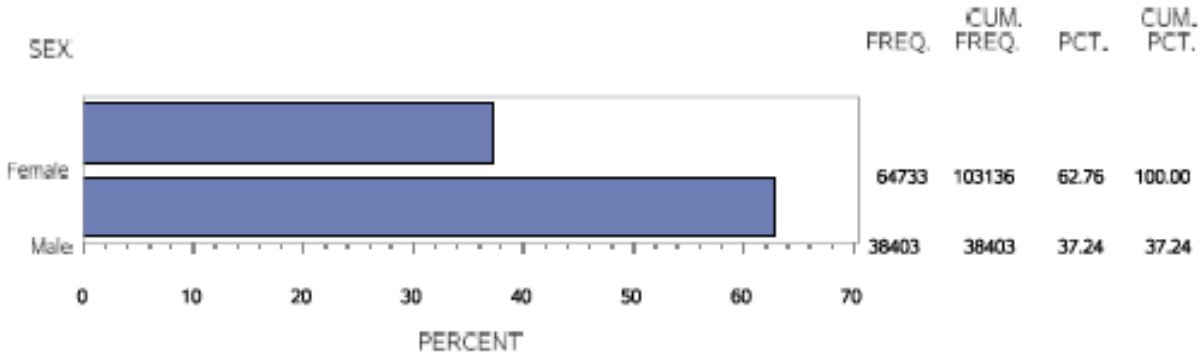

Figure 4-3. Distribution of Gender

In terms of household income, as shown in Figure 4-4, a majority of students had a combined household income of $75k or more per year, with $100–$149.9k accounting for roughly 20% of total responses. A significant number of students (10,181) chose to leave the income question blank, either because they did not know their parents'

combined annual income or chose not to provide the information. In regard to highest parental educational attainment, as shown in Figure 4-5, over 70% of students had a parent who had earned at least a college degree, and 38.75% had a parent with a graduate degree. Those families in which neither parent graduated from high school accounted for only 2.4% of total responses.

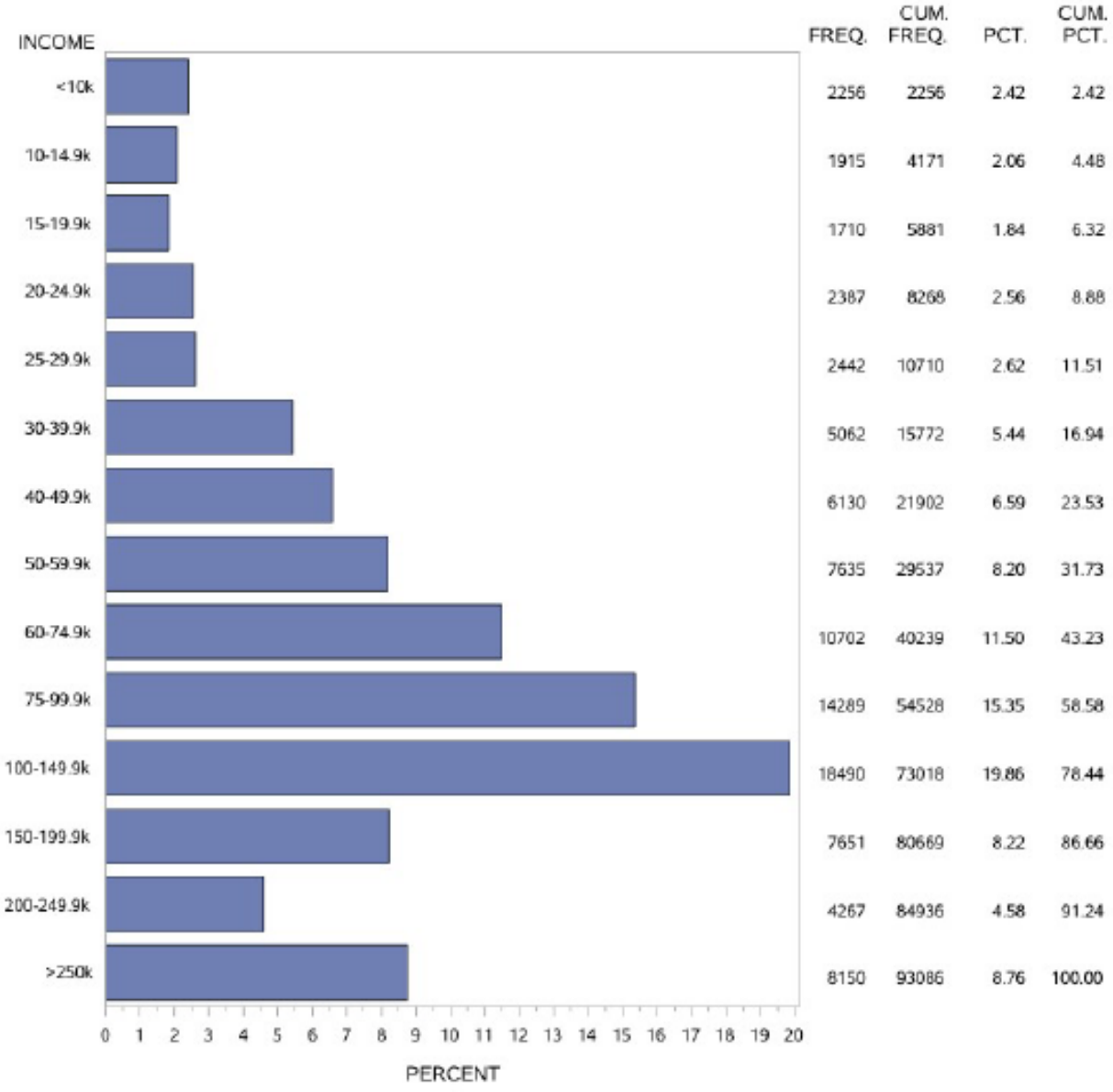

Figure 4-4. Distribution of Household Income

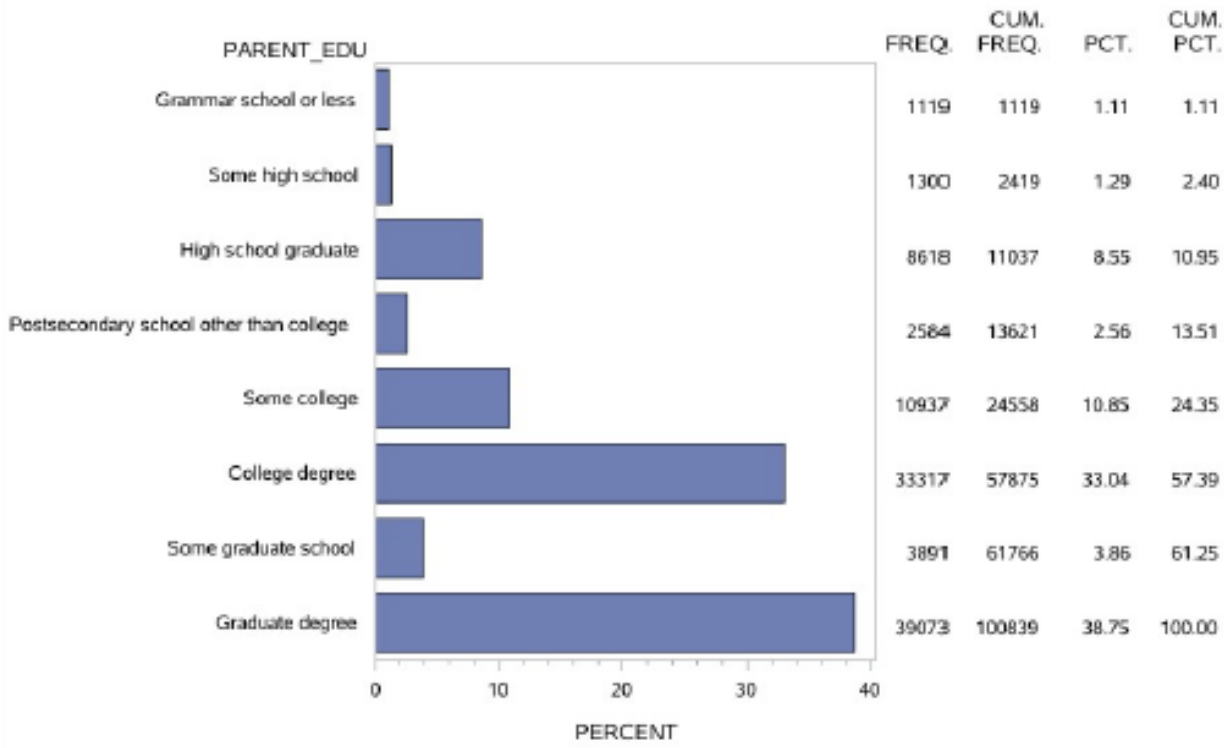

Figure 4-5. Distribution of Highest Parental Educational Attainment

From Figure 4-6, we see that most of the high-achieving students were either 18 or 19 years old, and that less than 5% of the sample fell outside of this range.

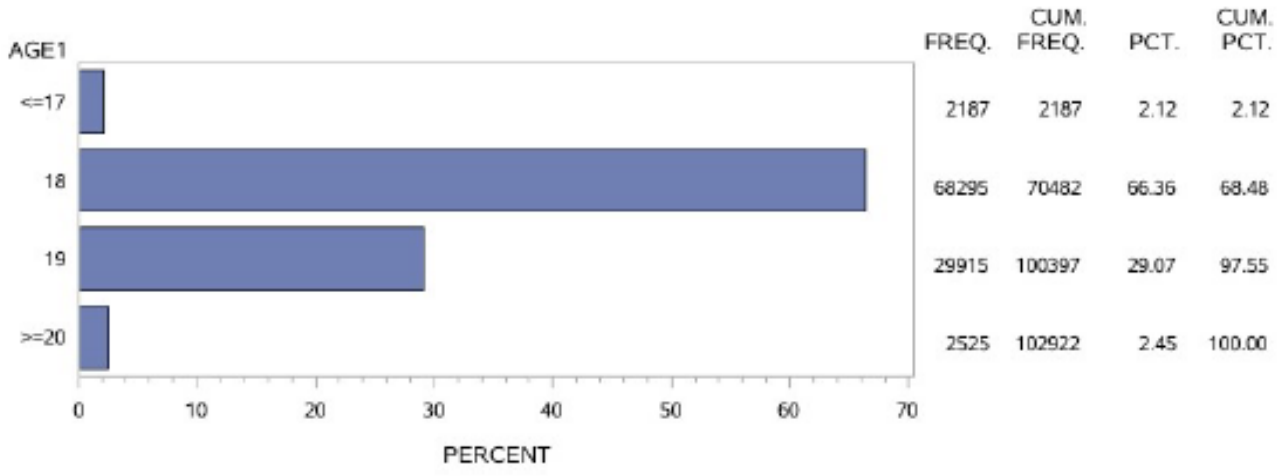

Figure 4-6. Distribution of Age (In Years)

Two-Way Frequencies (Categorical and Ordinal Variables)

In order to examine the pairwise relationships between the predictor variables and the response, a series of two-way tables were produced (along with their corresponding statistical tests of dependence and association).

Race and gender were significantly related to acceptance outcome (X^2(76, n=98730) = 8958.39, $p \leq 0.001$ and X^2 (19, n = 103136) = 2061.16, $p \leq 0.001$; respectively). Further, household income and highest parental educational attainment were significantly related to acceptance outcome (X^2 (247, n = 93086) = 8045.05, $p \leq 0.001$ and X^2 (133, n =100839) 9762.94, $p \leq 0.001$; respectively).

Household income was significantly related to highest parental educational attainment (X^2 (91, n = 91831) = 21269.91, $p \leq 0.001$). The correlation between household income and highest parental education was moderate (Y=O.43, r = 0.42).

Descriptive Analysis (Interval and Ratio Variables)

As previously mentioned, test scores were measured using SAT and ACT composite scores. Almost sixty thousand students (n = 59,450) reported a SAT score, while somewhat less (n = 46,753) reported an ACT score. Almost twenty thousand students (n = 19,921) reported scores for both tests. Due to issues inherent in making comparisons using concordance scoring between the two tests, each test was analyzed separately. The analysis indicated that SAT and ACT were highly correlated (r(n = 19921) = 0.78, 0.001).

The average SAT score among the high-achieving students (with scores that adhered to the scoring constraints) was 1310.45, and the minimum and maximum scores were 450 and 1600, respectively. The average ACT score was 27.36, and the minimum and maximum scores were 1 and 36, respectively. While all reported ACT

scores made sense in the context of the ACT scoring, 283 students provided SAT scores that did not adhere to the scoring constraints; the potentially inaccurate SAT scores were not completely divisible by 10. It is conceivable that such values were obtained by averaging the scores for multiple attempts. However, to mitigate potential issues in interpretation, those 283 SAT scores were omitted. The SAT and ACT distributions are presented in Figures 4-7 and 4-8, respectively. Both distributions were mostly normally distributed. Lastly, the distributions for SAT and ACT by acceptance outcome are presented in Figures 4-9 and 4-10, respectively. Both figures indicate that an increase in selectivity corresponds to an increase in average test score for a given institution type.

Inferential Statistical Analyses

In cases involving the need to analyze the effect of one or more predictors on a polychotomous response variable, multinomial logistic regression is a natural choice. While each student chose to attend one and only one institution, it cannot be determined whether students would remain in the same institution category if alternatives were added or subtracted from their choices of institution type/institution selectivity. Thus, the Independence of Irrelevant Alternatives assumption may not be entirely valid.

For the sake of model interpretation, SAT scores were divided by 10. Such a division facilitates understanding, as SAT scores are in increments of 10 points (i.e., the score immediately following a 1310 is a 1320, not a 1301). As previously mentioned, SAT and ACT scores were analyzed separately, to avoid any issues related to concordance score interpretation, high correlation between the tests, and the exclusion of students who did not report scores for both tests. For all of the statistical tests below,

