

The Choice-of-College Decision of Academically Talented Students

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Abstract of Dissertation

The Choice-of-College Decision of Academically Talented Students

This dissertation sought to explore the choice-of-college decision of academically talented students using Chapman's (1981) Model of College Choice to inform the selection of variables. This study focused on what factors influenced the decision of students who earned an A/A+ average in high school to enroll in their first-choice institution of higher education. This study found that being a non-White race resulted in a smaller likelihood that an individual would enroll in their first-choice institution, compared to White students. Also, an increase of age by just one year would increase the enrollment likelihood of first-choice enrollment. As students valued the influence of their parents the more likely they were to enroll in their first-choice college. The increase of out-of-pocket costs resulted in a negative influence on an academically talented student's enrollment decision, but income was not a significant predictor of enrollment patterns. As students valued the influence of their high school counselor, the student was less likely to enroll in their first-choice institution. As students were positively influenced by the campus visit, they were more likely to enroll in their first-choice institution, which proved to be the largest predictor of choice-of-college enrollment. Students who aspired to earn a bachelor's degree were positively influenced to enroll in their first-choice institution, but any other degree level, whether higher or lower, were less likely to enroll in their first-choice institution,

by comparison. Distance negatively influenced enrollment patterns, as academically talented students tended to enroll at institutions of higher education closer to their permanent residence.

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I**INTRODUCTION**

Colleges and universities across the country consider the enrollment of students to be a prime goal for the institution. Institutions of higher education have created divisions of enrollment management to specifically focus on the recruitment, enrollment, and retention of the student body, as well as the marketing of the institution to a number of interested groups, such as prospective students and alumni. The strengths of the student body are used as a marketing tool in emphasizing the quality of the institution and the ability to achieve rankings, and to encourage other students to choose the institution. Many populations bring prestige to an institution, including athletes, artists, and academics. Schools that wish to enroll these types of students look to entice prospects to choose their institution over other institutions. However, research does not exist that focuses on the decision of college for student populations and why students choose the particular institution they attend. The choice-of-college is an important factor to enrollment management even though educational research has not explored the concept.

This research explores choice-of-college through a quantitative research design (Denscombe, 2003). It analyzes data from an annual national survey conducted by the Higher Education Research Institute (HERI), at the University of California, Los Angeles (HERI, 2008). Chapter 1 will discuss (a) the context of

the study; (b) the gaps that currently exist in the literature and the problem of research that will guide this study; (c) the problem of practice; (d) the research questions guiding this study; (e) the significance of this study, and its limitations and delimitations; and (f) the assumptions of this study.