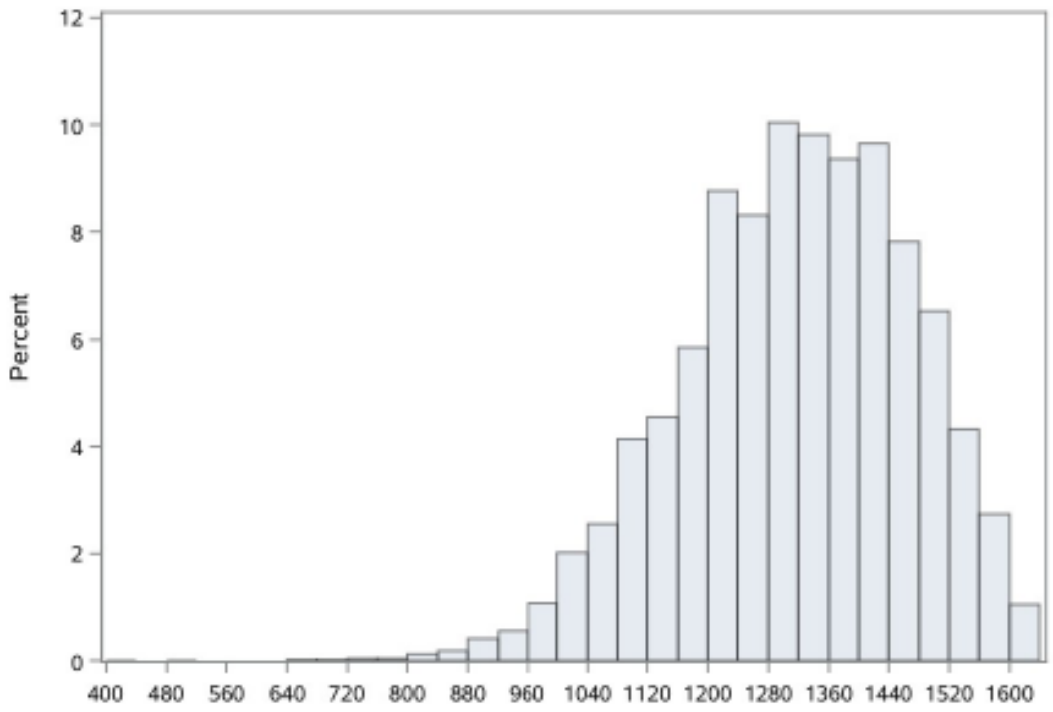

Figure 4-7. Distribution of SAT Composite Scores

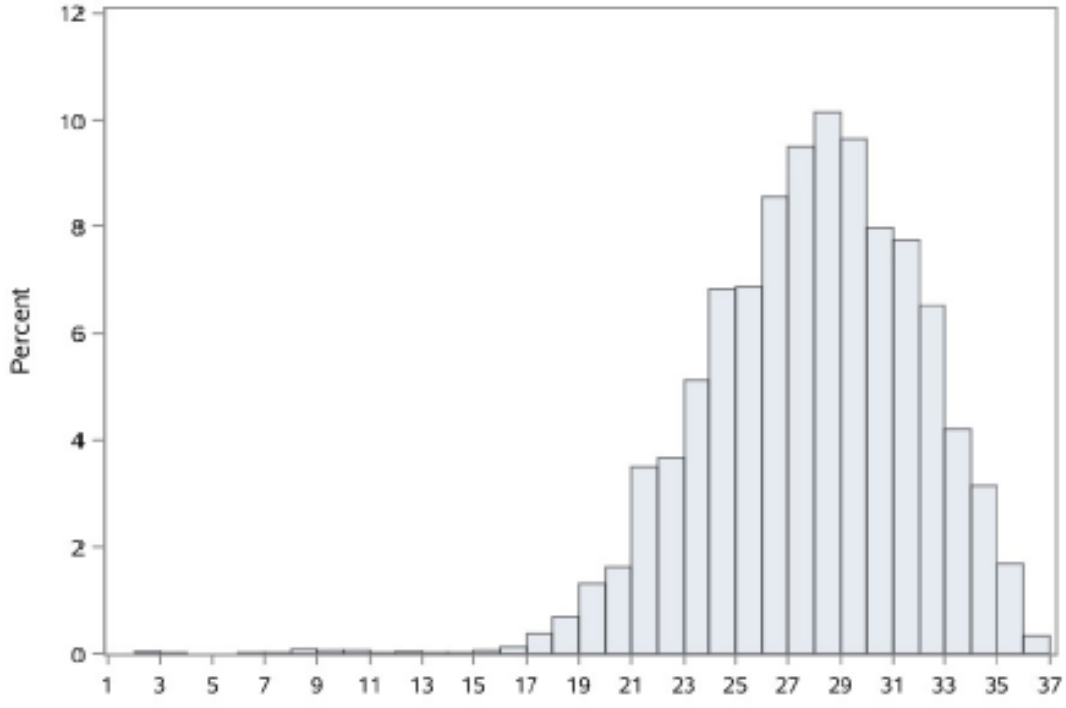

Figure 4-8. Distribution of ACT Composite Scores

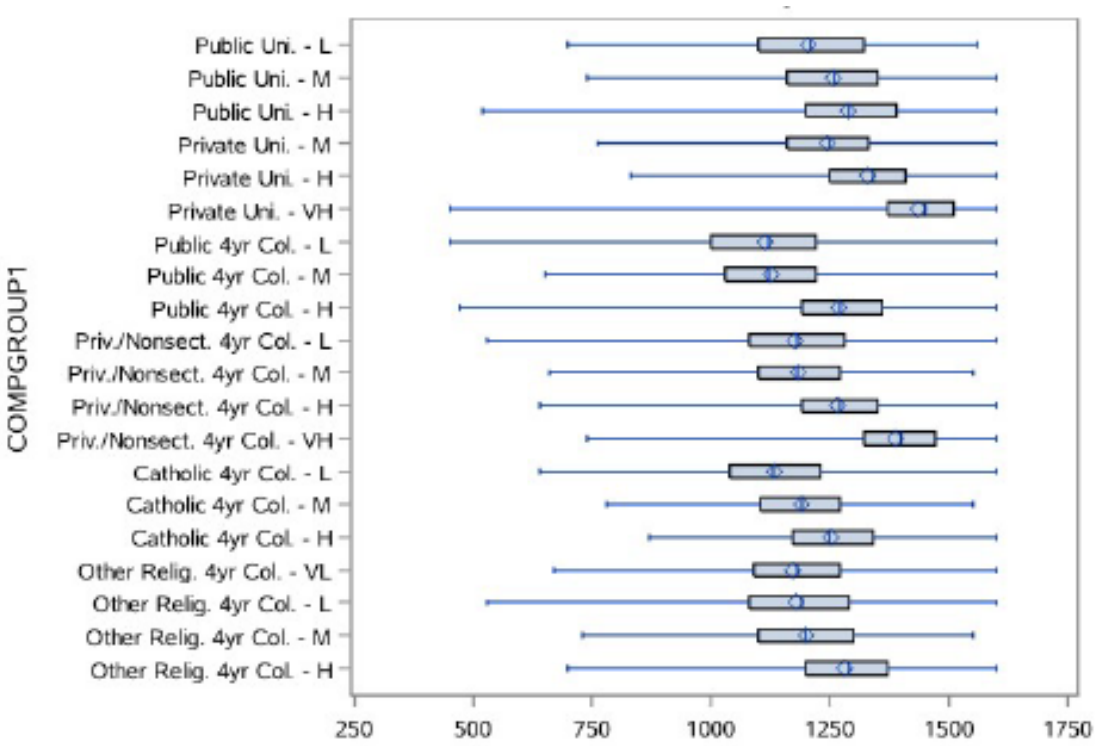

Figure 4-9. Distribution of SAT composite scores by acceptance outcome

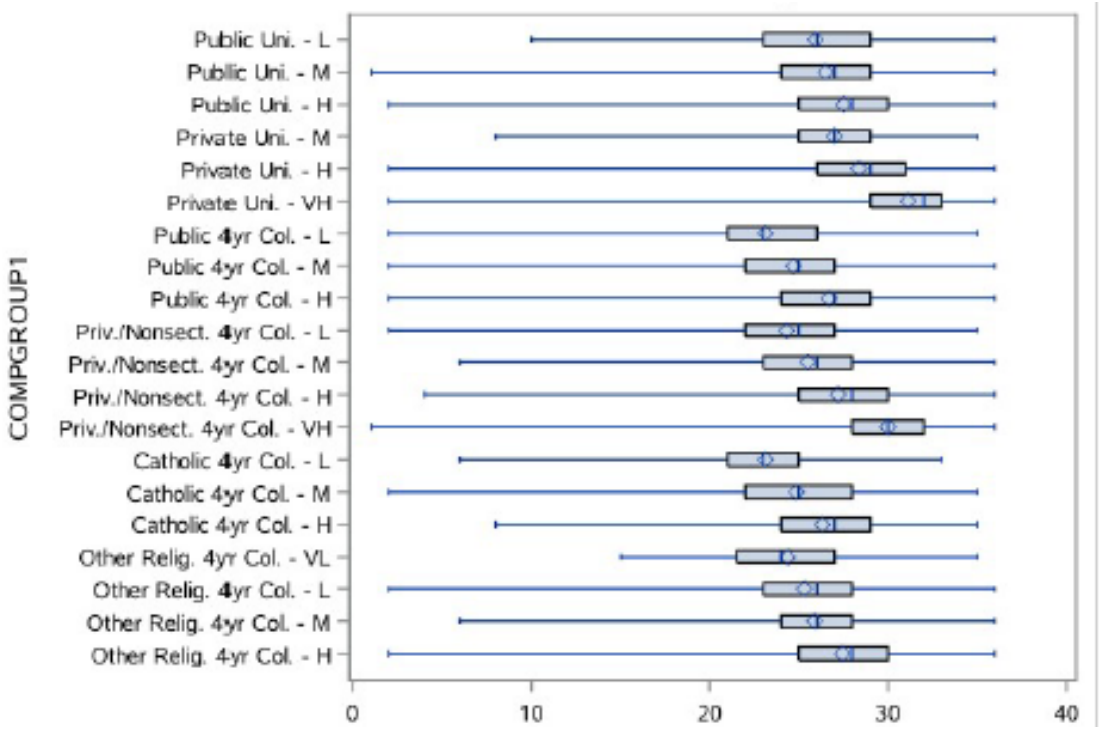

Figure 4-10. Distribution of ACT composite scores by acceptance outcome

a type-I error rate of 0.05 was assumed (i.e., a 0.05). This value was chosen based solely on current scientific convention. The phrase "odds ratio" is used in lieu of the more general (yet more appropriate) phrase "relative risk ratio" in all of the resulting interpretations below. The less general phrase has been chosen due to its overwhelming presence (relative to the more general phrase) in the education literature (Creswell, 2009).

Research Question 1

To what degree do test scores impact college acceptance outcomes for high-achieving students? Two multinomial logistic regressions were conducted with acceptance outcome as the response variable and SAT and ACT as the predictors. The first MLR included SAT only, while the second included ACT only. Low selectivity public universities were used as the reference category for the response variable. As such, all other response levels (19 in total) were compared in this reference category.

RQ1 SAT

The global test for non-contribution of the predictor was significant ($X^2(19, n = 59167) = 13776.57$, $p \leq 0.001$), indicating that SAT score does a significantly better job of predicting acceptance outcomes than an intercept-only model. Almost all relative log odds estimates were significantly different from zero, with the exception of medium selectivity Catholic 4-year colleges ($p = 0.115$) and medium selectivity other religious 4-year colleges ($p = 0.517$). For these institutions, there was no significant increase or decrease in the likelihood of attendance (relative to low selectivity public universities) for each 10-point increase in SAT score. The odds ratios, provided in Figure 4-11, indicates that higher SAT scores were associated with a higher likelihood of attending a more selective college and a lower likelihood of attending a less selective college (relative to

the referenced institution). The largest positive effect was observed for very high selectivity private universities, where for each additional 10 points on the SAT, a student was 16.2% more likely to attend a highly selective private university than a low selectivity private university. The smallest negative effect was observed for low selectivity public 4-year colleges (OR 0.958).

RQ1 ACT

The global test for non-contribution of the predictor was significant ($X^2(19, n = 46753) = 8254.17$, $p \leq 0.001$), indicating that the ACT score does a significantly better job of predicting acceptance outcomes than an intercept-only model. All relative log odds estimates, with the exception of medium selectivity other religious 4-year colleges ($p=0.530$), were significantly different from zero. The odds ratios, provided in Figure 4-11, indicate that higher ACT scores were associated with a higher likelihood of attending a more selective college and a lower likelihood of attending a less-selective college (relative to the referenced institution). As was the case for SAT scores, the largest positive effect was observed for very high selectivity private universities, indicating that for each additional point on the ACT, a student was 61% more likely to attend a highly selective private university than a low selectivity public university.

The results indicate that test scores play a significant role in the acceptance outcomes of high-achieving students. The ACT model displayed a better model fit than the SAT model (AIC=237204.13 vs. AIC=261364.08, respectively) as shown in Figure 4-12. Thus, the ACT did a better job of predicting acceptance outcomes among high-achieving students than the SAT.

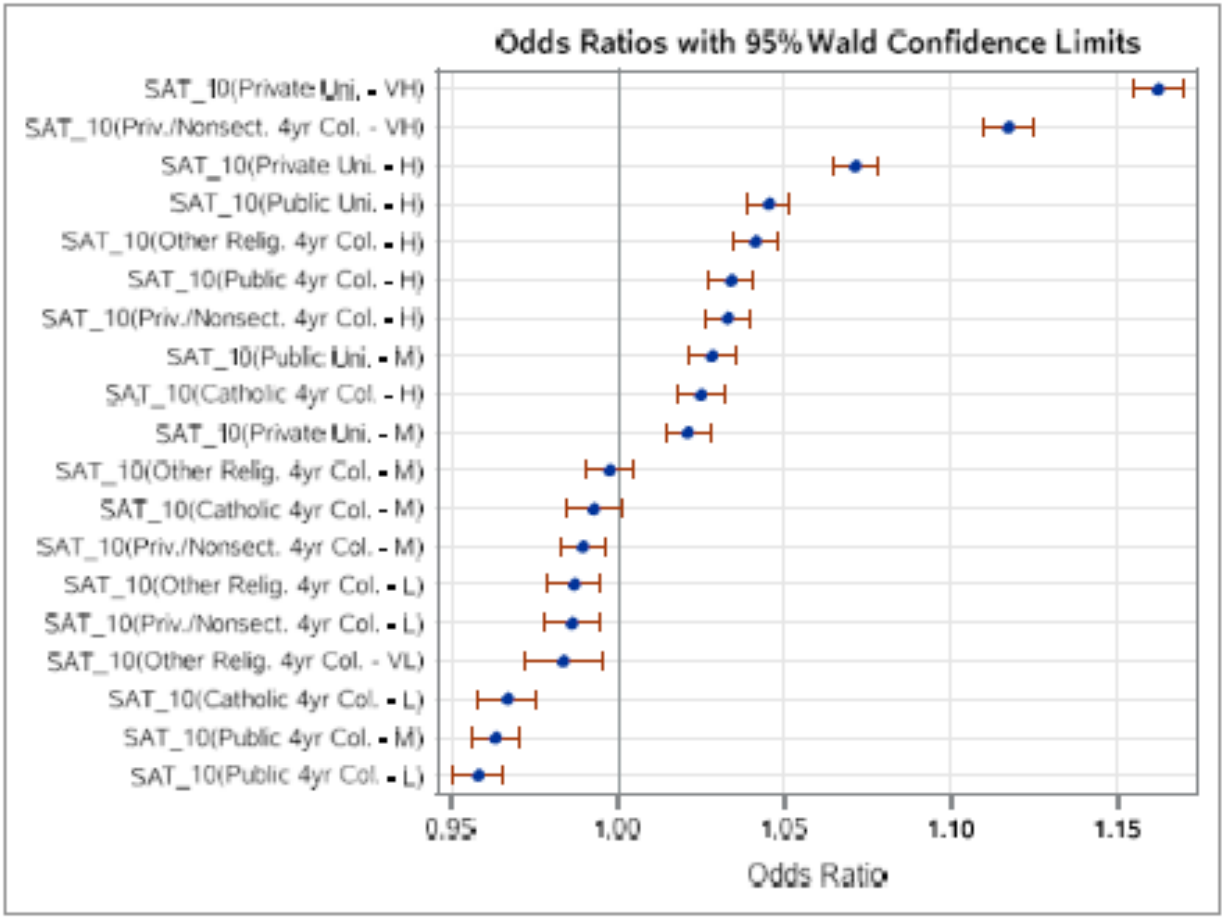

Figure 4-11. Odds Ratios for SAT by Acceptance Outcome

Research Question 2

Controlling for test scores, do race and gender impact college acceptance outcomes for high-achieving students? Two multinomial logistic regressions were conducted with acceptance outcome as the response variable and race and gender as the predictors. The first MLR controlled for SAT, while the second controlled for ACT. Low selectivity public universities were used as the reference category for the response variable, while white males were used as reference category for the predictors. Reference coding was used to create dummy variables for the predictors. This type of

coding was chosen to allow for the comparison of whites to each other race category, and females to males.

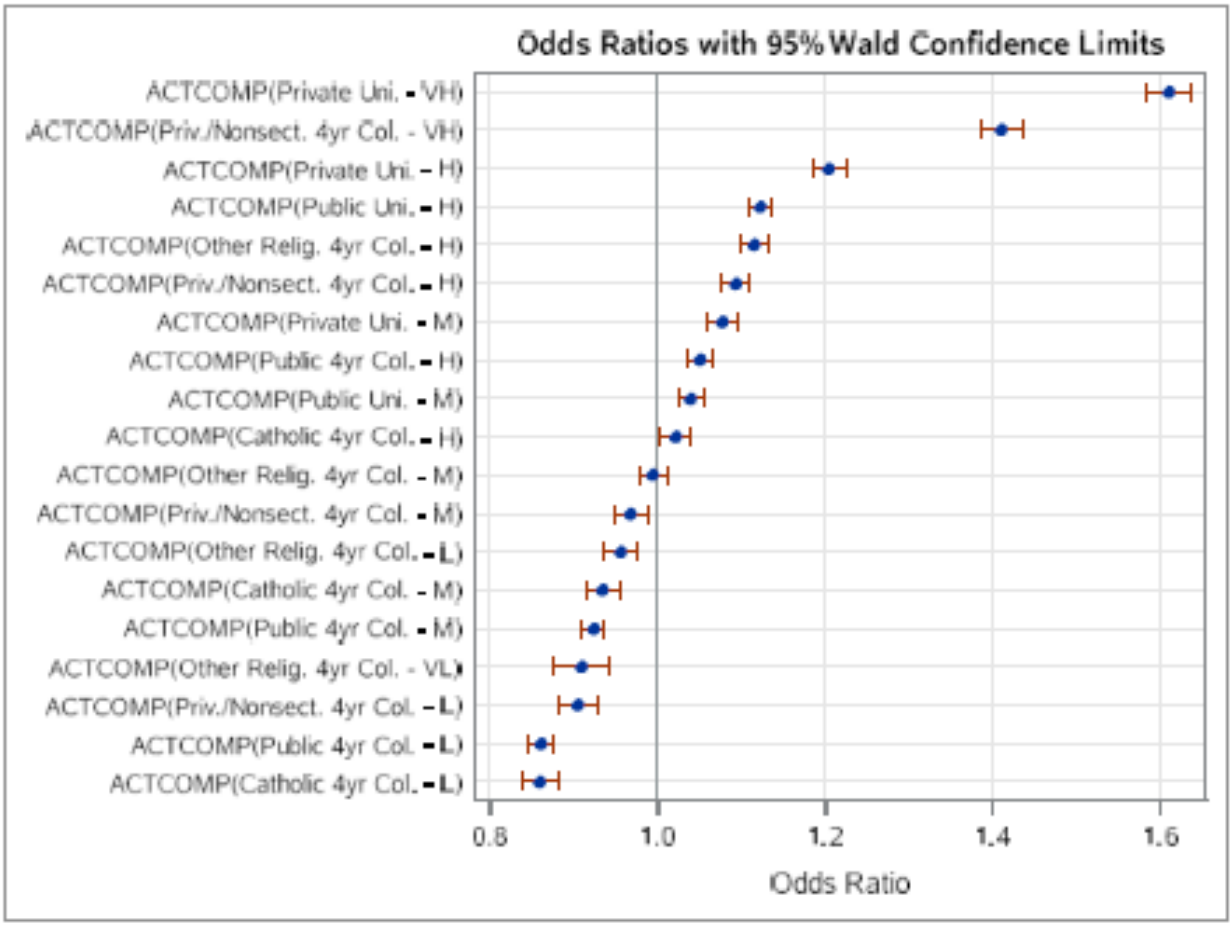

Figure 4-12. Odds Ratios for ACT by Acceptance Outcome

RQ2 SAT

The global test for non-contribution of the predictors was significant ($X^2(190, n = 56800) = 16729.76$, $p \leq 0.001$), indicating that SAT score, race, and gender do a significantly better job of predicting acceptance outcomes compared to an intercept-only model. A significant interaction effect between race and gender was observed and, therefore, included in the model ($p \leq 0.001$). No predictor by covariate interactions were included (i.e., the SAT by gender and SAT by race interactions were excluded from the

model). All main effects were significant ($p \leq 0.001$). However, not all category effects were significant. Due to the inclusion of an interaction term, one must practice caution when interpreting the results of this section. To simplify the matter, the odds ratios for race are provided by gender in Table 4-1.

From Table 4-1, we see that (compared to white females) black females were over nine times more likely to attend a very high selectivity private university than a low selectivity public university, when controlling for SAT scores. On the other hand, Black males (compared to white males), were over twenty-one times more likely to attend a very high selectivity private university than a low selectivity public university, when controlling for SAT scores. The magnitude and sign (negative vs. positive) of the differences in odds ratios between males and females throughout Table 4-1 highlights the interaction between race and gender in the current model.

The largest difference in odds between males and females was observed for low selectivity private/non-sectarian 4-year colleges (black versus white), where the odds ratio for males (OR = 16.71) was over four times larger than that for females (OR = 3.88). The smallest negative effect observed indicates that Asian males (compared to white males) were 97.1% less likely to attend a low selectivity other religious 4-year college than a low selectivity public university, controlling for SAT scores.

In terms of non-significance, there were 22 (of the 76 possible) race category effects that were not significant for either gender. Overall, race and gender significantly affect a high-achieving student's acceptance outcomes when SAT scores are held constant (controlled for). The model including race, gender, and SAT displayed a significantly better fit than the SAT-only model ($X^2(171)$ 14991.28, $p \leq 0.001$). Viewed alternatively to

the current research question, the increase in model fit indicates that SAT does a significantly better job of predicting acceptance outcomes when race and gender are controlled for.

Table 4-1. Odds ratio for race by gender, controlling for SAT

	Odds Ratio (Female)	Odds Ratio (Male)
Private Uni. - VH: RACEGROUP Black vs White	9.274	21.314
Public 4yr Col. - L: RACEGROUP Black vs White	4.933	9.605
Private Uni. - VH: RACEGROUP Hispanic vs White	4.064	5.557
Priv./Nonsect. 4yr Col. - L: RACEGROUP Black vs White	3.875	16.712
Private Uni. - M: RACEGROUP Black vs White	3.161	3.615
Priv./Nonsect. 4yr Col. - VH: RACEGROUP Black vs White	2.752	6.206
Catholic 4yr Col. - L: RACEGROUP Asian vs White	0.473	0.230
Priv./Nonsect. 4yr Col. - H: RACEGROUP Asian vs White	0.473	0.425
Public 4yr Col. - H: RACEGROUP Asian vs White	0.383	0.298
Public Uni. - M: RACEGROUP Asian vs White	0.346	0.445
Priv./Nonsect. 4yr Col. - L: RACEGROUP Asian vs White	0.332	0.185
Priv./Nonsect. 4yr Col. - H: RACEGROUP Hispanic vs White	0.298	0.387
Other Relig. 4yr Col. - H: RACEGROUP Asian vs White	0.289	0.161
Public Uni. - M: RACEGROUP Hispanicvs White	0.285	0.278
Priv./Nonsect. 4yr Col. - M: RACEGROUP Asian vs White	0.276	0.251
Public 4yr Col. - M: RACEGROUP Asian vs White	0.266	0.384
Catholic 4yr Col. - H: RACEGROUP Hispanic vs White	0.254	0.394
Catholic 4yr Col. - H: RACEGROUP Asian vs White	0.237	0.255
Catholic 4yr Col. - M: RACEGROUP Asian vs White	0.193	0.078
Other Relig. 4yr Col. - M: RACEGROUP Hispanic vs White	0.188	0.053
Other Relig. 4yr Col. - M: RACEGROUP Asian vs White	0.113	0.130
Other Relig. 4yr Col. - L: RACEGROUP Asian vs White	0.051	0.029
Private Uni. - VH: RACEGROUP Asian vs White	1.798	
Public Uni. - H: RACEGROUP Other vs White	0.708	
Catholic 4yr Col. - L: RACEGROUP Other vs White	0.532	
Other Relig. 4yr Col. - L: RACEGROUP Other vs White	0.528	
Public 4yr Col. - H: RACEGROUP Other vs White	0.516	
Priv./Nonsect. 4yr Col. - H: RACEGROUP Other vs White	0.494	
Other Relig. 4yr Col. - H: RACEGROUP Other vs White	0.494	
Priv./Nonsect. 4yr Col. - M: RACEGROUP Other vs White	0.465	
Priv./Nonsect. 4yr Col. - L: RACEGROUP Other vs White	0.450	
Other Relig. 4yr Col. - L: RACEGROUP Black vs White	0.422	
Public 4yr Col. - M: RACEGROUP Other vs White	0.412	
Public Uni. - M: RACEGROUP Other vs White	0.409	
Catholic 4yr Col. - H: RACEGROUP Other vs White	0.407	
Public 4yr Col. - H: RACEGROUP Hispanic vs White	0.395	
Other Relig. 4yr Col. - M: RACEGROUP Black vs White	0.385	

Table 4-1. Continued

Effect	Odds Ratio (Female)	Odds Ratio (Male)
Public 4yr Col. - M: RACEGROUP Black vs White	0.354	
Public 4yr Col. - M: RACEGROUP Hispanic vs White	0.346	
Priv./Nonsect. 4yr Col. - M: RACEGROUP Black vs White	0.333	
Other Relig. 4yr Col. - M: RACEGROUP Other vs White	0.333	
Other Relig. 4yr Col. - H: RACEGROUP Hispanic vs White	0.331	
Catholic 4yr Col. - M: RACEGROUP Other vs White	0.307	
Priv./Nonsect. 4yr Col. - L: RACEGROUP Hispanic vs White	0.287	
Priv./Nonsect. 4yr Col. - M: RACEGROUP Hispanicvs White	0.241	
Other Relig. 4yr Col. - L: RACEGROUP Hispanic vs White	0.188	
Catholic 4yr Col. - H: RACEGROUP Black vs White	0.181	
Catholic 4yr Col. - M: RACEGROUP Black vs White	0.122	
Other Relig. 4yr Col. - VL: RACEGROUP Asian vs White	0.075	
Public Uni. - H: RACEGROUP Black vs White		3.332
Public 4yr Col. - L: RACEGROUP Hispanic vs White		2.311
Private Uni. - VH: RACEGROUP Other vs White		2.015
Private Uni. - H: RACEGROUP Asian vs White		0.661
Priv./Nonsect. 4yr Col. - VH: RACEGROUP Asian vs White		0.455

Note. "." indicates that a given odds ratio was not significantly different from 1.

RQ2 ACT

The global test for non-contribution of the predictors was significant ($X^2(190, n = 44909) = 10968.46$, $p \leq 0.001$), indicating that the ACT score, race, and gender do a significantly better job of predicting acceptance outcomes compared to an intercept-only model. A significant interaction effect between race and gender was observed and, therefore, was included in the model ($p \leq 0.001$). No predictor by covariate interactions were included (i.e., the ACT by gender and ACT by race interactions were excluded from the model). All main effects were significant ($p \leq 0.001$). However, not all category effects were significant. The odds ratios for race are provided by gender in Table 4-1.

From Table 4-2, we see that (compared to white females) Hispanic females were almost thirteen times more likely to attend a very high selectivity private university than a low selectivity public university, when controlling for ACT scores. On the other hand, Hispanic males (compared to white males), were over twenty-one times more likely to attend a very high selectivity private university than a low selectivity public university, when controlling for ACT scores. As was the case for the SAT, the magnitude and sign of the differences in odds ratios between males and females highlights the interaction between race and gender in the current model. While ten of the category effects were significantly positive for one or both of the genderes when controlling for SAT, twenty-nine were significantly positive when controlling for ACT. In terms of non-significance, however, there were 31 (of the 76 possible) race category effects that were not significantly different from 0 for either gender.

A few noteworthy differences can be inferred from Table 4-2. Black females (compared to white females) were roughly eight times more likely to attend a low selectivity Catholic 4-year college than a low selectivity public university, while black males were not significantly more or less likely than white males to make the same acceptance decision. Black males were roughly 88% less likely than white males to attend a medium selectivity private non-sectarian 4-year college (relative to the reference institution), while no significant difference was observed for females (for the same institutional comparison).

Table 4-2. Odds ratio for race by gender, controlling for ACT

Effect	Odds Ratio (Female)	Odds Ratio (Male)
Private Uni. - VH: RACEGROUP Hispanicvs White	12.884	21.413
Private Uni. - VH: RACEGROUP Black vs White	10.399	7.471
Priv./Nonsect. 4yr Col. - L: RACEGROUP Black vs White	9.082	14.395
Private Uni. - VH: RACEGROUP Asian vs White	6.295	4.143
Catholic 4yr Col. - L: RACEGROUP Asian vs White	4.351	8.798
Priv./Nonsect. 4yr Col. - VH: RACEGROUP Hispanic vs White	3.619	6.440
Private Uni. - H: RACEGROUP Hispanic vs White	3.608	6.054
Private Uni. - M: RACEGROUP Asian vs White	3.278	3.447
Public Uni. - H: RACEGROUP Hispanic vs White	3.241	5.693
Public 4yr Col. - L: RACEGROUP Black vs White	3.232	3.855
Catholic 4yr Col. - M: RACEGROUP Hispanic vs White	3.072	3.188
Private Uni. - M: RACEGROUP Hispanic vs White	2.986	4.933
Public Uni. - H: RACEGROUP Asian vs White	2.888	2.925
Private Uni. - VH: RACEGROUP Other vs White	2.872	2.540
Private Uni. - H: RACEGROUP Asian vs White	2.232	1.799
Priv./Nonsect. 4yr Col. - VH: RACEGROUP Black vs White	2.164	3.205
Private Uni. - H: RACEGROUP Other vs White	1.543	1.732
Private Uni. - M: RACEGROUP Other vs White	1.528	1.757
Public Uni. - M: RACEGROUP Other vs White	1.487	1.771
Public 4yr Col. - M: RACEGROUP Black vs White	0.603	0.503
Public 4yr Col. - M: RACEGROUP Asian vs White	0.400	0.278
Other Relig. 4yr Col. - M: RACEGROUP Black vs White	0.198	0.391
Catholic 4yr Col. - L: RACEGROUP Black vs White	8.102	
Catholic 4yr Col. - L: RACEGROUP Hispanic vs White	5.687	
Catholic 4yr Col. - L: RACEGROUP Other vs White	3.112	
Private Uni. - M: RACEGROUP Black vs White	2.793	
Priv./Nonsect. 4yr Col. - VH: RACEGROUP Asian vs White	2.444	
Priv./Nonsect. 4yr Col. - VH: RACEGROUP Other vs White	1.569	
Public Uni. - H: RACEGROUP Black vs White	1.518	
Public Uni. - M: RACEGROUP Other vs White	0.887	
Other Relig. 4yr Col. - M: RACEGROUP Other vs White	0.848	
Catholic 4yr Col. - M: RACEGROUP Other vs White	0.607	
Other Relig. 4yr Col. - L: RACEGROUP Black vs White	0.542	
Priv./Nonsect. 4yr Col. - H: RACEGROUP Black vs White	0.537	
Other Relig. 4yr Col. - H: RACEGROUP Black vs White	0.530	
Other Relig. 4yr Col. - M: RACEGROUP Asian vs White	0.520	
Public 4yr Col. - M: RACEGROUP Other vs White	0.493	

Table 4-2. Continued

Effect	Odds Ratio (Female)	Odds Ratio (Male)
Catholic 4yr Col. - H: RACEGROUP Black vs White	0.397	
Public 4yr Col. - M: RACEGROUP Hispanic vs White	0.376	
Other Relig. 4yr Col. - L: RACEGROUP Hispanic vs White	0.360	
Other Relig. 4yr Col. - L: RACEGROUP Asian vs White	0.174	
Public 4yr Col. - L: RACEGROUP Hispanic vs White		6.088
Public 4yr Col. - H: RACEGROUP Hispanic vs White		2.350
Catholic 4yr Col. - H: RACEGROUP Asian vs White		1.855
Priv./Nonsect. 4yr Col. - M: RACEGROUP Black vs White		0.121

Note. "." indicates that a given odds ratio was not significantly different from 1.

Overall, race and gender significantly affect a high-achieving student's acceptance outcomes when ACT scores are held constant (controlled for). The model including race, gender, and ACT displayed a significantly better fit than the ACT-only model ($X^2(171) = 12886$, $p \leq 0.001$). As was the case for SAT, the increase in model fit indicates that ACT does a significantly better job of predicting acceptance outcomes when race and gender are controlled for.

The results indicate that demographic characteristics (race and gender) play a significant role in the acceptance outcomes of high-achieving students, when controlling for test scores. The ACT model displayed a better model fit than the SAT model (AIC = 224660.13 vs. AIC = 246714.80, respectively). Thus, the model that controlled for ACT scores did a better job of predicting acceptance outcomes among high-achieving students than the model that controlled for SAT scores.

Research Question 3

Controlling for test scores, do parental demographics (household income and highest parental educational attainment) impact college acceptance

outcomes for high-achieving students? Two multinomial logistic regressions were conducted with acceptance outcome as the response variable and household income and highest parental educational attainment as the predictors. The first MLR controlled for SAT, while the second controlled for ACT. Low selectivity public universities were used as the reference category for the response variable. As mentioned above, household income and highest parental educational attainment were treated as continuous in the statistical procedures of this section.

RQ3 SAT

The global test for non-contribution of the predictors was significant ($X^2(76, n = 53863) = 13392.65$, $p \leq 0.001$), indicating that SAT score, household income, and highest parental educational attainment do a significantly better job of predicting acceptance outcome compared to an intercept-only model. A significant interaction effect between household income and highest parental educational attainment was observed and, therefore, included in the model (p 0.001). No predictor by covariate interactions were included (i.e., the SAT by household income and SAT by highest parental educational attainment interactions were excluded from the model). All main effects were significant ($p \leq 0.001$). However, not all comparison effects (the coefficients for each acceptance outcome relative to low selectivity public university for a given predictor) were significant. The odds ratios for highest parental educational attainment are provided by household income (at the lowest, most frequent, and highest income class values) in the following section.

From Table 4-3, we see that while several of the marginal odds ratios were significant, only one of them was more than 10% different from 1: students whose household income was less than ten thousand dollars per year were 10.3% more likely

to attend a medium selectivity other religious 4-year college (relative to a low selectivity public university) for each one-unit increase in highest parental educational attainment. For those in the lowest household income class, all of the odds ratios for other religious 4-year colleges were significantly greater than I , indicating that students in the lowest household income class were significantly more likely to attend an "other religious" 4-year college (of any selectivity) for each unit increase in highest parental educational attainment, when controlling for SAT scores. This increased likelihood appears to decrease for all levels of selectivity as household income increases (i.e., the odds ratios decrease across the rows of Table 4-3 corresponding to other religious 4-year colleges).

While the odds ratios for high and very high selectivity private universities were not significantly different from 1 for those in the lowest household income class, a significant increase was observed for those in the highest household income class. Those students in the highest household income class were 2.7% and 4.6% more likely to attend a high and very high selectivity private university (respectively and relative to the reference institution) for each one-unit increase in highest parental educational attainment. Thus, for a seven-unit increase (the difference between "Grammar School or Less" and "Graduate Degree"), students in the highest household income class were 20.5% and 37% more likely to attend a high and very high selectivity private university (respectively and relative to the reference institution), controlling for SAT scores.

Overall, parental demographics (household income and highest parental educational attainment) significantly affected a high-achieving student's acceptance outcomes when SAT scores are controlled for. The model, including parental demographics and SAT

Table 4-3. Odds ratios for highest parental attainment by household income, controlled for SAT

Effect	Odds Ratio (<10k)	Odds Ratio (100-149.9k)	Odds Ratio (>250k)
Other Relig. 4yr Col. - M: PARENT_EDU	1.103	1.035	1.015
Other Relig. 4yr Col. - L: PARENT_EDU	1.093	1.046	1.032
Other Relig. 4yr Col. - VL: PARENT_EDU	1.066	1.010	0.994
Priv./Nonsect. 4yr Col. - M: PARENT_EDU	1.044	0.980	0.962
Catholic 4yr Col. - L: PARENT_EDU	1.024	0.953	0.933
Public Uni.- M: PARENT_EDU	0.966	1.021	1.038
Public 4yr Col. - L: PARENT_EDU	0.942	0.945	0.947
Priv./Nonsect. 4yr Col. - L: PARENT_EDU	0.933	0.999	1.020
Public 4yr Col. - H: PARENT_EDU	0.926	1.003	1.027
Catholic 4yr Col. - M: PARENT_EDU	0.923	0.967	0.981
Other Relig. 4yr Col. - H: PARENT_EDU	1.020		
Catholic 4yr Col. - H: PARENT_EDU	1.001	1.055	
Public 4yr Col. - M: PARENT_EDU	0.985	0.936	
Priv./Nonsect. 4yr Col. - H: PARENT_EDU	0.982	1.060	
Priv./Nonsect. 4yr Col. - VH: PARENT_EDU		1.029	
Private Uni. - H: PARENT_EDU		0.974	1.027
Private Uni. - VH: PARENT_EDU			1.046
Public Uni.- H: PARENT_EDU			0.988
Private Uni. - M: PARENT_EDU			0.945

scores displayed a significantly better fit than the SAT-only model ($X^2(57) = 23800.28$, $p \leq 0.001$). This increase in model fit indicates that the SAT does a significantly better job of predicting acceptance outcomes when parental demographics are controlled for. The

interactions between SAT and parental demographics were not included in the model above, as their inclusion would make interpretation more difficult. Additionally, all of the comparison effects for the SAT by household income and SAT by highest parental educational attainment interaction effects were virtually zero, indicating that the inclusion of these interaction terms would not have added much value to the current discussion.

RQ3 ACT

The global test for non-contribution of the predictors was significant ($X^2(76, n = 42751) = 8890.76$, $p \leq 0.001$), indicating that ACT score, household income, and highest parental educational attainment do a significantly better job of predicting acceptance outcome compared to an intercept-only model. A significant interaction effect between household income and highest parental educational was observed and, therefore, included in the model ($p \leq 0.001$). No predictor by covariate interactions were included (i.e., the ACT by household income and ACT by highest parental educational attainment interactions were excluded from the model). All main effects were significant ($p \leq 0.001$). However, not all comparison effects were significant. The odds ratios for highest parental educational attainment are provided by household income (at the lowest, most frequent, and highest income class values) on the following page.

From Table 4-4, we see that more than half of the marginal odds ratios were non-significant (for the income classes included in the table). Further, none of the marginal odds ratios were more than 10% different from 1. The largest positive effect indicates that students in the highest household income class were 10% more likely to attend a very low selectivity other religious 4-year college (relative to a low selectivity public university) for each one-unit increase in highest parental educational attainment.

Conversely to the relationship observed for very low selectivity Other religious 4-year colleges in the SAT- controlled model, the odds ratios appear to increase as income values increase, when ACT scores are controlled for. This reversal of the direction of the highest parental educational attainment odds ratios across the different household income values may be due to the stronger predictor by covariate interaction effects in the ACT model (relative to the SAT model), which were excluded (after much consideration) from the analysis due to the potential for interpretation issues and overall understanding.

More than half of the response levels (labeled "Effect" in Table 4-4) saw no significant difference at one or more of the household income values provided (the lowest, most frequent, and highest). In other words, the overall strength of the interaction between household income and highest parental educational attainment was lower when controlling for ACT scores, than when the SAT score was controlled for. The magnitude of the overall main and interaction effects was greater for SAT than ACT: household income (X^2 = 690.21 vs. X^2 = 411.47), highest parental educational attainment (X^2 = 496.78 vs. X^2 = 312.53), and their interaction (X^2 = 774.36 vs. X^2 = 612.06). However, the overall model fit was better for ACT (AIC = 215215.63) than SAT (AIC = 237677.80).

Overall, parental demographics (household income and highest parental educational attainment) significantly affected a high-achieving student's acceptance outcome when ACT scores were controlled for. The model, including parental demographics and ACT. displayed a significantly better fit than the ACT-only model (X^2

(57) = 22102.5, p ≤ 0.001). This increase in model fit indicates that ACT does a significantly better job of

Table 4-4. Odds ratios for highest parental attainment by household income, controlled for ACT

Effect	Odds Ratio (<10k)	Odds Ratio (100-149.9k)	Odds Ratio (>250k)
Public 4yr Col. - M: PARENT_EDU	1.064	1.019	1.005
Other Relig. 4yr Col. - VL: PARENT_EDU	0.978	1.071	1.100
Public 4yr Col. - L: PARENT_EDU	0.933	0.948	0.952
Catholic 4yr Col. - L: PARENT_EDU	0.879	1.010	1.053
Priv./Nonsect. 4yr Col. - L: PARENT_EDU	1.091		
Priv./Nonsect. 4yr Col. - M: PARENT_EDU	1.032	1.048	
Catholic 4yr Col. - M: PARENT_EDU	0.988	0.954	
Public 4yr Col. - H: PARENT_EDU	0.968	1.033	
Catholic 4yr Col. - H: PARENT_EDU	0.951	1.051	
Private Uni. - VH: PARENT_EDU		1.042	
Public Uni.- H: PARENT_EDU		1.022	
Private Uni. - M: PARENT_EDU		1.015	
Other Relig. 4yr Col. - H: PARENT_EDU			
Other Relig. 4yr Col. - L: PARENT_EDU			
Other Relig. 4yr Col. - M: PARENT_EDU			
Priv./Nonsect. 4yr Col. - H: PARENT_EDU			
Priv./Nonsect. 4yr Col. - VH: PARENT_EDU			
Private Uni. - H: PARENT_EDU			
Public Uni.- M: PARENT_EDU			

predicting acceptance outcomes when parental demographics are controlled for. The interactions between ACT and parental demographics, while stronger than those between SAT and parental demographics, were not included in the model above, as their inclusion would make interpretation more difficult. While some of the comparison effects were significantly different from 0 for the ACT by highest parental educational attainment interaction (especially among the high and very high selectivity institutions), all interactions between parental demographics and ACT were excluded from the current analyses for the sake of clarity.