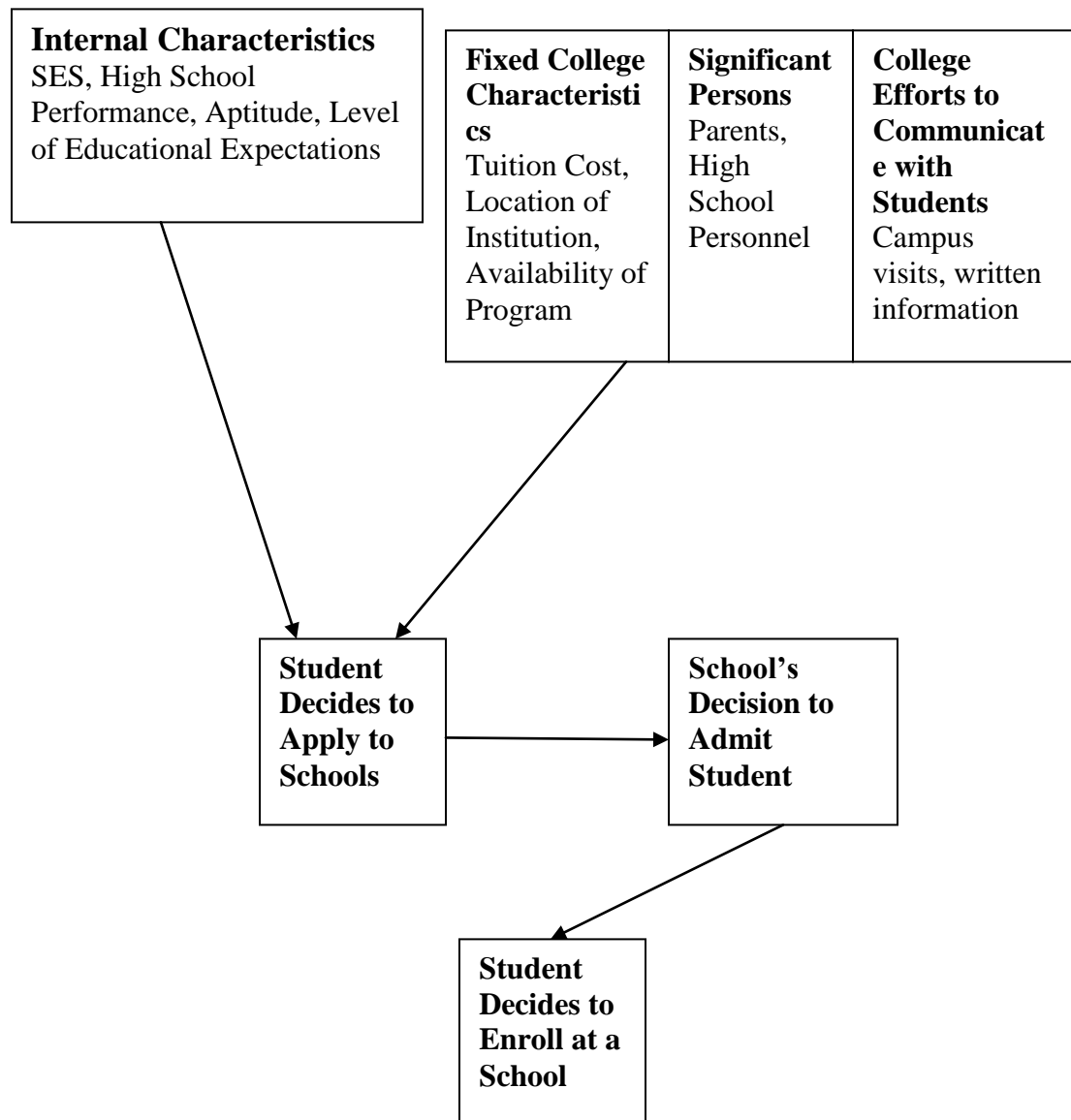
Theory Overview

A theoretical model informed this research in its conception and execution. Chapman's (1981) Model of College Choice presents the factors that an individual considers when choosing to pursue postsecondary education. This model focuses on the major conceptual areas into which college choice factors are categorized: individual characteristics, external characteristics, and the impacts of significant individuals (Chapman, 1981). Individual characteristics are those characteristics inherent in the individual, such as socioeconomic status or family background (Chapman). External characteristics are those characteristics that pertain to the institution, such as financial aid and tuition policies, or the location of the institution (Chapman). The impact of significant individuals involves the ways in which certain other people who have contact with the student affect him or her in the college choice decision, such people as their parent or high school counselor (Chapman). Chapman's model impacts and underpins this research by categorizing the factors and themes in the college choice decision.

Chapman's Model of College Choice. Many scholars have studied the reasons that individuals choose to attend a postsecondary educational institution, but Chapman's model provided a comprehensive and unique model for college

choice. Stemming from a concentrated focus on the admissions process during the late 1970s and early 1980s, when colleges and universities were worried about declining enrollments, Chapman (1981) explored “the influences affecting prospective students’ choice of which college to attend” (p. 490). In addition to focusing on the characteristics of the individual, Chapman categorized external influences into three categories: “(a) the influence of significant persons; (b) the fixed characteristics of the institution; and (c) the institution’s own efforts to communicate with prospective students” (p. 492). For a visual representation of Chapman’s Model of College Choice, see Figure 1. By combining both internal and external influences, students develop a general expectation of college life and what will be expected during their collegiate experience (Chapman). In turn, the expectations of college life influence students to choose the college that most closely matches their expectations (Chapman). Chapman’s model is unique compared with previous models; it incorporates a second decision in the college choice process, that of the college’s decision to admit the student. By deciding which students are admitted to the institution, the school’s admission decision becomes equally important to the decision of the student. This double selection gave a unique understanding of college choice. Through the conceptualization of a unified model and the ability of the college to choose a student, Chapman creates a model of college choice that was unique from what had been developed before.

Figure 1. Visual Representation of Chapman's Model of College Choice.



Context

This section will orient the reader to the main contextual areas of this study that were established by Chapman's (1981) Model of College Choice. Internal characteristics have been demonstrated to have a strong impact on an individual's college choice decision, among which are race/ethnicity, gender, and socioeconomic status (Ceja, 2006; Chapman, 1981; McDonough, 1997; National Postsecondary Education Cooperative, 2007). An individual's race/ethnicity impacts the type of institution that he/she will apply to, as White students are more likely to enroll in elite four-year institutions, colleges with extremely high selectivity standards when admitting students (Ceja, 2006; Freeman, 1999; Hossler & Gallagher, 1987; NPEC, 1997). Women must overcome societal pressures that push them to remain with the family to enroll in higher education, whereas men are more likely to be encouraged to enter college (Butner, Caldera, & Herrera, 2001; Ceja, 2006; Litten, 1982). The socioeconomic status of an individual's family will impact the type of institution that an applicant will consider affordable and be able to enroll at, as higher socioeconomic status students are more likely to enroll in four-year institutions (Cooper, 2006; Hossler, Schmit, & Vesper, 1999; McDonough, 1997). Academic preparedness will affect an individual's predisposition to attend college and what type of institution to attend (Hossler, Schmit, & Vesper, 1999; Hu & Hossler, 2000). The educational background of an applicant's parents, especially the individual's mother, is shown to influence the

likelihood of students attending college as well as their applying for highly selective institutions (Hossler & Stage, 1992; NPEC, 2007). Chief among the influences that impact an individual's college choice are the factors emanating from personal and family characteristics.