Limitations

The responses to The Freshman Survey were self-reported. Therefore, any analyses conducted on such information makes the inherent assumption that the students responded honestly and that the responses are true. The current study defined a high-achieving student as one with a self-reported high school GPA of "A or A+" Differences in GPA within this range may account for some of the differences observed in this study. Two of the predictors (household income and highest parental educational attainment) were ordinal in nature, and as such, their treatment within certain statistical modeling procedures is not as clearly defined as for nominal or interval variables. Many educational researchers claim that if the number of categories is larger than, say, 5, then one is justified in using such a variable as though it were an interval (or ratio).

Others claim that ordinal variables should be treated as categorical, to avoid any additional assumptions. Recoding household income into a variable with fewer categories was not possible, as information on the size of a student's household was not available. Further, the use of percentile-based recoding was avoided due to the rather large number of ties in household income. To determine the appropriateness

(with respect to information gain/loss) of treating household income and highest parental education as continuous predictors, models treating these predictors as categorical were compared to the same models treating these predictors as continuous. No significant differences were observed between the continuous and categorical runs of the models. Therefore, household income and highest parental education were treated as continuous. Lastly, the mechanisms governing the relations between the variables of interest may have changed drastically in the past twelve years. As such, any sequential generalizations should be approached with caution.

Concerning the sample, a few important limitations are explained. First, due to the fact that the participating institutions (and their participating students) were not chosen at random, the sampling method of the HERI Freshman Survey essentially falls into the category of non-probability sampling (more specifically, voluntary response sampling). While it may be logical to assume that the students at non-participating institutions did not differ from those at participating institutions in any meaningful way, it is not quite as easy to assume that the students who chose to respond to the survey were the same as those who chose not to respond. Secondly, the high-achieving student sample utilized in the current study was large (over 100k). As such, more importance should be placed on effect sizes, rather than p-values, when interpreting the results. The interpretation of p-values, in light of large sample sizes, is an issue that is well documented, but not generally well understood.

CHAPTER 5
DISCUSSION AND RECOMMENDATIONS

Implication of the Findings

Significant differences in acceptance outcomes were observed among the high-achieving student sample. While the students in this sample are identical with respect to high school GPA, the differences they experienced in acceptance outcomes based on test scores (SAT and ACT) were significant: higher scores were associated with an increased likelihood of acceptance to more selective institutions. In other words, a student's score on a standardized examination related to their chances of attending a more selective institution. There were also identifiable differences in acceptance outcomes due to the demographic characteristics of gender and race. Students who were wealthy, or White and/or Asian, were significantly more likely to be accepted at a selective four-year college.

Controlling for test scores and (by design) high school GPA, certain students were more or less likely to attend certain institutions based on whether they were male vs. female, Black vs. White, Hispanic vs. Black, etc. Some of these differences could have been due to the low representation of certain race groups at certain institutions (i.e., an institution may more readily admit a member of an underprivileged race group). However, such policies do not account for the differences between males and females observed in Tables 4-1 and 4-2. The independent variables utilized in this study were selected on the basis of their relevance to the underlying research questions. The inclusion or exclusion of other variables or responses may or may not have skewed the results, and as such further studies using the HERI Freshman Survey variables may yield more specific outcomes.

Lastly, there are the differences in acceptance outcomes based on parental demographics of household income and highest parental educational attainment. While statistically significant, these differences were not as clearly defined as those observed for other characteristics. While increases in highest parental educational attainment were associated with an increased likelihood of attending the most selective institutions of the study (very high selectivity private universities) for students whose household income was greater than 250k per year, such increases were not observed for all household income values. Additionally, the study did not examine the implications of those students who were living with one rather than both parents, and the impact this had on postsecondary acceptance. Practitioners should keep in mind several things when interpreting the results of the current study: some students may have been accepted to a more selective institution, but chose not to attend due to the cost or the distance from their parents' home; some institutions are male- or female-only; and some responses may not have been entirely truthful. In spite of these potential issues, the current study indicates that a relationship exists between standardized test scores and the race, gender, and parental demographics of a high-achieving student. The differences identified in this study warrant additional examination to provide more definitive insight on how standardized testing differences ultimately impact postsecondary acceptance outcomes, and is intended to be the beginning of a dialogue about how standardized testing and demographic variables are interrelated, and how these metrics are utilized by high school and college admissions leaders, professional organizations, and research institutions. This research effort may be critical to understanding the relationship between race, gender, parental demographics and the

stratification of higher education, paving the road toward a more consistent set of admissions standards and practices that promote equitable access to all institutions for an increasingly diverse student population.

Recommendations for Future Research

The manner in which postsecondary institutions evaluate potential applicants has shifted very little in the past half-century. The results of this study indicate that the way selective colleges and universities make determinations about who to admit is still primarily based on high school grades and standardized test scores. While these cognitive demographics are significant, they cannot fully predict a student's career success, academic achievement, college persistence, campus contributions, and ultimate success down the road. This study clearly merits further examination relating to the relationship between race, ethnicity, gender and parental demographics and college acceptance outcomes. Additionally,further research exploration into the utilization and development of assessments that examine non-cognitive qualities, such as creativity, determination, problem-solving skills, interpersonal ability, emotional intelligence and grit, would yield promising results to innovate the state of college admissions. In an ever-evolving world that isn't primarily centered around percentages, criteria, and data points, further research on the creation of structured admissions processes that identify leadership, teamwork, and general success traits may provide more equitable and diverse populations matriculating to college campuses.

APPENDIX A
2006 CRP FRESHMAN SURVEY

PLEASE PRINT NAME AND PERMANENT/HOME ADDRESS (one letter or number per box)

NAME: FIRST MI LAST

ADDRESS:

CITY: STATE: ZIP: PHONE: – –

When were you born? Month (01-12) Day (01-31) Year

2006 CIRP FRESHMAN SURVEY

MARKING DIRECTIONS

Your responses will be read by an optical mark reader. Please,

- Use a pencil or black or blue pen.
- Fill in the oval completely.
- Erase cleanly any answer you wish to change or "X" out mark if in pen.

CORRECT MARK INCORRECT MARKS

PLEASE PROVIDE YOUR ID NUMBER (as instructed) | Mark here if directed | GROUP CODE A | GROUP CODE B

1. Your sex: ○ Male ○ Female

2. How old will you be on December 31 of this year? (Mark one)
16 or younger ○ 21-24 ○
17 ○ 25-29 ○
18 ○ 30-39 ○
19 ○ 40-54 ○
20 ○ 55 or older ○

3. Is English your native language?
○ Yes ○ No

4. In what year did you graduate from high school? (Mark one)
2006 ○ Did not graduate but passed G.E.D. test ○
2005 ○
2004 ○ Never completed high school ○
2003 or earlier ○

5. Are you enrolled (or enrolling) as a: (Mark one)
Full-time student? ○
Part-time student? ○

6. How many miles is this college from your permanent home? (Mark one)
5 or less ○ 11-50 ○ 101-500 ○
6-10 ○ 51-100 ○ Over 500 ○

7. What was your average grade in high school? (Mark one)
A or A+ ○ B ○ C ○
A– ○ B– ○ D ○
B+ ○ C+ ○

8. What were your scores on the SAT I and/or ACT?
SAT VERBAL
SAT MATH
ACT Composite

9. Citizenship status:
○ U.S. citizen
○ Permanent resident (green card)
○ Neither

10. Prior to this term, have you ever taken courses for credit at this institution?
○ Yes ○ No

11. Since leaving high school, have you ever taken courses, whether for credit or not for credit, at any other institution (university, 4- or 2-year college, technical, vocational, or business school)?
○ Yes ○ No

12. Where do you plan to live during the fall term? (Mark one)
With my family or other relatives ○
Other private home, apartment, or room ○
College residence hall ○
Fraternity or sorority house ○
Other campus student housing ○
Other ○

13. Is this college your: (Mark one)
First choice? ○
Second choice? ○ Less than third choice? ○
Third choice? ○

14. If this college was not your first choice, were you accepted by your first choice college?
○ Yes ○ No

15. To how many colleges other than this one did you apply for admission this year?
None ○ 1 ○ 4 ○ 7-10 ○
2 ○ 5 ○ 11 or more ○
3 ○ 6 ○

16. Are your parents: (Mark one)
Both alive and living with each other? ○
Both alive, divorced or living apart? ○
One or both deceased? ○

17. During high school (grades 9-12) how many years did you study each of the following subjects? (Mark one for each item)

	None	1/2	1	2	3	4	5 or more
English	○	○	○	○	○	○	○
Mathematics	○	○	○	○	○	○	○
Foreign Language	○	○	○	○	○	○	○
Physical Science	○	○	○	○	○	○	○
Biological Science	○	○	○	○	○	○	○
History/Am. Govt.	○	○	○	○	○	○	○
Computer Science	○	○	○	○	○	○	○
Arts and/or Music	○	○	○	○	○	○	○

18. How many Advanced Placement courses or exams did you take in high school? (Mark one in each row)

	Not offered at my high school	None	1-4	5-9	10-14	15+
AP Courses	○	○	○	○	○	○
AP Exams	○	○	○	○	○	○

19. What is the highest academic degree that you intend to obtain? (Mark one in each column)

	Highest Planned	Highest Planned At This College
None	○	○
Vocational certificate	○	○
Associate (A.A. or equivalent)	○	○
Bachelor's degree (B.A., B.S., etc.)	○	○
Master's degree (M.A., M.S., etc.)	○	○
Ph.D. or Ed.D.	○	○
M.D., D.O., D.D.S., or D.V.M.	○	○
J.D. (Law)	○	○
B.D. or M.DIV. (Divinity)	○	○
Other	○	○

20. How would you describe the racial composition of the high school you last attended and the neighborhood where you grew up? (Mark one in each row)

	Completely Non-White	Mostly Non-White	Roughly Half Non-White	Mostly White	Completely White
High school I last attended	○	○	○	○	○
Neighborhood where I grew up	○	○	○	○	○

21. Did either of your parents or legal guardians attend the institution that you are now attending?
○ Neither
○ Mother or female legal guardian only
○ Father or male legal guardian only
○ Both

- 1 -

22. How much of your first year's educational expenses (room, board, tuition, and fees) do you expect to cover from each of the sources listed below? (Mark one answer for each possible source)

	None	Less than $1,000	$1,000 to 2,999	$3,000 to 5,999	$6,000 to 9,999	over $10,000
a. My Own or Family Resources						
Parents, other relatives or friends	○	○	○	○	○	○
Spouse	○	○	○	○	○	○
Savings from summer work	○	○	○	○	○	○
Other savings	○	○	○	○	○	○
Part-time job on campus	○	○	○	○	○	○
Part-time job off campus	○	○	○	○	○	○
Full-time job while in college	○	○	○	○	○	○
b. Aid Which Need Not Be Repaid						
Pell Grant	○	○	○	○	○	○
Supplemental Educational Opportunity Grant	○	○	○	○	○	○
State Scholarship or Grant						
Merit-based	○	○	○	○	○	○
Need-based	○	○	○	○	○	○
College Work-Study Grant	○	○	○	○	○	○
College Grant/Scholarship (other than above)	○	○	○	○	○	○
Other private grant	○	○	○	○	○	○
Government Aid						
GI military benefits	○	○	○	○	○	○
ROTC	○	○	○	○	○	○
Other Government Aid	○	○	○	○	○	○
c. Aid Which Must Be Repaid						
Stafford Loan (GSL)	○	○	○	○	○	○
Perkins Loan	○	○	○	○	○	○
Other College Loan	○	○	○	○	○	○
Other Loan	○	○	○	○	○	○
d. Other Than Above	○	○	○	○	○	○

23. How many individuals in your household are dependent on your parents for financial support? (Include yourself and your parents)

○ 1 ○ 4
○ 2 ○ 5
○ 3 ○ 6 or more

24. What is your best estimate of your parents' total income last year? Consider income from all sources before taxes. (Mark one)

○ Less than $10,000 ○ $50,000-59,999
○ $10,000-14,999 ○ $60,000-74,999
○ $15,000-19,999 ○ $75,000-99,999
○ $20,000-24,999 ○ $100,000-149,999
○ $25,000-29,999 ○ $150,000-199,999
○ $30,000-39,999 ○ $200,000-249,999
○ $40,000-49,999 ○ $250,000 or more

25. Do you have any concern about your ability to finance your college education? (Mark one)

None (I am confident that I will have sufficient funds) ○
Some (but I probably will have enough funds) ○
Major (not sure I will have enough funds to complete college) ○

26. Current religious preference: (Mark one in each column)

	Yours	Father's	Mother's
Baptist	Ⓐ	Ⓐ	Ⓐ
Buddhist	Ⓑ	Ⓑ	Ⓑ
Church of Christ	Ⓒ	Ⓒ	Ⓒ
Eastern Orthodox	Ⓓ	Ⓓ	Ⓓ
Episcopalian	Ⓔ	Ⓔ	Ⓔ
Hindu	Ⓕ	Ⓕ	Ⓕ
Islamic	Ⓖ	Ⓖ	Ⓖ
Jewish	Ⓗ	Ⓗ	Ⓗ
LDS (Mormon)	Ⓘ	Ⓘ	Ⓘ
Lutheran	Ⓙ	Ⓙ	Ⓙ
Methodist	Ⓚ	Ⓚ	Ⓚ
Presbyterian	Ⓛ	Ⓛ	Ⓛ
Quaker	Ⓜ	Ⓜ	Ⓜ
Roman Catholic	Ⓝ	Ⓝ	Ⓝ
Seventh Day Adventist	Ⓞ	Ⓞ	Ⓞ
United Church of Christ/ Congregational	Ⓟ	Ⓟ	Ⓟ
Other Christian	Ⓠ	Ⓠ	Ⓠ
Other Religion	Ⓡ	Ⓡ	Ⓡ
None	Ⓢ	Ⓢ	Ⓢ

27. For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark Ⓕ. If you engaged in an activity one or more times, but not frequently, mark Ⓞ (Occasionally). Mark Ⓝ (Not at all) if you have not performed the activity during the past year. (Mark one for each item)

	Frequently	Occasionally	Not at all
Attended a religious service	Ⓐ	Ⓑ	Ⓒ
Was bored in class	Ⓐ	Ⓑ	Ⓒ
Participated in organized demonstrations	Ⓐ	Ⓑ	Ⓒ
Tutored another student	Ⓐ	Ⓑ	Ⓒ
Studied with other students	Ⓐ	Ⓑ	Ⓒ
Was a guest in a teacher's home	Ⓐ	Ⓑ	Ⓒ
Smoked cigarettes	Ⓐ	Ⓑ	Ⓒ
Drank beer	Ⓐ	Ⓑ	Ⓒ
Drank wine or liquor	Ⓐ	Ⓑ	Ⓒ
Felt overwhelmed by all I had to do	Ⓐ	Ⓑ	Ⓒ
Felt depressed	Ⓐ	Ⓑ	Ⓒ
Performed volunteer work	Ⓐ	Ⓑ	Ⓒ
Played a musical instrument	Ⓐ	Ⓑ	Ⓒ
Asked a teacher for advice after class	Ⓐ	Ⓑ	Ⓒ
Voted in a student election	Ⓐ	Ⓑ	Ⓒ
Socialized with someone of another racial/ethnic group	Ⓐ	Ⓑ	Ⓒ
Came late to class	Ⓐ	Ⓑ	Ⓒ
Used the Internet:			
For research or homework	Ⓐ	Ⓑ	Ⓒ
To read news sites	Ⓐ	Ⓑ	Ⓒ
To read blogs	Ⓐ	Ⓑ	Ⓒ
Performed community service as part of a class	Ⓐ	Ⓑ	Ⓒ
Discussed religion	Ⓐ	Ⓑ	Ⓒ
Discussed politics	Ⓐ	Ⓑ	Ⓒ
Read a newspaper for:			
National and global news	Ⓐ	Ⓑ	Ⓒ
Local news and information	Ⓐ	Ⓑ	Ⓒ
Schoolwork	Ⓐ	Ⓑ	Ⓒ

28. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. (Mark one in each row)

	Highest 10%	Above Average	Average	Below Average	Lowest 10%
Academic ability	○	○	○	○	○
Artistic ability	○	○	○	○	○
Computer skills	○	○	○	○	○
Cooperativeness	○	○	○	○	○
Creativity	○	○	○	○	○
Drive to achieve	○	○	○	○	○
Emotional health	○	○	○	○	○
Leadership ability	○	○	○	○	○
Mathematical ability	○	○	○	○	○
Physical health	○	○	○	○	○
Public speaking ability	○	○	○	○	○
Religiousness	○	○	○	○	○
Self-confidence (intellectual)	○	○	○	○	○
Self-confidence (social)	○	○	○	○	○
Self-understanding	○	○	○	○	○
Spirituality	○	○	○	○	○
Understanding of others	○	○	○	○	○
Writing ability	○	○	○	○	○

29. What is the highest level of formal education obtained by your parents? (Mark one in each column)

	Father	Mother
Grammar school or less	○	○
Some high school	○	○
High school graduate	○	○
Postsecondary school other than college	○	○
Some college	○	○
College degree	○	○
Some graduate school	○	○
Graduate degree	○	○

30. In deciding to go to college, how important to you was each of the following reasons? (Mark one answer for each possible reason)

	Very Important	Somewhat Important	Not Important
My parents wanted me to go	Ⓐ	Ⓑ	Ⓒ
I could not find a job	Ⓐ	Ⓑ	Ⓒ
Wanted to get away from home	Ⓐ	Ⓑ	Ⓒ
To be able to get a better job	Ⓐ	Ⓑ	Ⓒ
To gain a general education and appreciation of ideas	Ⓐ	Ⓑ	Ⓒ
There was nothing better to do	Ⓐ	Ⓑ	Ⓒ
To make me a more cultured person	Ⓐ	Ⓑ	Ⓒ
To be able to make more money	Ⓐ	Ⓑ	Ⓒ
To learn more about things that interest me	Ⓐ	Ⓑ	Ⓒ
To prepare myself for graduate or professional school	Ⓐ	Ⓑ	Ⓒ
A mentor/role model encouraged me to go	Ⓐ	Ⓑ	Ⓒ
To get training for a specific career	Ⓐ	Ⓑ	Ⓒ

31. Mark only three responses, one in each column.

Ⓜ Your mother's occupation
Ⓕ Your father's occupation
Ⓣ Your probable career occupation

NOTE: If your father or mother is deceased, please indicate his or her last occupation.

	Ⓣ	Ⓕ	Ⓜ
Accountant or actuary	Ⓣ	Ⓕ	Ⓜ
Actor or entertainer	Ⓣ	Ⓕ	Ⓜ
Architect or urban planner	Ⓣ	Ⓕ	Ⓜ
Artist	Ⓣ	Ⓕ	Ⓜ
Business (clerical)	Ⓣ	Ⓕ	Ⓜ
Business executive (management, administrator)	Ⓣ	Ⓕ	Ⓜ
Business owner or proprietor	Ⓣ	Ⓕ	Ⓜ
Business salesperson or buyer	Ⓣ	Ⓕ	Ⓜ
Clergy (minister, priest)	Ⓣ	Ⓕ	Ⓜ
Clergy (other religious)	Ⓣ	Ⓕ	Ⓜ
Clinical psychologist	Ⓣ	Ⓕ	Ⓜ
College administrator/staff	Ⓣ	Ⓕ	Ⓜ
College teacher	Ⓣ	Ⓕ	Ⓜ
Computer programmer or analyst	Ⓣ	Ⓕ	Ⓜ
Conservationist or forester	Ⓣ	Ⓕ	Ⓜ
Dentist (including orthodontist)	Ⓣ	Ⓕ	Ⓜ
Dietitian or nutritionist	Ⓣ	Ⓕ	Ⓜ
Engineer	Ⓣ	Ⓕ	Ⓜ
Farmer or rancher	Ⓣ	Ⓕ	Ⓜ
Foreign service worker (including diplomat)	Ⓣ	Ⓕ	Ⓜ
Homemaker (full-time)	Ⓣ	Ⓕ	Ⓜ
Interior decorator (including designer)	Ⓣ	Ⓕ	Ⓜ
Lab technician or hygienist	Ⓣ	Ⓕ	Ⓜ
Law enforcement officer	Ⓣ	Ⓕ	Ⓜ
Lawyer (attorney) or judge	Ⓣ	Ⓕ	Ⓜ
Military service (career)	Ⓣ	Ⓕ	Ⓜ
Musician (performer, composer)	Ⓣ	Ⓕ	Ⓜ
Nurse	Ⓣ	Ⓕ	Ⓜ
Optometrist	Ⓣ	Ⓕ	Ⓜ
Pharmacist	Ⓣ	Ⓕ	Ⓜ
Physician	Ⓣ	Ⓕ	Ⓜ
Policymaker/Government	Ⓣ	Ⓕ	Ⓜ
School counselor	Ⓣ	Ⓕ	Ⓜ
School principal or superintendant	Ⓣ	Ⓕ	Ⓜ
Scientific researcher	Ⓣ	Ⓕ	Ⓜ
Social, welfare, or recreation worker	Ⓣ	Ⓕ	Ⓜ
Therapist (physical, occupational, speech)	Ⓣ	Ⓕ	Ⓜ
Teacher or administrator (elementary)	Ⓣ	Ⓕ	Ⓜ
Teacher or administrator (secondary)	Ⓣ	Ⓕ	Ⓜ
Veterinarian	Ⓣ	Ⓕ	Ⓜ
Writer or journalist	Ⓣ	Ⓕ	Ⓜ
Skilled trades	Ⓣ	Ⓕ	Ⓜ
Laborer (unskilled)	Ⓣ	Ⓕ	Ⓜ
Semi-skilled worker	Ⓣ	Ⓕ	Ⓜ
Unemployed	Ⓣ	Ⓕ	Ⓜ
Other	Ⓣ	Ⓕ	Ⓜ
Undecided	Ⓣ		

32. Mark one in each row:

① Disagree Strongly
② Disagree Somewhat
③ Agree Somewhat
④ Agree Strongly

	④	③	②	①
There is too much concern in the courts for the rights of criminals	④	③	②	①
Abortion should be legal	④	③	②	①
The death penalty should be abolished	④	③	②	①
Marijuana should be legalized	④	③	②	①
It is important to have laws prohibiting homosexual relationships	④	③	②	①
Racial discrimination is no longer a major problem in America	④	③	②	①
Realistically, an individual can do little to bring about changes in our society	④	③	②	①
Wealthy people should pay a larger share of taxes than they do now	④	③	②	①
Same-sex couples should have the right to legal marital status	④	③	②	①
Affirmative action in college admissions should be abolished	④	③	②	①
Federal military spending should be increased	④	③	②	①
The federal government should do more to control the sale of handguns	④	③	②	①
Only volunteers should serve in the armed forces	④	③	②	①
The federal government is not doing enough to control environmental pollution	④	③	②	①
A national health care plan is needed to cover everybody's medical costs	④	③	②	①
Undocumented immigrants should be denied access to public education	④	③	②	①
Through hard work, everybody can succeed in American society	④	③	②	①
Dissent is a critical component of the political process	④	③	②	①
Colleges have the right to ban extreme speakers from campus	④	③	②	①
The chief benefit of a college education is that it increases one's earning power	④	③	②	①
The federal government should raise taxes to reduce the deficit	④	③	②	①

33. During your last year in high school, how much time did you spend during a typical week doing the following activities?

Hours per week:	None	Less than 1 hour	1-2	3-5	6-10	11-15	16-20	Over 20
Studying/homework	○	○	○	○	○	○	○	○
Socializing with friends	○	○	○	○	○	○	○	○
Talking with teachers outside of class	○	○	○	○	○	○	○	○
Exercise or sports	○	○	○	○	○	○	○	○
Partying	○	○	○	○	○	○	○	○
Working (for pay)	○	○	○	○	○	○	○	○
Volunteer work	○	○	○	○	○	○	○	○
Student clubs/groups	○	○	○	○	○	○	○	○
Watching TV	○	○	○	○	○	○	○	○
Household/childcare duties	○	○	○	○	○	○	○	○
Reading for pleasure	○	○	○	○	○	○	○	○
Playing video/computer games	○	○	○	○	○	○	○	○

34. Are you: (Mark all that apply)

- White/Caucasian ○
- African American/Black ○
- American Indian/Alaska Native ○
- Asian American/Asian ○
- Native Hawaiian/Pacific Islander ○
- Mexican American/Chicano ○
- Puerto Rican ○
- Other Latino ○
- Other ○

35. How would you characterize your political views? (Mark one)

- ○ Far left
- ○ Liberal
- ○ Middle-of-the-road
- ○ Conservative
- ○ Far right

36. Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here? (Mark one answer for each possible reason)

	Very important	Somewhat important	Not important
My relatives wanted me to come here	Ⓥ	Ⓢ	Ⓝ
My teacher advised me	Ⓥ	Ⓢ	Ⓝ
This college has a very good academic reputation	Ⓥ	Ⓢ	Ⓝ
This college has a good reputation for its social activities	Ⓥ	Ⓢ	Ⓝ
I was offered financial assistance	Ⓥ	Ⓢ	Ⓝ
The cost of attending this college	Ⓥ	Ⓢ	Ⓝ
High school counselor advised me	Ⓥ	Ⓢ	Ⓝ
Private college counselor advised me	Ⓥ	Ⓢ	Ⓝ
I wanted to live near home	Ⓥ	Ⓢ	Ⓝ
Not offered aid by first choice	Ⓥ	Ⓢ	Ⓝ
Could not afford first choice	Ⓥ	Ⓢ	Ⓝ
This college's graduates gain admission to top graduate/professional schools	Ⓥ	Ⓢ	Ⓝ
This college's graduates get good jobs	Ⓥ	Ⓢ	Ⓝ
I was attracted by the religious affiliation/orientation of the college	Ⓥ	Ⓢ	Ⓝ
I wanted to go to a school about the size of this college	Ⓥ	Ⓢ	Ⓝ
Rankings in national magazines	Ⓥ	Ⓢ	Ⓝ
Information from a website	Ⓥ	Ⓢ	Ⓝ
I was admitted through an Early Action or Early Decision program	Ⓥ	Ⓢ	Ⓝ
The athletic department recruited me	Ⓥ	Ⓢ	Ⓝ
A visit to the campus	Ⓥ	Ⓢ	Ⓝ

37. Below is a list of different undergraduate major fields grouped into general categories. Mark only one oval to indicate your probable field of study.

ARTS AND HUMANITIES
- Art, fine and applied (1)
- English (language and literature) (2)
- History (3)
- Journalism (4)
- Language and Literature (except English) (5)
- Music (6)
- Philosophy (7)
- Speech (8)
- Theater or Drama (9)
- Theology or Religion (10)
- Other Arts and Humanities (11)

BIOLOGICAL SCIENCE
- Biology (general) (12)
- Biochemistry or Biophysics (13)
- Botany (14)
- Environmental Science (15)
- Marine (Life) Science (16)
- Microbiology or Bacteriology (17)
- Zoology (18)
- Other Biological Science (19)

BUSINESS
- Accounting (20)
- Business Admin. (general) (21)
- Finance (22)
- International Business (23)
- Marketing (24)
- Management (25)
- Secretarial Studies (26)
- Other Business (27)

EDUCATION
- Business Education (28)
- Elementary Education (29)
- Music or Art Education (30)
- Physical Education or Recreation (31)
- Secondary Education (32)
- Special Education (33)
- Other Education (34)

ENGINEERING
- Aeronautical or Astronautical Eng (35)
- Civil Engineering (36)
- Chemical Engineering (37)
- Computer Engineering (38)
- Electrical or Electronic Engineering (39)
- Industrial Engineering (40)
- Mechanical Engineering (41)
- Other Engineering (42)

PHYSICAL SCIENCE
- Astronomy (43)
- Atmospheric Science (incl. Meteorology) (44)
- Chemistry (45)
- Earth Science (46)
- Marine Science (incl. Oceanography) (47)
- Mathematics (48)
- Physics (49)
- Statistics (50)
- Other Physical Science (51)

PROFESSIONAL
- Architecture or Urban Planning (52)
- Family & Consumer Sciences (53)
- Health Technology (medical, dental, laboratory) (54)
- Library or Archival Science (55)
- Medicine, Dentistry, Veterinary Medicine (56)
- Nursing (57)
- Pharmacy (58)
- Therapy (occupational, physical, speech) (59)
- Other Professional (60)

SOCIAL SCIENCE
- Anthropology (61)
- Economics (62)
- Ethnic Studies (63)
- Geography (64)
- Political Science (gov't., international relations) (65)
- Psychology (66)
- Social Work (67)
- Sociology (68)
- Women's Studies (69)
- Other Social Science (70)

TECHNICAL
- Building Trades (71)
- Data Processing or Computer Programming (72)
- Drafting or Design (73)
- Electronics (74)
- Machanics (75)
- Other Technical (76)

OTHER FIELDS
- Agriculture (77)
- Communications (78)
- Computer Science (79)
- Forestry (80)
- Kinasiology (81)
- Law Enforcement (82)
- Military Science (83)
- Other Field (84)
- Undecided (85)

DO NOT WRITE IN THIS AREA

38. Please indicate the importance to you personally of each of the following: (Mark one for each item)

(1) Not Important (2) Somewhat Important (3) Very Important (4) Essential

	1	2	3	4
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	1	2	3	4
Becoming an authority in my field	1	2	3	4
Obtaining recognition from my colleagues for contributions to my special field	1	2	3	4
Influencing the political structure	1	2	3	4
Influencing social values	1	2	3	4
Raising a family	1	2	3	4
Having administrative responsibility for the work of others	1	2	3	4
Being very well off financially	1	2	3	4
Helping others who are in difficulty	1	2	3	4
Making a theoretical contribution to science	1	2	3	4
Writing original works (poems, novels, short stories, etc.)	1	2	3	4
Creating artistic work (painting, sculpture, decorating, etc.)	1	2	3	4
Becoming successful in a business of my own	1	2	3	4
Becoming involved in programs to clean up the environment	1	2	3	4
Developing a meaningful philosophy of life	1	2	3	4
Participating in a community action program	1	2	3	4
Helping to promote racial understanding	1	2	3	4
Keeping up to date with political affairs	1	2	3	4
Becoming a community leader	1	2	3	4
Improving my understanding of other countries and cultures	1	2	3	4
Participating in an organization like the Peace Corps or AmeriCorps/VISTA	1	2	3	4

39. What is your best guess as to the chances that you will: (Mark one for each item)

(1) No Chance (2) Very Little Chance (3) Some Chance (4) Very Good Chance

	1	2	3	4
Change major field?	1	2	3	4
Change career choice?	1	2	3	4
Participate in student government?	1	2	3	4
Get a job to help pay for college expenses?	1	2	3	4
Work full-time while attending college?	1	2	3	4
Join a social fraternity or sorority?	1	2	3	4
Play varsity/intercollegiate athletics?	1	2	3	4
Make at least a "B" average?	1	2	3	4
Need extra time to complete your degree requirements?	1	2	3	4
Participate in student protests or demonstrations?	1	2	3	4
Transfer to another college before graduating?	1	2	3	4
Be satisfied with your college?	1	2	3	4
Participate in volunteer or community service work?	1	2	3	4
Seek personal counseling?	1	2	3	4
Communicate regularly with your professors?	1	2	3	4
Socialize with someone of another racial/ethnic group?	1	2	3	4
Participate in student clubs/groups?	1	2	3	4
Participate in a study abroad program?	1	2	3	4

40. Do you give the Higher Education Research Institute (HERI) permission to include your ID number should your college request the data for additional research analyses? HERI maintains strict standards of confidentiality and would require your college to sign a pledge of confidentiality. ○ Yes ○ No

The remaining ovals are provided for questions specifically designed by your college rather than the Higher Education Research Institute. If your college has chosen to use the ovals, please observe carefully the supplemental directions given to you.

41. A B C D E	47. A B C D E	53. A B C D E
42. A B C D E	48. A B C D E	54. A B C D E
43. A B C D E	49. A B C D E	55. A B C D E
44. A B C D E	50. A B C D E	56. A B C D E
45. A B C D E	51. A B C D E	57. A B C D E
46. A B C D E	52. A B C D E	58. A B C D E

THANK YOU!

APPENDIX B
CIRP FRESHMAN SURVEY DATA FILE

Higher Education Research Institute
Graduate School of Education & Information Studies
University of California, Los Angeles
3005 Moore Hall / Mailbox 951528
Los Angeles, CA 90095-1528

F I L E D O C U M E N T A T I O N

2006 FRESHMAN SURVEY DATA FILE

File Name: CIRP2006.DAT

Record Length: 302

This layout describes your 2006 CIRP Freshman Survey Data File. The values "0" (zero) and " " (blank) represent "missing" or "did not respond" for all variables in this file.

The variables in columns 7-271 were scanned directly from the survey instrument. Those in columns 272-281 were computed from the scanned items. The variables in columns 282-302 were keypunched, rather than directly scanned from the survey instrument.

If you have ordered this data file in the default "fixed-field text" format, you will have also received an SPSS Syntax File. It contains all commands required to describe the data file, as well as some simple RECODE statements. The file CIRP2006.SPS is configured for use on a personal computer using SPSS for Windows or SPSS for Macintosh. The file USESPSSC.DOC contains instructions on how to use the Syntax file to read the data into SPSS.

To match the first-time full-time records used to produce your Institutional Profile, you must select only those students with a Student Status (STUDSTAT, in column 281) of "1" <u>and</u> who reported a gender (SEX, in column 20). In SPSS Syntax language, the command to accomplish this is: SELECT IF studstat=1 AND (sex=1 OR sex=2).

2006 FRESHMAN SURVEY DATA FILE

1-4	ACE:	College (ACE) I.D.
5-6	SHRED:	Shred (Breakout) Code
7-8	GRPA:	Group Code A
9-10	GRPB:	Group Code B
11-19	STUDID:	Student Identifier
20	SEX:	Your sex *1=Male* *2=Female*
21-22	AGE:	How old will you be on December 31 of this year? *1=16 or younger* *2=17* *3=18* *4=19* *5=20* *6=21 to 24* *7=25 to 29* *8=30 to 39* *9=40 to 54* *10=55 or older*
23	NATENGSP:	Is English your native language? *1=No* *2=Yes*
24	YRGRADHS:	In what year did you graduate from high school? *1=2006* *2=2005* *3=2004* *4=2003 or earlier* *5=Did not graduate but passed G.E.D. test* *6=Never completed high school*
25	FULLSTAT:	Are you enrolled (or enrolling) as a: *1=Part-time student* *2=Full-time student*
26	DISTHOME:	How many miles is this college from your permanent home? *1=5 or less* *2=6 to 10* *3=11 to 50* *4=51 to 100* *5=101 to 500* *6=Over 500*
27	HSGPA:	What was your average grade in high school? *1=D* *2=C* *3=C+* *4=B-* *5=B* *6=B+* *7=A-* *8=A or A+*
28	CITIZEN:	Citizenship status *1=Neither* *2=Permanent resident (green card)* *3=U.S. citizen*
29	PREVCRED:	Prior to this term, have you ever taken courses for credit at this institution? *1=No* *2=Yes*
30	OTHRCOLL:	Since leaving high school, have you ever taken courses, whether for credit or not for credit, at any other institution (university, 4- or 2-year college, technical, vocational, or business school)? *1=No* *2=Yes*
31	LIVEPLAN:	Where do you plan to live during the fall term? *1=With my family or other relatives* *2=Other private home, apartment, or room* *3=College residence hall* *4=Fraternity or sorority house* *5=Other campus student housing* *6=Other*

32	CHOICE: Is this college your: *1=Less than third choice* *2=Third choice* *3=Second choice* *4=First choice*
33	ACCPT1ST: If this college was not your first choice, were you accepted by your first choice college? *1=No* *2=Yes*
34	NUMAPPLY: To how many colleges other than this one did you apply for admission this year? *1=None* *2=One* *3=Two* *4=Three* *5=Four* *6=Five* *7=Six* *8=Seven to ten* *9=Eleven or more*
35	PARSTAT: Are your parents? *1=One or both deceased* *2=Both alive, divorced or living apart* *3=Both alive and living with each other*
	During high school (grades 9-12) how many years did you study each of the following subjects? *1=None* *2=One-half* *3=One* *4=Two* *5=Three* *6=Four* *7=Five or more*
36	YRSTUDY1: English
37	YRSTUDY2: Mathematics
38	YRSTUDY3: Foreign Language
39	YRSTUDY4: Physical Science
40	YRSTUDY5: Biological Science
41	YRSTUDY6: History/Am. Govt.
42	YRSTUDY7: Computer Science
43	YRSTUDY8: Arts and/or Music
	How many Advanced Placement courses or exams did you take in high school? 1=None offered at my high school *2=None* *3=1 to 4* *4=5 to 9* *5=10 to 14* *6=15 +*
44	APCOURSE: AP Courses
45	APEXAM: AP Exams
	What is the highest academic degree that you intend to obtain? *1=None* *2=Vocational certificate* *3=Associate (A.A. or equivalent)* *4=Bachelor's degree (B.A., B.S., etc.)* *5=Master's degree (M.A., M.S., etc.)* *6=Ph.D. or Ed.D.* *7=M.D., D.O., D.D.S., D.V.M.* *8=J.D. (Law)* *9=B.D. or M.DIV. (Divinity)* *10=Other*
46-47	DEGASP06: Highest planned
48-49	HIDEGHRE: Highest planned at this college
	How would you describe the racial composition of the high school you last attended and the neighborhood where you grew up? *1=Completely non-White* *2=Mostly non-White* *3=Roughly half non-White* *4=Mostly White* *5=Completely White*
50	RACESCHL: High school I last attended
51	RACEBEIB: Neighborhood where I grew up