Second to internal characteristics in impacting the college choice decision are the characteristics of the institution (Chapman, 1981). The type of institution (public vs. private; two-year vs. four-year) and its demographics influence the applicant's willingness to apply (Kurlaender, 2006; Merranko, 2005). The geographic location (where in the nation the institution is located) and the proximity of the school to their home each impact the application of students (Kelp Kern, 2000; Kurlaender, 2006; NPEC, 2007). The reputation of the institution, both academically and socially, and how that reputation fits with an individual will impact whether the student will apply to that institution (Chapman, 1980; Isherwood, 1991; Paulsen & St. John, 1992; Zimbhoff, 2005). The offerings of an institution (classes, majors, special programs) also impact the desire of students to apply to a particular institution (NPEC, 2007; Paulsen & St. John, 2002). The cost of the institution and the amount and type of financial aid a student receives impact the ability of an individual to enroll at their top-choice institution (Kurlaender, 2006; Paulsen & St. John, 2002). These characteristics of the institution all bear on the student's decision on whether to apply and enroll at that particular school.

In addition to the internal and external characteristics, significant individuals influence the college choice decision of applicants. Chief among those who influence applicants are those members of families, including parents and siblings, who help navigate the application process and provide funding (Chapman, 1981; Hossler & Stage, 1992; Isherwood, 1991; NPEC, 2007). Friends may also influence the individual's decision by offering suggestions and providing a social network at the college level (Chapman, 1981; Isherwood, 1991). High school counselors and the staff of the high school help students by making suggestions of well-matched institutions and by handling a large amount of the paperwork in the application process (Chapman, 1981; McDonough, 1997). The staff of the university disseminates information to students allowing them to learn pertinent facts so they can compare among multiple institutions (Chapman, 1981; McDonough, 1997). Other individuals influence the college choice decision of an applicant in a multitude of ways, ranging from direct involvement in the entire process to providing information.

Problem of Research / Literature Gap

College choice research has been conducted on many factors that influence the postsecondary educational decisions made by many populations of students (e.g., Cooper, 2006; Kurlaender, 2006; NPEC, 2007). Research has been conducted on racial groups (e.g., Ceja, 2006; Cooper, 2006), women (e.g., Hossler & Stage, 1992; McDonough, 1997), and economic groups (e.g., Hossler, Schmit, & Vesper, 1999; McDonough, 1997) to determine what factors are considered by

individuals in entering postsecondary education. Research has also been conducted to determine who influences individuals to attend postsecondary education, including friends, family, and high school personnel (e.g., Hossler & Gallagher, 1987; McDonough, 1997). Characteristics unrelated to the individual but unique to the institution, such as cost and location, have also been studied (e.g., Kurlaender, 2006; Merranko, 2005). However, research on the individual's characteristics, the influence of other individuals, and the characteristics of the institution have focused on the ability of individuals to enter postsecondary education rather than on the particular institution that an individual decides to attend. This research seeks to address this literature gap by exploring an individual's choice-of-college and examining what factors are important to the enrollment of their first-choice institution over another-choice institution.

The college choice decision of academically talented students is another gap in the literature that is addressed in this research. Academically talented students, as a population, have been shown to have the opportunity to attend a variety of institutions because of their high grades and test scores (Lee, Matthews, & Olszewski- Kubilius, 2008). These individuals have the ability to choose between multiple institutions because colleges heavily recruit academically talented students. In addition, while academic talent has been studied based on a characteristic of college-going students (Hu & Hossler, 2000), the college choice decision has not been studied for academically talented students, as a population. This research will also address a gap in the literature about the college choice

decision of academically talented students by exploring the characteristics that influence the decision of academically talented students' college enrollment decisions.

Problem of Practice

Institutions of higher education also have an interest in ensuring that individuals choose to enroll at that institution over other institutions. Enrollments of students ensure fiscal solvency of colleges and universities through earned tuition dollars, provide opportunities for the school to market themselves based on the demographics of the population that are enrolled, and earn rankings on the selectivity of the admitted class (Morse & Flanigan 2008). To successfully recruit and enroll desired populations, it is imperative for administrators to understand why individuals choose to enroll at that particular institution of higher education instead of at other schools. A greater understanding of the choices that students make, in addition to the understanding of why individuals decide to pursue postsecondary education, allows administrators to focus recruitment strategies and target those factors that students find important to their enrollment decisions. A broader understanding of college choice to include both why students pursue postsecondary education and why students decide to attend a particular college or university will help administrators enroll desired students at colleges and universities.