52	LEGACY:	Did either of your parents or legal guardians attend the institution that you are now attending? *1=Neither* *2=Mother or female legal guardian only* *3=Father or male legal guardian only* *4=Both*
	How much of your first year's educational expenses (room, board, tuition, and fees) do you expect to cover from each of the sources listed below? *1=None* *2=Less than $1,000* *3=$1,000 - 2,999* *4=$3,000 - 5,999* *5=$6,000 - 9,999* *6=$10,000 +*	
53	AID01:	Parents, other relatives or friends
54	AID02:	Spouse
55	AID03:	Savings from summer work
56	AID04:	Other savings
57	AID05:	Part-time job on campus
58	AID06:	Part-time job off campus
59	AID07:	Full-time job while in college
60	AID08:	Pell Grant
61	AID09:	Supplemental Educational Opportunity Grant
62	AID10:	State Scholarship or Grant: Merit-based
63	AID11:	State Scholarship or Grant: Need-based
64	AID12:	College Work-Study Grant
65	AID13:	College Grant/Scholarship (other than above)
66	AID14:	Other private grant
67	AID15:	GI military benefits
68	AID16:	ROTC
69	AID17:	Other Government aid
70	AID18:	Stafford Loan (GSL)
71	AID19:	Perkins Loan
72	AID20:	Other college loan
73	AID21:	Other loan
74	AID22:	Other than above
75	DEPPAR:	How many individuals in your household are dependent on your parents for financial support (include yourself and your parents) *1=One* *2=Two* *3=Three* *4=Four* *5=Five* *6=Six or more*
76-77	INCOME:	What is your best estimate of your parents' total income last year? Consider income from all sources before taxes *1=Less than $10,000* *2=$10,000 to $14,999* *3=$15,000 to $19,999* *4=$20,000 to $24,999* *5=$25,000 to $29,999* *6=$30,000 to $39,999* *7=$40,000 to $49,999* *8=$50,000 to $59,999* *9=$60,000 to $74,999* *10=$75,000 to $99,999* *11=$100,000 to $149,999* *12=$150,000 to $199,999* *13=$200,000 to $249,999* *14=$250,000 or more*
78	FINCON:	Do you have any concern about your ability to finance your college education? *1=None (I am confident that I will have sufficient funds)* *2=Some (but I probably will have enough funds)* *3=Major (not sure I will have enough funds to complete college)*

Current religious preference:
1=Baptist
2=Buddhist
3=Church of Christ
4=Eastern Orthodox
5=Episcopalian
6=Hindu
7=Islamic
8=Jewish
9=LDS (Mormon)
10=Lutheran
11=Methodist
12=Presbyterian
13=Quaker
14=Roman Catholic
15=Seventh Day Adventist
16=United Church of Christ/Congregational
17=Other Christian
18=Other Religion
19=None

79-80	RELIG06:	Yours
81-82	FRELIG:	Father's
83-84	MRELIG:	Mother's

Indicate which activities you did during the past year
1=Not at all
2=Occasionally
3=Frequently

85	ACT0601:	Attended a religious service
86	ACT0602:	Was bored in class
87	ACT0603:	Participated in organized demonstrations
88	ACT0604:	Tutored another student
89	ACT0605:	Studied with other students
90	ACT0606:	Was a guest in a teacher's home
91	ACT0607:	Smoked cigarettes
92	ACT0608:	Drank beer
93	ACT0609:	Drank wine or liquor
94	ACT0610:	Felt overwhelmed by all I had to do
95	ACT0611:	Felt depressed
96	ACT0612:	Performed volunteer work
97	ACT0613:	Played a musical instrument
98	ACT0614:	Asked a teacher for advice after class
99	ACT0615:	Voted in a student election
100	ACT0616:	Socialized with someone of another racial/ethnic group
101	ACT0617:	Came late to class
102	ACT0618:	Used the Internet: For research or homework
103	ACT0619:	Used the Internet: To read news sites
104	ACT0620:	Used the Internet: To read blogs
105	ACT0621:	Performed community service as part of a class
106	ACT0622:	Discussed religion
107	ACT0623:	Discussed politics
108	ACT0624:	Read a newspaper for: National and global news
109	ACT0625:	Read a newspaper for: Local news and information
110	ACT0626:	Read a newspaper for: Schoolwork

Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.
1=Lowest 10%
2=Below average
3=Average
4=Above average
5=Highest 10%

111	RATE0601: Academic ability
112	RATE0602: Artistic ability
113	RATE0603: Computer skills
114	RATE0604: Cooperativeness
115	RATE0605: Creativity
116	RATE0606: Drive to achieve
117	RATE0607: Emotional health
118	RATE0608: Leadership ability
119	RATE0609: Mathematical ability
120	RATE0610: Physical health
121	RATE0611: Public speaking ability

(continued)

	Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. (continued) *1=Lowest 10%* *2=Below average* *3=Average* *4=Above average* *5=Highest 10%*
122	RATE0612: Religiousness
123	RATE0613: Self-confidence (intellectual)
124	RATE0614: Self-confidence (social)
125	RATE0615: Self-understanding
126	RATE0616: Spirituality
127	RATE0617: Understanding of others
128	RATE0618: Writing ability
	What is the highest level of formal education obtained by your parents? *1=Grammar school or less* *2=Some high school* *3=High school graduate* *4=Postsecondary school other than college* *5=Some college* *6=College degree* *7=Some graduate school* *8=Graduate degree*
129	FATHEDUC: Father
130	MOTHEDUC: Mother
	In deciding to go to college, how important to you was each of the following reasons? *1=Not important* *2=Somewhat important* *3=Very important*
131	REASON01: My parents wanted me to go
132	REASON02: I could not find a job
133	REASON03: Wanted to get away from home
134	REASON04: To be able to get a better job
135	REASON05: To gain a general education and appreciation of ideas
136	REASON06: There was nothing better to do
137	REASON07: To make me a more cultured person
138	REASON08: To be able to make more money
139	REASON09: To learn more about things that interest me
140	REASON10: To prepare myself for graduate or professional school
141	REASON11: A mentor/role model encouraged me to go
142	REASON12: To get training for a specific career
	Career or Occupation of *1=Accountant or actuary* *2=Actor or entertainer* *3=Architect or urban planner* *4=Artist* *5=Business (clerical)* *6=Business executive (management, administrator)* *7=Business owner or proprietor* *8=Business salesperson or buyer* *9=Clergy (minister, priest)* *10=Clergy (other religious)* *11=Clinical psychologist* *12=College administrator/staff* *13=College teacher* *14=Computer programmer or analyst* *15=Conservationist or forester* *16=Dentist (including orthodontist)* *17=Dietitian or nutritionist* *18=Engineer* *19=Farmer or rancher* *20=Foreign service worker (including diplomat)* *21=Homemaker (full-time)* *22=Interior decorator (including designer)* *23=Lab technician or hygienist* *24=Law enforcement officer* *25=Lawyer (attorney) or judge* *26=Military service (career)* *27=Musician (performer, composer)* *28=Nurse* *29=Optometrist* (continued)

	Career or Occupation of (continued)
	30=Pharmacist
	31=Physician
	32=Policymaker/Government
	33=School counselor
	34=School principal or superintendent
	35=Scientific researcher
	36=Social, welfare, or recreation worker
	37=Therapist (physical, occupational, speech)
	38=Teacher or administrator (elementary)
	39=Teacher or administrator (secondary)
	40=Veterinarian
	41=Writer or journalist
	42=Skilled trades
	43=Laborer (unskilled)
	44=Semi-skilled worker
	45=Unemployed
	46=Other
	47=Undecided [student only]
143-144	CAREER06: Student (probable)
145-146	FCAREERD: Father
147-148	MCAREERD: Mother
	Student Opinions
	1=Disagree strongly
	2=Disagree somewhat
	3=Agree somewhat
	4=Agree strongly
149	VIEW0601: There is too much concern in the courts for the rights of criminals
150	VIEW0602: Abortion should be legal
151	VIEW0603: The death penalty should be abolished
152	VIEW0604: Marijuana should be legalized
153	VIEW0605: It is important to have laws prohibiting homosexual relationships
154	VIEW0606: Racial discrimination is no longer a major problem in America
155	VIEW0607: Realistically, an individual can do little to bring about changes in our society
156	VIEW0608: Wealthy people should pay a larger share of taxes than they do now
157	VIEW0609: Same-sex couples should have the right to legal marital status
158	VIEW0610: Affirmative action in college admissions should be abolished
159	VIEW0611: Federal military spending should be increased
160	VIEW0612: The federal government should do more to control the sale of handguns
161	VIEW0613: Only volunteers should serve in the armed forces
162	VIEW0614: The federal government is not doing enough to control environmental pollution
163	VIEW0615: A national health care plan is needed to cover everybody's medical costs
164	VIEW0616: Undocumented immigrants should be denied access to public education
165	VIEW0617: Through hard work, everybody can succeed in American society
166	VIEW0618: Dissent is a critical component of the political process
167	VIEW0619: Colleges have the right to ban extreme speakers from campus
168	VIEW0620: The chief benefit of a college education is that it increases one's earning power
169	VIEW0621: The federal government should raise taxes to reduce the deficit
	During your last year in high school, how much time did you spend during a typical week doing:
	1=None
	2=Less than one hour
	3=1 to 2 hours
	4=3 to 5 hours
	5=6 to 10 hours
	6=11 to 15 hours
	7=16 to 20 hours
	8=Over 20 hours
170	HPW0601: Studying/homework
171	HPW0602: Socializing with friends
172	HPW0603: Talking with teachers outside of class
173	HPW0604: Exercise or sports
174	HPW0605: Partying
175	HPW0606: Working (for pay)
176	HPW0607: Volunteer work
177	HPW0608: Student clubs/groups
178	HPW0609: Watching TV
	(continued)

	During your last year in high school, how much time did you spend during a typical week doing: (continued) *1=None* *2=Less than one hour* *3=1 to 2 hours* *4=3 to 5 hours* *5=6 to 10 hours* *6=11 to 15 hours* *7=16 to 20 hours* *8=Over 20 hours*
179	HPW0610: Household/childcare duties
180	HPW0611: Reading for pleasure
181	HPW0612: Playing video/computer games
	Are you: *1=Not marked* *2=Marked*
182	RACE1: White/Caucasian
183	RACE2: African American/Black
184	RACE3: American Indian/Alaska Native
185	RACE4: Asian American/Asian
186	RACE5: Native Hawaiian/Pacific Islander
187	RACE6: Mexican American/Chicano
188	RACE7: Puerto Rican
189	RACE8: Other Latino
190	RACE9: Other
191	POLIVW06: How would you characterize your political views? *1=Far right* *2=Conservative* *3=Middle-of-the-road* *4=Liberal* *5=Far left*
	Reasons for choosing to attend this particular college *1=Not important* *2=Somewhat important* *3=Very important*
192	CHOOSE01: My relatives wanted me to come here
193	CHOOSE02: My teacher advised me
194	CHOOSE03: This college has a very good academic reputation
195	CHOOSE04: This college has a good reputation for its social activities
196	CHOOSE05: I was offered financial assistance
197	CHOOSE06: The cost of attending this college
198	CHOOSE07: High school counselor advised me
199	CHOOSE08: Private college counselor advised me
200	CHOOSE09: I wanted to live near home
201	CHOOSE10: Not offered aid by first choice
202	CHOOSE11: Could not afford first choice
203	CHOOSE12: This college's graduates gain admission to top graduate/professional schools
204	CHOOSE13: This college's graduates get good jobs
205	CHOOSE14: I was attracted by the religious affiliation/orientation of the college
206	CHOOSE15: I wanted to go to a school about the size of this college
207	CHOOSE16: Rankings in national magazines
208	CHOOSE17: Information from a website
209	CHOOSE18: I was admitted through an Early Action or Early Decision program
210	CHOOSE19: The athletic department recruited me
211	CHOOSE20: A visit to campus
212-213	MAJOR06: Student's Probable Major *1=Art, fine and applied* *2=English (language & literature)* *3=History* *4=Journalism* *5=Language and Literature (except English)* *6=Music* *7=Philosophy* *8=Speech* *9=Theater or Drama* *10=Theology or Religion* *11=Other Arts and Humanities* *12=Biology (general)* *13=Biochemistry or Biophysics* *14=Botany* *15=Environmental Science* (continued)

212-213 **MAJOR06: Student's Probable Major (continued)**

16=Marine (Life) Science
17=Microbiology or Bacteriology
18=Zoology
19=Other Biological Science
20=Accounting
21=Business Admin. (general)
22=Finance
23=International Business
24=Marketing
25=Management
26=Secretarial Studies
27=Other Business
28=Business Education
29=Elementary Education
30=Music or Art Education
31=Physical Education or Recreation
32=Secondary Education
33=Special Education
34=Other Education
35=Aeronautical or Astronautical Engineering
36=Civil Engineering
37=Chemical Engineering
38=Computer Engineering
39=Electrical or Electronic Engineering
40=Industrial Engineering
41=Mechanical Engineering
42=Other Engineering
43=Astronomy
44=Atmospheric Science (incl. Meteorology)
45=Chemistry
46=Earth Science
47=Marine Science (incl. Oceanography)
48=Mathematics
49=Physics
50=Statistics
51=Other Physical Science
52=Architecture or Urban Planning
53=Family & Consumer Sciences
54=Health Technology (medical, dental, laboratory)
55=Library or Archival Science
56=Medicine, Dentistry, Veterinary Medicine
57=Nursing
58=Pharmacy
59=Therapy (occupational, physical, speech)
60=Other Professional
61=Anthropology
62=Economics
63=Ethnic Studies
64=Geography
65=Political Science (gov't., international relations)
66=Psychology
67=Social Work
68=Sociology
69=Women's Studies
70=Other Social Science
71=Building Trades
72=Data Processing or Computer Programming
73=Drafting or Design
74=Electronics
75=Mechanics
76=Other Technical
77=Agriculture
78=Communications
79=Computer Science
80=Forestry
81=Kinesiology
82=Law Enforcement
83=Military Science
84=Other Field
85=Undecided

Indicate the importance to you personally of:
1=Not important
2=Somewhat important
3=Very important
4=Essential

214 GOAL0601: Becoming accomplished in one of the performing arts (acting, dancing, etc.)
215 GOAL0602: Becoming an authority in my field
216 GOAL0603: Obtaining recognition from my colleagues for contributions to my special field
217 GOAL0604: Influencing the political structure
218 GOAL0605: Influencing social values
219 GOAL0606: Raising a family
220 GOAL0607: Having administrative responsibility for the work of others
221 GOAL0608: Being very well off financially
222 GOAL0609: Helping others who are in difficulty
223 GOAL0610: Making a theoretical contribution to science
224 GOAL0611: Writing original works (poems, novels, short stories, etc.)
225 GOAL0612: Creating artistic work (painting, sculpture, decorating, etc.)
226 GOAL0613: Becoming successful in a business of my own
227 GOAL0614: Becoming involved in programs to clean up the environment
228 GOAL0615: Developing a meaningful philosophy of life
229 GOAL0616: Participating in a community action program
230 GOAL0617: Helping to promote racial understanding
231 GOAL0618: Keeping up to date with political affairs
232 GOAL0619: Becoming a community leader
233 GOAL0620: Improving my understanding of other countries and cultures
234 GOAL0621: Participating in an organization like the Peace Corps or AmeriCorps/VISTA

What is your best guess as to the chances that you will
1=No chance
2=Very little chance
3=Some chance
4=Very good chance

235 FUTACT01: Change major field
236 FUTACT02: Change career choice
237 FUTACT03: Participate in student government
238 FUTACT04: Get a job to help pay for college expenses
239 FUTACT05: Work full-time while attending college
240 FUTACT06: Join a social fraternity or sorority
241 FUTACT07: Play varsity/intercollegiate athletics
242 FUTACT08: Make at least a "B" average
243 FUTACT09: Need extra time to complete your degree requirements
244 FUTACT10: Participate in student protests or demonstrations
245 FUTACT11: Transfer to another college before graduating
246 FUTACT12: Be satisfied with your college
247 FUTACT13: Participate in volunteer or community service work
248 FUTACT14: Seek personal counseling
249 FUTACT15: Communicate regularly with your professors
250 FUTACT16: Socialize with someone of another racial/ethnic group
251 FUTACT17: Participate in student clubs/groups
252 FUTACT18: Participate in a study abroad program

253 PERMIT06: Do you give the Higher Education Research Institute (HERI) permission to include your ID number should your college request the data for additional research analyses?
1=No
2=Yes

Optional Questions
1=A
2=B
3=C
4=D
5=E

254 OPTQ0601: Question #41
255 OPTQ0602: Question #42
256 OPTQ0603: Question #43
257 OPTQ0604: Question #44
258 OPTQ0605: Question #45
259 OPTQ0606: Question #46
260 OPTQ0607: Question #47
261 OPTQ0608: Question #48
262 OPTQ0609: Question #49
263 OPTQ0610: Question #50
264 OPTQ0611: Question #51

(continued)

	Optional Questions
	1=A
	2=B
	3=C
	4=D
	5=E
265	**OPTQ0612: Question #52**
266	**OPTQ0613: Question #53**
267	**OPTQ0614: Question #54**
268	**OPTQ0615: Question #55**
269	**OPTQ0616: Question #56**
270	**OPTQ0617: Question #57**
271	**OPTQ0618: Question #58**
272-273	**SCAREERA: Student's career (aggregated)**
	1=Artist
	2=Business
	3=Business (clerical)
	4=Clergy
	5=College teacher
	6=Doctor (MD or DDS)
	7=Education (secondary)
	8=Education (elementary)
	9=Engineer
	10=Farmer or forester
	11=Health professional
	12=Homemaker (full-time)
	13=Lawyer
	14=Military (career)
	15=Nurse
	16=Research scientist
	17=Social/welfare/rec worker
	18=Skilled worker
	19=Semi-skilled worker
	20=Unskilled worker
	21=Unemployed
	22=Other
	23=Undecided
	Parents' Occupation (aggregated)
	1=Artist
	2=Business
	3=Business (clerical)
	4=Clergy
	5=College teacher
	6=Doctor (MD or DDS)
	7=Education (secondary)
	8=Education (elementary)
	9=Engineer
	10=Farmer or forester
	11=Health professional
	12=Homemaker (full-time)
	13=Lawyer
	14=Military (career)
	15=Nurse
	16=Research scientist
	17=Social/welfare/rec worker
	18=Skilled worker
	19=Semi-skilled worker
	20=Unskilled worker
	21=Unemployed
	22=Other
274-275	**FCAREERA: Father's**
276-277	**MCAREERA: Mother's**