Issues of access have been an important focus of postsecondary education (Office of Postsecondary Education, 2008). Nonprofit agencies, research

organizations, and the federal government have focused on ways to increase participation in college for a plethora of populations (e.g., Institute for Higher Education Policy, 2008; Office of Postsecondary Education/OPE, 2008). Students' ability to enroll in postsecondary education has been the focus of policy and institutional priorities for decades (OPE, 2008). Programs have been developed to help underrepresented groups enter and complete postsecondary education (e.g., Campus Compact, 2007). Access has been the focus of policy and institutional priorities for enrollment of students into postsecondary education.

Institutions of higher education also have an interest in ensuring access to postsecondary education. Colleges and universities enroll a multipronged strategy to enroll desired populations and ensure access at the institutional level (Campus Compact, 2007; National Association for College Admission Counseling, 2009). Many institutions gear marketing campaigns and recruitment strategies to reach out to various populations and encourage students to apply for admissions. Financial incentives, such as scholarships and financial aid, have been employed to reduce tuition cost and make enrollment at a particular institution more attainable, toward ensuring enrollment of desired individuals (e.g., University of Richmond, 2008). As is evident in recent court cases, institutions have given benefits in the admissions process to those populations that the institutions want to enroll (*Gratz v. Bollinger*, 2003). While the media has often focused on the benefits used to ensure racial, gender, or economic diversity as a goal of higher education, the same type of benefits are given to individuals whose parents

attended the institution (legacy students), or those with athletic, artistic, or academic talent (Mayher, 1998). Colleges and universities have developed policies to ensure a broad ability of individuals to enroll in postsecondary education.

Research focusing on academically talented students is beneficial to enrollment management administrators. Among the many populations that schools desire to enroll, academically talented students are a highly desired and recruited population (Capetas, Garcia, & Allyne, 2008; Lee, Matthews, & Olszewski- Kubiilius, 2008; Van Tassel-Baska, 2001). The focus on this population will also provide enrollment management administrators information on what factors influence the postsecondary enrollment decision of this population and allow institutions of higher education a greater ability to enroll this desired population. Information on the college choice decision of academically talented students provides enrollment managers the ability to better recruit this population.

Research Questions

The purpose of this research is to explore the factors that are important to academically talented students when making their choice-of-college decision. To assist in establishing the important factors, this study is guided by the following research questions:

1. To what extent does the family income influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: Academically talented students from families with higher income are more likely to enroll in their first-choice institution.

2. To what extent does the level of educational expectation of an individual influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: Academically talented students who have higher educational expectations are more likely to enroll at their first-choice institution.

3. To what extent does the out-of-pocket cost of the institution influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: Academically talented students who pay more in out-of-pocket costs are less likely to attend their first-choice institution.

4. To what extent does the distance from the college to an academically talented student's home influence the student's decision to enroll at their first-choice institution?

Hypothesis: Academically talented students are not likely to be constrained by distance in the decision to enroll at their first-choice institution.

5. To what extent do parents influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: Parents do not greatly influence the decision of academically talented students to enroll in their first-choice institution.

6. To what extent do high school counselors influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: High school personnel do not greatly influence the decision of academically talented students to enroll in their first-choice institution.

7. To what extent do campus visits influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: Academically talented students are positively influenced by campus visits when choosing to enroll at their first-choice institution.

Significance of Study

This study is significant in two ways. First, it expands the college choice literature to include a population that has previously not been examined, that of academically talented students. In previous studies academic preparation has been used as a determinant for college enrollment, but research has not been conducted on academically talented students as a population (Bers & Galowich, 2002; Hossler, Schmit, & Vesper, 1999; Hu & Hossler, 2000). Since this population attends college in greater proportion than other populations, research has ignored them and failed to determine what factors influence their college choice behavior (Douglas & Powers, 1985; Hearn, 1984; Rinn, 2007). This study increases the literature on college choice to include academically talented students.

Second, this research is significant because of its potential impact on practitioner policies. This research will help enrollment managers recruit academically talented students, a coveted population for institutions of higher education. By providing information regarding the college choice decision of this population, universities can reallocate resources to other populations that may need more resources to meet the institution's other enrollment goals. Providing information to enrollment managers, schools will receive more cost benefits when recruiting academically talented students. What also makes this research significant is the impact on enrollment management practitioners as far as their ability to better recruit academically talented students.

Delimitations

This study is bounded by several delimitations designed to limit the scope of this research. First, the researcher decided to limit the population by reviewing only individuals who were academically talented. This is the population of interest for this research, and populations of non-academically talented would not illuminate the college choice decision of academically talented students. By identifying this population as the subject of this study, the results of this research may not be generalizable to non-academically talented populations. Second, the definition of academically talented students was delimited to those with a self-reported high GPA (A or A+ average). While academically talented students could be identified from high standardized test scores, receipt of a merit scholarship, or participation in an academically talented program, the definition of

academically talented for this research will limit the population to those individuals with high grades. The purpose of this delimitation is twofold: (a) Standardized tests may fail to be a strong indicator of academic talent in light of the continued press reports on the biases that exist in such tests, and (b) self-reported grades are easily accessible in the CIRP Freshman Survey conducted by the HERI. Finally, this study delimited data to those institutions who participate in the CIRP Freshman Survey. Since not every institution of higher education participates in the HERI survey, the instrument will only access students who enroll at a participating institution of higher education and those who enroll during the traditional fall semester. The researcher delimited this study to students with high grades who attended institutions who participate in the HERI Freshman Survey.

Limitations

This research has limitations that may affect the generalizability of the results. The delimitations of the population as academically talented students may limit the ability to apply the results of this study to other populations. The demographics of the population, which are traditionally middle- and upper-class White students, may disproportionately affect the results as a whole because of smaller representation of non-Whites and lower economic classes in the sample. This may limit the generalizability to non-White populations and lower economic populations. Population definitions limit the generalizability of this research.

The construction of the survey instrument is another limitation for this research. Since the researcher did not construct the survey instrument, some factors that influence college choice may not be asked in the survey instrument and may be missed in the data. The researcher will not be able to address every aspect of college choice that exists in the Chapman model due to lack of complete information in the CIRP Freshman Survey. For example, the availability of academic programs and the ability of the institution to communicate with the student through written information was not included in this research. By not using an original survey instrument, not all variables of college choice will be able to be analyzed with this population.

Assumptions

This study is guided by a number of assumptions. As established in research, the college choice process occurs in three stages—predisposition, search, and choice (Hossler & Gallagher, 1987). As the students who have responded to the survey conducted by HERI have already enrolled in an institution of higher education, it is assumed that they have already progressed through these stages. As such, it is assumed that these students made a decision to attend a college or university, conducted a search to learn about at least one institution of higher education, and decided to enroll at a particular institution.

This study assumes that respondents to this survey will have answered the questions honestly and accurately. Subjects in this research will self-report their grade average and may not know their exact high school Grade Point Average

(GPA), but will report as accurately as possible. In addition, as the survey is conducted during an individual's first year in college, the college choice process has already been completed, but students will report as accurately as possible the impact of various factors as influential on their college choice decision.

Definitions of Key Terms

Academically Talented Students—Students whose grade average was self-reported as either an A or an A+.

Choice-of-College/Choice-of-College Decision—The decision to enroll in a particular institution of higher education, thereby rejecting enrollment in other institutions.

College Choice/College Choice Decision—The decision to enroll in postsecondary education.

College Choice Process—The complete process one undertakes when deciding to attend a specific institution of higher education, which includes the decision to attend college, learning about various institutions of higher education, and making a decision to attend a particular institution.

College Enrollment Prioritization- The process by which an individual ranks potential colleges by preference. For the purposes of this research, this term was operationalized as enrollment in one's first-choice or not-first-choice institution.

Out-of-Pocket Cost—The actual cost of the tuition that a family pays out of pocket. The costs of all educationally related expenses minus all financial aid an individual receives (grant and loan money). Chapman's(1981) discussion of out-

of-pocket costs focused on the funds that a family pays after financial aid covers a portion of the cost, so this research focused on that cost rather than the actual tuition charge.

Predisposition—The first stage of the college choice process, whereby one decides to attend college rather than go into the workforce directly after high school.

Overview of Dissertation

Chapter 1 describes the context of the problem to be addressed by this research. Through the lens of the practitioner, it explores the problem as well as how the literature does not currently address the research topic. This chapter also summarizes the theoretical underpinnings of this study and enumerates the research questions to be addressed in this research. It also explains the significance of this study and lists its limitations and delimitations.

Chapter 2 presents the literature in thematic content areas that inform this research. It reviews the sociological underpinnings on why an individual decides to increase his/her education level. It explores the literature on college choice, including internal characteristics, external characteristics, and the impact of others on the college choice decision. The chapter also reviews the literature on academically talented students and their academic and social development during high school.

Chapter 3 presents the methodology for this study. The researcher proposes to conduct logistic regression on data obtained through the CIRP (Cooperative Institutional Research Program) conducted through the Higher Education Research

Institute (HERI) at the University of California, Los Angeles (UCLA). It describes the methodology for this study. In addition, this chapter will describe the population and the procedure for collection of the data.

Chapter 4 presents the data collected. Chapter 5 presents the results, implications, and potential areas for future research.

II

Literature Review

The purpose of this study is to explore the factors that are important to academically talented students when making their choice-of-college decision. Academically talented students are defined as those students who attained an A+ average in high school, and, as discussed in Chapter 1, is a term selected for the study to identify those with high levels of academic achievement (A average) as a population. The college choice decision is defined as the decision to attend one particular institution of higher education over another institution. The study will examine individuals whose chosen institutions participated in the 2007 Freshman Survey through the Higher Education Research Institute, at the University of California, Los Angeles. The Freshman Survey was conducted during orientation and registration for newly admitted students. This literature review will explore three areas of literature that are salient to this dissertation. The review will begin by reviewing the sociological underpinnings that explain the theories of why individuals decide to go to college. Secondly, this literature review will look at what other researchers have found about college choice. Finally, this literature review will focus on what researchers have found about the population being studied in this dissertation, academically talented students. This literature review will explore the literature that informs this dissertation as background content in college choice and the population being studied.