278-279	**MAJOR06A: Student's Major (aggregated)** *1=Agriculture* *2=Biological Science* *3=Business* *4=Education* *5=Engineering* *6=English* *7=Health Professional* *8=History or Political Science* *9=Humanities* *10=Fine Arts* *11=Mathematics or Statistics* *12=Physical Science* *13=Social Science* *14=Other Technical* *15=Other Non-technical* *16=Undecided*
280	**RESPRACE: Responded to Race question?** *1=No* *2=Yes*
281	**STUDSTAT: Student Status** *1=First-time, full-time* *2=First-time, part-time* *3=Not a freshman*
	High School Test Scores
282-284	**SATV: SAT Verbal Score**
285-287	**SATM: SAT Math Score**
288-289	**ACTCOMP: ACT Composite Score**
	Date of Birth
290-291	**BMONTH: Month**
292-293	**BDAY: Day**
294-295	**BYEAR: Year**
296-297	**HOMSTATE: Student's Home State** *10=Alabama* *11=Alaska* *12=Arizona* *13=Arkansas* *14=California* *15=Colorado* *16=Connecticut* *17=Delaware* *18=District of Columbia* *19=Florida* *20=Georgia* *21=Hawaii* *22=Idaho* *23=Illinois* *24=Indiana* *25=Iowa* *26=Kansas* *27=Kentucky* *28=Louisiana* *29=Maine* *30=Maryland* *31=Massachusetts* *32=Michigan* *33=Minnesota* *34=Mississippi* *35=Missouri* *36=Montana* *37=Nebraska* *38=Nevada* *39=New Hampshire* *40=New Jersey* *41=New Mexico* *42=New York* *43=North Carolina* *44=North Dakota* *45=Ohio* **(continued)**

296-297	**HOMSTATE: Student's Home State (continued)** *46=Oklahoma* *47=Oregon* *48=Pennsylvania* *49=Rhode Island* *50=South Carolina* *51=South Dakota* *52=Tennessee* *53=Texas* *54=Utah* *55=Vermont* *56=Virginia* *57=Washington* *58=West Virginia* *59=Wisconsin* *60=Wyoming* *61=U.S. Service Schools* *62=Outlying Areas*
298-302	**HOMEZIP: Student's Home ZIP Code**

APPENDIX C
CIRP FRESHMAN SURVEY (CODEBOOK)

CIRP COOPERATIVE INSTITUTIONAL RESEARCH PROGRAM at the HIGHER EDUCATION RESEARCH INSTITUTE AT UCLA

2006 CIRP Freshman Survey (Codebook)

Col	Variable Name	Variable Description
1-4	ACE	College I.D.
5-10	SUBJID	Subject I.D.
11-12	GRPA	Group A
13-14	GRPB	Group B
15	SEX	Your sex: 1 = Male 2 = Female
16-17	AGE	How old will you be on December 31 of this year? 1 = 16 or younger 2 = 17 3 = 18 4 = 19 5 = 20 6 = 21 to 24 7 = 25 to 29 8 = 30 to 39 9 = 40 to 54 10 = 55 or older
18	NATENGSP	Is English your native language? 1 = No 2 = Yes
19	YRGRADHS	In what year did you graduate from high school? 1 = 2006 2 = 2005 3 = 2004 4 = 2003 or earlier 5 = Did not graduate but passed GED test 6 = Never completed high school
20	FULLSTAT	Are you enrolled (or enrolling) as a: 1 = Part-time student 2 = Full-time student
21	DISTHOME	How many miles is this college from your permanent home? 1 = 5 or less 2 = 6 to 10 3 = 11 to 50 4 = 51 to 100 5 = 101 to 500 6 = Over 500
22	HSGPA	What was your average grade in high school? 1 = D 2 = C 3 = C+ 4 = B- 5 = B 6 = B+ 7 = A- 8 = A or A+
23-25	SATV	SAT Verbal
26-28	SATM	SAT Math
29-30	ACTCOMP	ACT Composite
31	CITIZEN	Citizenship status: 1 = Neither 2 = Permanent resident (green card) 3 = U.S. citizen
32	PREVCRED	Prior to this term, have you ever taken courses for credit at this institution? 1 = No 2 = Yes
33	OTHRCOLL	Since leaving high school, have you ever taken courses, whether for credit or not for credit, at any other institution (university, 4- or 2 1 = No 2 = Yes
34	PLANLIVE	Where do you plan to live during the fall term? 1 = With my family or other relatives 2 = Other private home, apartment, or room 3 = College residence hall 4 = Fraternity or sorority house 5 = Other campus student housing 6 = Other

Col	Variable Name	Variable Description
35	CHOICE	Choice: Is this college your: 1 = Less than third choice 2 = Third choice 3 = Second choice 4 = First choice
36	ACCPT1ST	Were you accepted by your first choice college? 1 = No 2 = Yes
37	NUMAPPLY	To how many colleges other than this one did you apply for admission this year? 1 = None 2 = 1 3 = 2 4 = 3 5 = 4 6 = 5 7 = 6 8 = 7-10 9 = 11 or more
38	PARSTAT	Are your parents alive? divorced? 1 = One or both deceased 2 = Both alive, divorced or living apart 3 = Both alive and living with each other
		During high school, how many years did you study each of the following subjects? 1 = None 2 = 1/2 3 = 1 4 = 2 5 = 3 6 = 4 7 = 5 or more
39	YRSTUDY1	Years Study: English
40	YRSTUDY2	Years Study: Mathematics
41	YRSTUDY3	Years Study: Foreign Language
42	YRSTUDY4	Years Study: Physical Science
43	YRSTUDY5	Years Study: Biological Science
44	YRSTUDY6	Years Study: History/Am Govt
45	YRSTUDY7	Years Study: Computer Science
46	YRSTUDY8	Years Study: Art and/or Music
47	APCOURSE	AP Courses
48	APEXAM	AP Exams 1 = Not offered at my high school 2 = None 3 = 1 to 4 4 = 5 to 9 5 = 10 to 14 6 = 15 +
49-50	DEGASP	Highest academic degree planned
51-52	HIDEGREE	Highest academic degree planned at this college 1 = None 2 = Vocational certificate 3 = Associate (A.A. or equivalent) 4 = Bachelor's degree (B.A., B.S., etc.) 5 = Master's degree (M.A., M.S., etc.) 6 = Ph.D. or Ed.D. 7 = M.D., D.O., D.D.S., D.V.M. 8 = J.D. (Law) 9 = B.D. or M.DIV. (Divinity) 10 = Other
53	RACEHS	How would you describe the racial composition of the high school you last attended?
54	RACENEIB	How would you describe the racial composition of the neighborhood where you grew up? 1 = Completely non-White 2 = Mostly non-White 3 = Roughly half non-White 4 = Mostly White 5 = Completely White

Col	Variable Name	Variable Description
55	LEGACY	Did either of your parents or legal guardians attend the institution that you are now attending? 1 = Neither 2 = Mother or female legal guardian only 3 = Father or male legal guardian only 4 = Both
		How much of your first year's educational expenses (room, board, tuition, and fees) do you expect to cover from: 1 = None 2 = Less than $1,000 3 = $1,000 - 2,999 4 = $3,000 - 5,999 5 = $6,000 - 9,999 6 = $10,000 +
56	AID01	Aid: Parents, other relatives or friends
57	AID02	Aid: Spouse
58	AID03	Aid: Savings from summer work
59	AID04	Aid: Other savings
60	AID05	Aid: Part-time job on campus
61	AID06	Aid: Part-time job off campus
62	AID07	Aid: Full-time job while in college
63	AID08	Aid: Pell Grant
64	AID09	Aid: Supplemental Educational Opportunity Grant
65	AID10	Aid: State Scholarship or Grant: Merit-based
66	AID11	Aid: State Scholarship or Grant: Need-based
67	AID12	Aid: College Work-Study Grant
68	AID13	Aid: College Grant/Scholarship (other than above)
69	AID14	Aid: Other private grant
70	AID15	Aid: GI military benefits
71	AID16	Aid: ROTC
72	AID17	Aid: Other Government aid
73	AID18	Aid: Stafford Loan (GSL)
74	AID19	Aid: Perkins Loan
75	AID20	Aid: Other College Loan
76	AID21	Aid: Other Loan
77	AID22	Aid: Other Than Above
78	NDEPPAR	How many individuals in your household are dependent on your parents for financial support? (include yourself and your parents) 1 = 1 2 = 2 3 = 3 4 = 4 5 = 5 6 = 6 or more
79-80	INCOME	What is your best estimate of your parents' total income last year? 1 = Less than $10,000 2 = $10,000 to 14,999 3 = $15,000 to 19,999 4 = $20,000 to 24,999 5 = $25,000 to 29,999 6 = $30,000 to 39,999 7 = $40,000 to 49,999 8 = $50,000 to 59,999 9 = $60,000 to 74,999 10 = $75,000 to 99,999 11 = $100,000 to 149,999 12 = $150,000 to 199,999 13 = $200,000 to 249,999 14 = $250,000 or more
81	FINCON	Do you have any concern about your ability to finance your college education? 1 = None (I am confident that I will have sufficient funds) 2 = Some (but I probably will have enough funds) 3 = Major (not sure I will have enough funds to complete college)

Col	Variable Name	Variable Description
82-83	SRELIGION	Student's religion
84-85	FRELIGION	Father's religion
86-87	MRELIGION	Mother's religion
		1 = Baptist
		2 = Buddhist
		3 = Church of Christ
		4 = Eastern Orthodox
		5 = Episcopalian
		6 = Hindu
		7 = Islamic
		8 = Jewish
		9 = LDS (Mormon)
		10 = Lutheran
		11 = Methodist
		12 = Presbyterian
		13 = Quaker
		14 = Roman Catholic
		15 = Seventh Day Adventist
		16 = United Church of Christ/Congregational
		17 = Other Christian
		18 = Other Religion
		19 = None
		Indicate which activities you did during the past year
		1 = Not at all
		2 = Occasionally
		3 = Frequently
88	ACT01	Act in Past Year: Attended a religious service
89	ACT02	Act in Past Year: Was bored in class
90	ACT03	Act in Past Year: Participated in organized demonstrations
91	ACT04	Act in Past Year: Tutored another student
92	ACT05	Act in Past Year: Studied with other students
93	ACT06	Act in Past Year: Was a guest in a teacher's home
94	ACT07	Act in Past Year: Smoked cigarettes
95	ACT08	Act in Past Year: Drank beer
96	ACT09	Act in Past Year: Drank wine or liquor
97	ACT10	Act in Past Year: Felt overwhelmed by all I had to do
98	ACT11	Act in Past Year: Felt depressed
99	ACT12	Act in Past Year: Performed volunteer work
100	ACT13	Act in Past Year: Played a musical instrument
101	ACT14	Act in Past Year: Asked a teacher for advice after class
102	ACT15	Act in Past Year: Voted in a student election
103	ACT16	Act in Past Year: Socialized with someone of another racial/ethnic group
104	ACT17	Act in Past Year: Came late to class
105	ACT18	Act in Past Year: Used the Internet: For research or homework
106	ACT19	Act in Past Year: Used the Internet: To read news sites
107	ACT20	Act in Past Year: Used the Internet: To read blogs
108	ACT21	Act in Past Year: Performed community service as part of a class
109	ACT22	Act in Past Year: Discussed religion
110	ACT23	Act in Past Year: Discussed politics
111	ACT24	Act in Past Year: Read a newspaper for: National and global news
112	ACT25	Act in Past Year: Read a newspaper for: Local news and information
113	ACT26	Act in Past Year: Read a newspaper for: Schoolwork

Col	Variable Name	Variable Description
		Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. 1 = Lowest 10% 2 = Below average 3 = Average 4 = Above average 5 = Highest 10%
114	RATE01	Self Rating: Academic ability
115	RATE02	Self Rating: Artistic ability
116	RATE03	Self Rating: Computer skills
117	RATE04	Self Rating: Cooperativeness
118	RATE05	Self Rating: Creativity
119	RATE06	Self Rating: Drive to achieve
120	RATE07	Self Rating: Emotional health
121	RATE08	Self Rating: Leadership ability
122	RATE09	Self Rating: Mathematical ability
123	RATE10	Self Rating: Physical health
124	RATE11	Self Rating: Public speaking ability
125	RATE12	Self Rating: Religiousness
126	RATE13	Self Rating: Self-confidence (intellectual)
127	RATE14	Self Rating: Self-confidence (social)
128	RATE15	Self Rating: Self-understanding
129	RATE16	Self Rating: Spirituality
130	RATE17	Self Rating: Understanding of others
131	RATE18	Self Rating: Writing ability
132	FATHEDUC	Father's education
133	MOTHEDUC	Mother's education 1 = Grammar school or less 2 = Some high school 3 = High school graduate 4 = Postsecondary school other than college 5 = Some college 6 = College degree 7 = Some graduate school 8 = Graduate degree
		In deciding to go to college, how important you was each of the following reasons? 1 = Not important 2 = Somewhat important 3 = Very important
134	REASON01	Reason Attend: My parents wanted me to go
135	REASON02	Reason Attend: I could not find a job
136	REASON03	Reason Attend: Wanted to get away from home
137	REASON04	Reason Attend: To be able to get a better job
138	REASON05	Reason Attend: To gain a general education and appreciation of ideas
139	REASON06	Reason Attend: There was nothing better to do
140	REASON07	Reason Attend: To make me a more cultured person
141	REASON08	Reason Attend: To be able to make more money
142	REASON09	Reason Attend: To learn more about things that interest me
143	REASON10	Reason Attend: To prepare myself for graduate or professional school
144	REASON11	Reason Attend: A mentor/role model encouraged me to go
145	REASON12	Reason Attend: To get training for a specific career

Col	Variable Name	Variable Description
146-147	SCAREER	Student's probable career
148-149	FCAREER	Father's career
150-151	MCAREER	Mother's career
		1 = Accountant or actuary
		2 = Actor or entertainer
		3 = Architect or urban planner
		4 = Artist
		5 = Business (clerical)
		6 = Business executive (management, administrator)
		7 = Business owner or proprietor
		8 = Business salesperson or buyer
		9 = Clergy (minister, priest)
		10 = Clergy (other religious)
		11 = Clinical psychologist
		12 = College administrator/staff
		13 = College teacher
		14 = Computer programmer or analyst
		15 = Conservationist or forester
		16 = Dentist (including orthodontist)
		17 = Dietitian or nutritionist
		18 = Engineer
		19 = Farmer or rancher
		20 = Foreign service worker (including diplomat)
		21 = Homemaker (full-time)
		22 = Interior decorator (including designer)
		23 = Lab technician or hygienist
		24 = Law enforcement officer
		25 = Lawyer (attorney) or judge
		26 = Military service (career)
		27 = Musician (performer, composer)
		28 = Nurse
		29 = Optometrist
		30 = Pharmacist
		31 = Physician
		32 = Policymaker/Government
		33 = School counselor
		34 = School principal or superintendent
		35 = Scientific researcher
		36 = Social, welfare, or recreation worker
		37 = Therapist (physical, occupational, speech)
		38 = Teacher or administrator (elementary)
		39 = Teacher or administrator (secondary)
		40 = Veterinarian
		41 = Writer or journalist
		42 = Skilled trades
		43 = Laborer (unskilled)
		44 = Semi-skilled worker
		45 = Unemployed
		46 = Other
		47 = Undecided [student only]

Col	Variable Name	Variable Description
		Mark one in each row: 1 = Disagree strongly 2 = Disagree somewhat 3 = Agree somewhat 4 = Agree strongly
152	VIEW01	View: There is too much concern in the courts for the rights of criminals
153	VIEW02	View: Abortion should be legal
154	VIEW03	View: The death penalty should be abolished
155	VIEW04	View: Marijuana should be legalized
156	VIEW05	View: It is important to have laws prohibiting homosexual relationships
157	VIEW06	View: Racial discrimination is no longer a major problem in America
158	VIEW07	View: Realistically, an individual can do little to bring about changes in our society
159	VIEW08	View: Wealthy people should pay a larger share of taxes than they do now
160	VIEW09	View: Same-sex couples should have the right to legal marital status
161	VIEW10	View: Affirmative action in college admissions should be abolished
162	VIEW11	View: Federal military spending should be increased
163	VIEW12	View: The federal government should do more to control the sale of handguns
164	VIEW13	View: Only volunteers should serve in the armed forces
165	VIEW14	View: The federal government is not doing enough to control environmental pollution
166	VIEW15	View: A national health care plan is needed to cover everybody's medical costs
167	VIEW16	View: Undocumented immigrants should be denied access to public education
168	VIEW17	View: Through hard work, everybody can succeed in American society
169	VIEW18	View: Dissent is a critical component of the political process
170	VIEW19	View: Colleges have the right to ban extreme speakers from campus
171	VIEW20	View: The chief benefit of a college education is that it increases one's earning power
172	VIEW21	View: The federal government should raise taxes to reduce the deficit
		During your last year in high school, how much time did you spend during a typical doing the following activities: 1 = None 2 = Less than one hour 3 = 1 to 2 hours 4 = 3 to 5 hours 5 = 6 to 10 hours 6 = 11 to 15 hours 7 = 16 to 20 hours 8 = Over 20 hours
173	HPW01	Hours per Week: Studying/homework
174	HPW02	Hours per Week: Socializing with friends
175	HPW03	Hours per Week: Talking with teachers outside of class
176	HPW04	Hours per Week: Exercise or sports
177	HPW05	Hours per Week: Partying
178	HPW06	Hours per Week: Working (for pay)
179	HPW07	Hours per Week: Volunteer work
180	HPW08	Hours per Week: Student clubs/groups
181	HPW09	Hours per Week: Watching TV
182	HPW10	Hours per Week: Household/childcare duties
183	HPW11	Hours per Week: Reading for pleasure
184	HPW12	Hours per Week: Playing video/computer games
		Are you: (Mark all that apply) 1 = Not marked 2 = Marked
185	RACE1	White
186	RACE2	Black
187	RACE3	American Indian
188	RACE4	Asian
189	RACE5	Native Hawaiian/Pacific Islander
190	RACE6	Mexican/Chicano
191	RACE7	Puerto Rican
192	RACE8	Other Latino
193	RACE9	Other race/ethnicity
194	POLIVIEW	How would you characterize your political views? 1 = Far right 2 = Conservative 3 = Middle-of-the-road 4 = Liberal 5 = Far left