Sociological Underpinnings of College Choice

Research in college choice generally falls into one of three theoretical constructs that explain why students choose to attend college. These theoretical constructs consist of status attainment theory, cultural capital theory, or economic theory (St. John, 2006). With the help of these theories, researchers have been able to explore a plethora of background characteristics to determine why individuals decide to attend college, ranging from the role of family in the college choice process to the influence of finances and cost in educational attainment (St. John). These three theoretical constructs have provided a useful tool for researchers to explore factors of college choice because they provide the theoretical basis for predisposition to college (Cooper, 2005; St. John, 2006). The sociological underpinnings and the literature that is explored at the beginning of the literature review frame the foundational basis for this study. As such, the literature explored as the sociological underpinnings of college choice is not recent. The theoretical underpinnings of why individuals attend college fall into the following categories: status attainment, cultural capital, or economic theory.

Status attainment theory. Status attainment theory explores educational attainment as a way for individuals to increase their economic standing as compared with their family's status (Cooper, 2005; St. John, 2006). The decision to attend higher education provides a major vehicle to increase one's economic standing by increasing one's earning potential through the ability to diversify postgraduation career options. Status attainment theory "views educational

attainment as a function of family income and parents' education" (St. John, 2006, p. 1606). In practice, individuals who seek to increase their economic standing over the financial standing of their parents will look for ways to move up economically. To succeed in moving up fiscally, an individual needs to obtain a better career with higher pay. As better jobs often require increased education and training, obtaining a college education would provide an individual with the required skills necessary for a better job (Blau & Duncan, 1967). Educational attainment is the vehicle that individuals use to move up the economic ladder and improve their lives. Educational attainment increases the ability of individuals to obtain better careers with better pay. The decision to attend college and the decision to attend a specific college provide a direct link to the ability to increase one's status attainment. Educational attainment is the key to increasing economic standing, according to status attainment theory.

Blau and Duncan's (1967) seminal work established status attainment theory. Sewell and Shah (1967) added to the theory by including extra factors, in addition to socio-economic status, as a factor for status attainment. Later, Sewell, Haller, and Ohlendorf (1970) connected psychological and structural factors to status attainment theory. Finally, Burke and Hoelter (1988) addressed the appropriateness of status attainment theory for diverse populations. This section will examine each of these studies in depth.

Blau and Duncan. Blau and Duncan's (1967) seminal work, which established status attainment theory, explored occupational structure and mobility

in the United States. The researchers collaborated with the Bureau of the Census to conduct the Occupational Changes in a Generation survey. They surveyed American men ages 20–64 and obtained a sample of over 20,000 individuals (Blau & Duncan). The survey obtained information about demographics, father's occupation, first job, and educational level (1967). Through this information, Blau and Duncan explored economic mobility through occupational structure and the ability to successfully transition to differing career fields.

Description. Father's occupation was a chief determinant on the occupational mobility of American men in the United States (Blau & Duncan, 1967). Blau and Duncan found that men generally entered the workforce at the same or a greater level than their father did. The researchers theorized that men were able to leverage the occupational and economic benefits of their father's social position and increase their own standing in the economic and occupational matrix. In certain occupational levels, father's occupation was the only way an individual was able to enter the career. Careers like farming and those needing extensive apprenticeships gave huge advantages to those individuals whose fathers were already in the career field, leaving it virtually impossible for others to break into these areas (Blau & Duncan). A father's occupation created an initial expectation of occupational attainment that could be achieved by an individual and imbued him with an opportunity to obtain a career with more economic rewards than his father had.

Socioeconomic status and social class, as determined in part by father's occupation, explains one reason why individuals seek to transcend their economic status (Blau & Duncan, 1967). As a father's occupation influences the job of an individual, an individual inherits the socioeconomic status of their family (Blau & Duncan). Through the combination of parents' education, parents' occupational attainment, and family income, an individual's social class is formed (St. John, 2006). Through the connection between family and socioeconomic status, an individual attempting to improve his economic standing does so through improvement in his occupational attainment (Blau & Duncan, 1967).

Socioeconomic status, as influenced by father's occupation, is a chief reason that individuals want to increase their economic standing by providing a better financial life for themselves and their family.

An individual's educational attainment level was determined to be the best opportunity to transcend the economic and occupational levels of their family (Blau & Duncan, 1967). By obtaining a higher educational level, individuals receive the additional training and information needed to enter new career areas. Individuals coming from a manual services family background (i.e., laborers and manufacturers) who received a college education or higher were more likely to enter better paying white-collar professions (i.e., salaried positions and managers) after they obtained an education (Blau & Duncan). Educational attainment, in this manner, allowed individuals the opportunity to increase their economic standing by receiving increased pay through a higher position in the occupational structure

in the United States. Blau and Duncan determined educational attainment to be the greatest opportunity to increase one's economic standing in society.