Col	Variable Name	Variable Description
		How important was each reason in your decision to come here? 1 = Not important 2 = Somewhat important 3 = Very important
195	CHOOSE01	Choose to Attend: My relatives wanted me to come here
196	CHOOSE02	Choose to Attend: My teacher advised me
197	CHOOSE03	Choose to Attend: This college has a very good academic reputation
198	CHOOSE04	Choose to Attend: This college has a good reputation for its social activities
199	CHOOSE05	Choose to Attend: I was offered financial assistance
200	CHOOSE06	Choose to Attend: The cost of attending this college
201	CHOOSE07	Choose to Attend: High school counselor advised me
202	CHOOSE08	Choose to Attend: Private college counselor advised me
203	CHOOSE09	Choose to Attend: I wanted to live near home
204	CHOOSE10	Choose to Attend: Not offered aid by first choice
205	CHOOSE11	Choose to Attend: Could not afford first choice
206	CHOOSE12	Choose to Attend: This college's graduates gain admission to top graduate/professional schools
207	CHOOSE13	Choose to Attend: This college's graduates get good jobs
208	CHOOSE14	Choose to Attend: I was attracted by the religious affiliation/orientation of the college
209	CHOOSE15	Choose to Attend: I wanted to go to a school about the size of this college
210	CHOOSE16	Choose to Attend: Rankings in national magazines
211	CHOOSE17	Choose to Attend: Information from a website
212	CHOOSE18	Choose to Attend: I was admitted through an Early Action or Early Decision program
213	CHOOSE19	Choose to Attend: The athletic department recruited me
214	CHOOSE20	Choose to Attend: A visit to campus
215-216	MAJOR	Student's probable field of study/major 1 = Art, fine and applied 2 = English (language and literature) 3 = History 4 = Journalism 5 = Language and Literature (except English) 6 = Music 7 = Philosophy 8 = Speech 9 = Theater or Drama 10 = Theology or Religion 11 = Other Arts and Humanities 12 = Biology (general) 13 = Biochemistry or Biophysics 14 = Botany 15 = Environmental Science 16 = Marine (Life) Science 17 = Microbiology or Bacteriology 18 = Zoology 19 = Other Biological Science 20 = Accounting 21 = Business Admin. (general) 22 = Finance 23 = International Business 24 = Marketing 25 = Management 26 = Secretarial Studies 27 = Other Business 28 = Business Education 29 = Elementary Education 30 = Music or Art Education 31 = Physical Education or Recreation 32 = Secondary Education 33 = Special Education 34 = Other Education 35 = Aeronautical or Astronautical Engineering 36 = Civil Engineering 37 = Chemical Engineering 38 = Computer Engineering 39 = Electrical or Electronic Engineering 40 = Industrial Engineering

Col	Variable Name	Variable Description
		41 = Mechanical Engineering 42 = Other Engineering 43 = Astronomy 44 = Atmospheric Science (incl. Meteorology) 45 = Chemistry 46 = Earth Science 47 = Marine Science (incl. Oceanography) 48 = Mathematics 49 = Physics 50 = Statistics 51 = Other Physical Science 52 = Architecture or Urban Planning 53 = Family & Consumer Sciences 54 = Health Technology (medical, dental, laboratory) 55 = Library or Archival Science 56 = Medicine, Dentistry, Veterinary Medicine 57 = Nursing 58 = Pharmacy 59 = Therapy (occupational, physical, speech) 60 = Other Professional 61 = Anthropology 62 = Economics 63 = Ethnic Studies 64 = Geography 65 = Political Science (gov't., international relations) 66 = Psychology 67 = Social Work 68 = Sociology 69 = Women's Studies 70 = Other Social Science 71 = Building Trades 72 = Data Processing or Computer Programming 73 = Drafting or Design 74 = Electronics 75 = Mechanics 76 = Other Technical 77 = Agriculture 78 = Communications 79 = Computer Science 80 = Forestry 81 = Kinesiology 82 = Law Enforcement 83 = Military Science 84 = Other Field 85 = Undecided

Col	Variable Name	Variable Description
		Indicate the importance to you personally of: 1 = Not important 2 = Somewhat important 3 = Very important 4 = Essential
217	GOAL01	Goal: Becoming accomplished in one of the performing arts (acting, dancing, etc.)
218	GOAL02	Goal: Becoming an authority in my field
219	GOAL03	Goal: Obtaining recognition from my colleagues for contributions to my special field
220	GOAL04	Goal: Influencing the political structure
221	GOAL05	Goal: Influencing social values
222	GOAL06	Goal: Raising a family
223	GOAL07	Goal: Having administrative responsibility for the work of others
224	GOAL08	Goal: Being very well off financially
225	GOAL09	Goal: Helping others who are in difficulty
226	GOAL10	Goal: Making a theoretical contribution to science
227	GOAL11	Goal: Writing original works (poems, novels, short stories, etc.)
228	GOAL12	Goal: Creating artistic work (painting, sculpture, decorating, etc.)
229	GOAL13	Goal: Becoming successful in a business of my own
230	GOAL14	Goal: Becoming involved in programs to clean up the environment
231	GOAL15	Goal: Developing a meaningful philosophy of life
232	GOAL16	Goal: Participating in a community action program
233	GOAL17	Goal: Helping to promote racial understanding
234	GOAL18	Goal: Keeping up to date with political affairs
235	GOAL19	Goal: Becoming a community leader
236	GOAL20	Goal: Improving my understanding of other countries and cultures
237	GOAL21	Goal: Participating in an organization like the Peace Corps or AmeriCorps/VISTA
		What is your best guess as to the chances that you will 1 = No chance 2 = Very little chance 3 = Some chance 4 = Very good chance
238	FUTACT01	Future Act: Change major field
239	FUTACT02	Future Act: Change career choice
240	FUTACT03	Future Act: Participate in student government
241	FUTACT04	Future Act: Get a job to help pay for college expenses
242	FUTACT05	Future Act: Work full-time while attending college
243	FUTACT06	Future Act: Join a social fraternity or sorority
244	FUTACT07	Future Act: Play varsity/intercollegiate athletics
245	FUTACT08	Future Act: Make at least a 'B' average
246	FUTACT09	Future Act: Need extra time to complete your degree requirements
247	FUTACT10	Future Act: Participate in student protests or demonstrations
248	FUTACT11	Future Act: Transfer to another college before graduating
249	FUTACT12	Future Act: Be satisfied with your college
250	FUTACT13	Future Act: Participate in volunteer or community service work
251	FUTACT14	Future Act: Seek personal counseling
252	FUTACT15	Future Act: Communicate regularly with your professors
253	FUTACT16	Future Act: Socialize with someone of another racial/ethnic group
254	FUTACT17	Future Act: Participate in student clubs/groups
255	FUTACT18	Future Act: Participate in a study abroad program
256	PERMIT	Do you give the higher education research institute (HERI) permission to include your id number should your college request the data for additional research analyses? 1 = No 2 = Yes

Col	Variable Name	Variable Description
		Optional Questions 1 = A 2 = B 3 = C 4 = D 5 = E
257	OPTQ01	Optional Question 1
258	OPTQ02	Optional Question 2
259	OPTQ03	Optional Question 3
260	OPTQ04	Optional Question 4
261	OPTQ05	Optional Question 5
262	OPTQ06	Optional Question 6
263	OPTQ07	Optional Question 7
264	OPTQ08	Optional Question 8
265	OPTQ09	Optional Question 9
266	OPTQ10	Optional Question 10
267	OPTQ11	Optional Question 11
268	OPTQ12	Optional Question 12
269	OPTQ13	Optional Question 13
270	OPTQ14	Optional Question 14
271	OPTQ15	Optional Question 15
272	OPTQ16	Optional Question 16
273	OPTQ17	Optional Question 17
274	OPTQ18	Optional Question 18
275-276	DOBMM	DOB Month
277-278	DOBYY	DOB Year
279	RRACE	Responded to race 1 = No 2 = Yes
280-281	RACEGROUP	Race/Ethnicity Group 1 = American Indian 2 = Asian 3 = Black 4 = Hispanic 5 = White 6 = Other 7 = Two or more race/ethnicity
282	FIRSTGEN	First generation status based on parent(s) with less than 'some college' 1 = No 2 = Yes
283-284	MAJORA	Student's major aggregated 1 = Agriculture 2 = Biological Sciences 3 = Business 4 = Education 5 = Engineering 6 = English 7 = Health Professional 8 = History or Political Science 9 = Humanities 10 = Fine Arts 11 = Mathematics or Statistics 12 = Physical Sciences 13 = Social Sciences 14 = Other Technical 15 = Other Non-technical 16 = Undecided

Col	Variable Name	Variable Description
285-286	SCAREERA	Student's probable career aggregated
287-288	FCAREERA	Father's career aggregated
289-290	MCAREERA	Mother's career aggregated 1 = Artist 2 = Business 3 = Business (clerical) 4 = Clergy 5 = College teacher 6 = Doctor (MD or DDS) 7 = Education (secondary) 8 = Education (elementary) 9 = Engineer 10 = Farmer or forester 11 = Health professional 12 = Homemaker (full-time) 13 = Lawyer 14 = Military (career) 15 = Nurse 16 = Research scientist 17 = Social/welfare/rec worker 18 = Skilled worker 19 = Semi-skilled worker 20 = Unskilled worker 21 = Unemployed 22 = Other 23 = Undecided
291-292	HOMESTATE	Student's home state
293-297	HOMEZIP	Student's home zip
298	STUDSTAT	Student status 1 = Full-time first-time freshman 2 = Part-time freshman 3 = Other
299	NORMSTAT	Norms status 1 = In norms 2 = Not in norms
300-304	STUDWGT	Student weight

Col	Variable Name	Variable Description
305-306	STRAT	CIRP Stratification Cell 1 = Public Universities - low 2 = Public Universities - medium 3 = Public Universities - high 4 = Private Universities - medium 5 = Private Universities - high 6 = Private Universities - very high 7 = Public 4yr Colleges - low 8 = Public 4yr Colleges - medium 9 = Public 4yr Colleges - high 10 = Public 4yr Colleges - unknown 11 = Private/Nonsectarian 4yr Colleges - low 12 = Private/Nonsectarian 4yr Colleges - medium 13 = Private/Nonsectarian 4yr Colleges - high 14 = Private/Nonsectarian 4yr Colleges - very high 15 = Private/Nonsectarian 4yr Colleges - unknown 16 = Catholic 4yr Colleges - low 17 = Catholic 4yr Colleges - medium 18 = Catholic 4yr Colleges - high 19 = Catholic 4yr Colleges - unknown 20 = Other Religious 4yr Colleges - very low 21 = Other Religious 4yr Colleges - low 22 = Other Religious 4yr Colleges - medium 23 = Other Religious 4yr Colleges - high 24 = Other Religious 4yr Colleges - unknown 25 = Public 2yr Colleges - very low 26 = Public 2yr Colleges - low 27 = Public 2yr Colleges - medium 28 = Public 2yr Colleges - high 29 = Public 2yr Colleges - very high 30 = Private 2yr Colleges - very low 31 = Private 2yr Colleges - low 32 = Private 2yr Colleges - medium 33 = Private 2yr Colleges - high 34 = HBCU Public 4yr Colleges 35 = HBCU Private 4yr Colleges 36 = HBCU Public 2yr Colleges 37 = HBCU Private 2yr Colleges 38 = HBCU Other Religious 4yr Colleges 39 = HBCU Catholic 4yr Colleges 40 = HBCU Public Universities 41 = HBCU Private Universities 99 = Other
307-308	STATE	Institution's state
309	HERIREG	HERI Region 1 = East 2 = Midwest 3 = South 4 = West
310	OBEREG	OBE Region 1 = New England - CT ME MA NH RI VT 2 = Mid East - DE DC MD NJ NY PA 3 = Great Lakes - IL IN MI OH WI 4 = Plains - IA KS MN MO NE ND SD 5 = Southeast - AL AR FL GA KY LA MS NC SC TN VA WV 6 = Southwest - AZ NM OK TX 7 = Rocky Mountains - CO ID MT UT WY 8 = Far West - AK CA HI NV OR WA 9 = Other
311	HBCU	Historically Black Colleges and University 1 = Not HBCU 2 = Public HBCU 3 = Private HBCU
312	INSTSEX	Institution's Sex 1 = Male only 2 = Female only 3 = Co-ed 4 = Coordinate

Col	Variable Name	Variable Description
313-316	SELECTIVITY	Institutional Selectivity
317	INSTTYPE	Institution Type 1 = University 2 = 4-year 3 = 2-year
318	INSTCONT	Institution Control 1 = Public 2 = Private
319-320	COMPGROUP1	Comparison Group 1 1 = Public Universities - low 2 = Public Universities - medium 3 = Public Universities - high 4 = Private Universities - medium 5 = Private Universities - high 6 = Private Universities - very high 7 = Public 4yr Colleges - low 8 = Public 4yr Colleges - medium 9 = Public 4yr Colleges - high 10 = Private/Nonsectarian 4yr Colleges - low 11 = Private/Nonsectarian 4yr Colleges - medium 12 = Private/Nonsectarian 4yr Colleges - high 13 = Private/Nonsectarian 4yr Colleges - very high 14 = Catholic 4yr Colleges - low 15 = Catholic 4yr Colleges - medium 16 = Catholic 4yr Colleges - high 17 = Other Religious 4yr Colleges - very low 18 = Other Religious 4yr Colleges - low 19 = Other Religious 4yr Colleges - medium 20 = Other Religious 4yr Colleges - high 21 = Public 2yr Colleges 22 = Private 2yr Colleges
321	COMPGROUP2	Comparison Group 2 1 = Public Universities 2 = Private Universities 3 = Public 4yr Colleges 4 = Private/Nonsectarian 4yr Colleges 5 = Catholic 4yr Colleges 6 = Other Religious 4yr Colleges 7 = Public 2yr Colleges 8 = Private 2yr Colleges
322	COMPGROUP3	Comparison Group 3 1 = All Baccalaureate Institutions 2 = All Two-Year Colleges
		TFS Constructs - Scores
323-327	ACADEMIC_SELFCONCEPT	TFS Academic Self-Concept Score
328-332	SOCIAL_SELFCONCEPT	TFS Social Self-Concept Score
333-337	SOCIAL_AGENCY	TFS Social Agency Score
338-342	COLLEGE_REPUTATION	TFS College Reputation Orientation Score
343-347	COLLEGE_INVOLVEMENT	TFS Likelihood of College Involvement Score
		TFS Constructs - Groups
348	ACADEMIC_SELFCONCEPT_GRP	TFS Academic Self-Concept Group
349	SOCIAL_SELFCONCEPT_GRP	TFS Social Self-Concept Group
350	SOCIAL_AGENCY_GRP	TFS Social Agency Group
351	COLLEGE_REPUTATION_GRP	TFS College Reputation Orientation Group
352	COLLEGE_INVOLVEMENT_GRP	TFS Likelihood of College Involvement Group 1 = Low score 2 = Average Score 3 = High score

APPENDIX D
ACT® - SAT® CONCORDANCE: A TOOL FOR COMPARING SCORES

ACT®–SAT® Concordance: A Tool for Comparing Scores

The ACT® college readiness assessment and SAT® are different tests that measure similar but distinct constructs. The ACT measures achievement related to high school curricula, while the SAT measures general verbal and quantitative reasoning.

ACT and the College Board (producers of the SAT) have completed a concordance study that is designed to examine the relationship between two scores on the ACT and SAT. These concordance tables do not equate scores, but rather provide a tool for finding comparable scores.

You can also find the concordance tables and guidelines for proper use on our website at **www.act.org/aap/concordance**.

ACT Composite Score	SAT Score Critical Reading + Math (Single Score)	SAT Score Critical Reading + Math (Score Range)	ACT Score Combined English/Writing	SAT Score Writing (Single Score)	SAT Score Writing (Score Range)
36	1600	1600	36	800	800
35	1560	1540–1590	35	800	800
34	1510	1490–1530	34	770	770–790
33	1460	1440–1480	33	740	730–760
32	1420	1400–1430	32	720	710–720
31	1380	1360–1390	31	690	690–700
30	1340	1330–1350	30	670	660–680
29	1300	1290–1320	29	650	640–650
28	1260	1250–1280	28	630	620–630
27	1220	1210–1240	27	610	610
26	1190	1170–1200	26	590	590–600
25	1150	1130–1160	25	570	570–580
24	1110	1090–1120	24	550	550–560
23	1070	1050–1080	23	530	530–540
22	1030	1020–1040	22	510	510–520
21	990	980–1010	21	490	480–500
20	950	940–970	20	470	470
19	910	900–930	19	450	450–460
18	870	860–890	18	430	430–440
17	830	820–850	17	420	410–420
16	790	770–810	16	400	390–400
15	740	720–760	15	380	380
14	690	670–710	14	360	360–370
13	640	620–660	13	340	340–350
12	590	560–610	12	330	320–330
11	530	510–550	11	310	300–310

The ACT®

www.act.org/concordance

ACT–SAT Concordance Study June 2008

Estimated Relationship Between ACT Composite Score and SAT CR+M+W Score

In addition, ACT is providing an ESTIMATED Relationship Table for institutions that also use the SAT (Critical Reading + Math + Writing) Score. This table provides a score on the SAT that is similar to an ACT Composite score. The values given are a very accurate representation of what you might get from a concordance table.

ACT Composite Score	SAT Score Critical Reading + Math + Writing (Single Score)	SAT Score Critical Reading + Math + Writing (Score Range)
36	2390	2380–2400
35	2330	2290–2370
34	2250	2220–2280
33	2180	2140–2210
32	2120	2080–2130
31	2060	2020–2070
30	2000	1980–2010
29	1940	1920–1970
28	1880	1860–1910
27	1820	1800–1850
26	1770	1740–1790
25	1710	1680–1730
24	1650	1620–1670
23	1590	1560–1610
22	1530	1510–1550
21	1470	1450–1500
20	1410	1390–1440
19	1350	1330–1380
18	1290	1270–1320
17	1230	1210–1260
16	1170	1140–1200
15	1100	1060–1130
14	1020	990–1050
13	950	910–980
12	870	820–900
11	780	750–810

ACT College Readiness Benchmark Scores

The ACT is the only test with College Readiness Benchmarks directly measuring the ACT College Readiness Standards. The Benchmarks are based on actual college performance of students and reflected by specific test scores.

College Course/Course Area	ACT Test	Benchmark Score
English Composition	English	**18**
Algebra	Mathematics	**22**
Social Sciences	Reading	**22**
Biology	Science	**23**

An ACT College Readiness Benchmark score is the minimum score needed on an ACT subject area test to indicate a 50 percent chance of obtaining a B or higher or about a 75 percent chance of obtaining a C or higher in the corresponding credit-bearing college courses. These scores were empirically derived based on the actual performance of students in college. ACT College Readiness Standards are subject-based knowledge skills statements that are informed by the ACT National Curriculum Survey®, directly measured by the ACT, and grouped by ACT score range. They may be found at **www.act.org/standard/instruct/index.html**.

ACT® www.act.org

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BIOGRAPHICAL SKETCH

Leena Hasbini was born and raised in Tampa, Florida. She received her bachelor's degree in business administration at nineteen from the University of South Florida, and subsequently went on to earn her master's degree in counselor education, also from the University of South Florida at 21.

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