Methodology. Blau and Duncan (1967) conducted their research using quantitative research methods. Surveys were sent to 25,000 households that were identified as having men between the ages of 20 and 64, which resulted in a sample of approximately 20,700 responses (Blau & Duncan). The survey was sent out from the Bureau of Census in 1962, which was interested in issues of occupational attainment and stratification (Blau & Duncan). Analysis conducted on the questionnaire responses was twofold: (a) descriptive statistics and (b) regression analysis. Since the survey provided an analysis of occupation for a large segment of the population, the researchers conducted population estimates of employment patterns in various career types (Blau & Duncan). In addition to the descriptive statistics regarding the occupations of the sample, Blau and Duncan (1967) conducted regression analysis to determine the occupational mobility of individuals compared with both their education and their father's education.

Results. Blau and Duncan's (1967) research concluded that men were more likely to increase their occupational attainment over their father's occupation. Younger generations showed a propensity to move toward better paying, white-collar jobs rather than remain in the careers that their fathers had or decreasing to lower paying, manual labor jobs (Blau & Duncan). Individuals were more likely to have entry level positions that were at a supervisor level or higher if they had obtained at least a college education, or if their father was enrolled in a similar

level occupation (Blau & Duncan). Education level was seen as a level of skill learned by the individual, and reflected the ability of an individual to hold supervisory positions and succeed at those positions. Father's occupation also reflected the ability of individuals to learn management and leadership skills, as it was assumed that individuals have learned job skills from their father in an informal apprenticeship with their father. These trends held true for all but a few select categories, such as farmers (Blau & Duncan). Farming and those career categorizations that utilized a long period of apprenticeship tended to retain offspring in the same career paths instead of bringing new employees into the field (Blau & Duncan). Blau and Duncan found that racial minorities did not have the same ability to move into higher career paths through increased education or through family connections. Minorities, at the time of publication, were marginalized into lower career paths based solely on race, according to Blau and Duncan. By having a father in these career paths, sons would be intensely trained in these careers, would be unlikely to leave regardless of educational level, and would make those whose father was not already employed in such a career field unable to successfully enter the career path (Blau & Duncan). Blau and Duncan's research demonstrated that occupational attainment resulted from father's occupation and education level.

Strengths. Blau and Duncan's (1967) research had many strengths based on its research design. Chiefly, the large response rate demonstrates the strength of the data obtained in this research. Approximately 83% of the surveys sent out

to individuals were returned, reflecting that the data analyzed in this research would be representative of the population as a whole and not biased toward specific traits of those who responded. In addition, this research can be generalized due to the large number of responses they obtained. An incredibly large number of individuals responded to the survey, approximately 20,700 people, strengthening the generalizability of this research. The strength of Blau and Duncan's (1967) research came from the large percentage and number of responses their survey received.

Blau and Duncan's (1967) research was also strong because of the quantitative nature of their research. By conducting regression analysis, this research was able to generalize the data to a larger population, in this case American men between 20 and 64. Although qualitative research explored each individual difference between subjects, quantitative research focused on trying to generalize to a larger population, which added to the strength of this research. Blau and Duncan determined the relationship between the variables of father's occupation and educational attainment level to an individual's occupational attainment through their analysis. The quantitative nature of logistic regression, as conducted by Blau and Duncan, adds to the strengths of the research.

Limitations. The major limitation of Blau and Duncan's research was the lack of explanation in choosing certain variables and any theoretical background to justify those choices (Cooper, 2005; Sewell & Shah, 1969). By not including some justification for the inclusion of the variables used and the exclusion of

variables not included, the reader is left to guess as to why these variables are important. Without such justification, it is possible that important variables that might impact occupational attainment were left out of consideration, such as the educational experiences within elementary and secondary education that may influence educational attainment levels. Without accounting for this, the reader must take for granted the importance of the variables used and that the variables excluded from the research were completely justified in being excluded.

A second limitation exists in the understanding of occupational mobility with regard to today's individuals. On one hand, this research underestimates the difficulty of increasing one's socioeconomic status, especially through increasing education. Although the authors do correctly connect an individual's family background to the person's first job and social class, those individuals who try to better themselves economically have a difficult time accomplishing such a feat. It is difficult to obtain the training and skills of better paying career fields because an individual is trained and educated in the field of their first job. One way that an individual can obtain those additional skills is to obtain additional education. However, the economics of obtaining education beyond high school are overlooked as an obstacle for those individuals who are attempting to increase their economic standing. Those individuals most likely to attempt economic and occupational mobility would be those from lower economic groups, who would also face the greatest obstacles to obtaining a college education due to cost. On the other hand, it is common in today's occupational hierarchy for an individual to

have multiple career paths throughout his or her lifetime. By having greater fluidity in occupational attainment, the emphasis on an individual's first job may not be adequate to measure upward mobility in today's society. This dating of this research may impact its applicability in current terms. The limited conceptions of occupational mobility both as ease of educational attainment and the ability to change career paths demonstrate a limitation in Blau and Duncan's research.

The role of the mother, as presented by Blau and Duncan (1967), presented a limitation with regard to the generalizability to a current population. Although the role of the mother in Blau and Duncan's research was one of being a homemaker who, characteristic of women of the era, did not have a higher education, nor a career, the women of the household today are increasingly more likely to attend college, obtain a degree from an institution of higher education, and have their own careers (Solomon, 1985; Thelin, 2004). No major updates on the theory could be identified that took into consideration the changed role of women in American society. Although research on college choice has reflected the role mothers play in the college choice decision (e.g., Isherwood, 1991; McDonough, 1997), status attainment theory's emphasis on the father's occupational level may be misplaced given the increasing independence of women in the family household and the increasing number of single-parent households in American society. A major weakness that has not been accounted for in the development of status attainment theory is the changing role of women in American society.

Relationship to dissertation. Blau and Duncan's (1967) seminal research provided the basis of a theoretical model for why individuals choose to attend college. Through status attainment theory, an individual chooses a college education in the hopes of improving the level of careers that they would qualify in achieving. With an increased education, they are able to increase their occupational attainment, economic power, and social class as compared with their family's attainment. With an increased educational level, individuals would have deeper levels of knowledge and training to achieve upward social mobility. This theory gives a conceptual understanding of why individuals would be predisposed to go to college and decide to attend an institution of higher education. As academic achievers tend to come from more affluent economic groups, the decision to obtain an education may be seen as an attempt to remain in an affluent economic group or to increase their affluence (McLeod & Cropley, 1989; Robinson, Weinberg, Redden, Ramey, & Rainey, 1998). As other research has demonstrated, academically talented students are more likely to attend college than other groups of students, so the selection of which particular institution may play a particular role (Bers & Galowich, 2002; Hossler, Schmit, & Vesper, 1999). Many colleges, such as elite private institutions, advertise the unique increase in opportunities that they can provide to students and how they increase the student's job prospects upon graduation (Moll, 1994). Knowledge of this sociological underpinning about why individuals decide to attend college may influence and inform this research and the study about why a particular population decides to

attend a particular institution. Status attainment theory will influence this dissertation as a possible and probable underlining theory as to why individuals decide to attend college. Blau and Duncan's (1967) research on status attainment gives a basis for the inclusion of certain variables in analyzing college choice. Status attainment theory emphasizes the importance of socioeconomic status in the decision to college choice. Individuals who wish to remain in a high economic career, or enter a higher economic career than that in which their father was employed, would be more likely to attend college to obtain the skills needed for their future education. In addition, variables involving parental educational attainment become important in exploring college. As the career of an individual's father may in part be determined based on the educational level of the father, and the occupation of a father will influence the occupational attainment of an individual, a parent's educational attainment will influence the decision of whether an individual decides to attend college.

Sewell and Shah. Sewell and Shah (1967) linked additional factors to reasons that individuals wanted to move up occupationally and achieve a higher status attainment, increasing the scope of status attainment theory. Sewell and Shah (1967) believed that "the educational system plays an important role in the allocation of personnel to various occupational positions" (p. 1). The intelligence level of individuals and their educational background impacted the ability of individuals to obtain higher economic careers. Sewell and Shah connected socioeconomic status and intelligence, which was defined as a score on the

Henmon-Nelson Test of Mental Maturity (a test given to all Wisconsin high school juniors) as factors that influence individuals in their ability to increase their status attainment. By connecting intelligence and academic background into the occupational attainment of an individual, Sewell and Shah demonstrated that academic achievement played a role in the likelihood of college attendance, rather than solely focusing on the economic characteristics of an individual's family.

Combining the factors intelligence and socioeconomic status, Sewell and Shah (1967) found that certain individuals were more likely to attend college. Individuals who were of high intelligence were more likely to attend college, according to Sewell and Shah. These individuals were more prepared for college and were more likely to attend and graduate when compared with individuals who were less intelligent (Sewell & Shah). Also, individuals from higher socioeconomic classes were more likely to attend college than those who were from lower socioeconomic classes, demonstrating that a family impacts one's possible attainment through social impacts and fiscal affordability (Sewell & Shah). When exploring the impact of both categories, Sewell and Shah found that intelligence and socioeconomic status had virtually equal impact on the impact of the college choice decision. Intelligence level and socioeconomic status impacted the decision to attend college as those who were from higher intelligence categories and higher economic groups were more likely to attend college than those from other groups.

Sewell and Shah's (1969) research tested the theoretical model of Blau and Duncan (1967). Accepting Blau and Duncan's (1967) research regarding the definitions of what develops social class, Sewell and Shah (1969) connected status attainment theory directly to education by exploring how socioeconomic status (and intelligence) impacts the desire to achieve a college education and to enroll at an institution of higher education. This proves that individuals who came from well-off families are more likely to go to college and to remain at the upper echelons of status attainment (Sewell & Shah). The inclusion of additional variables such as socioeconomic status and intelligence level is appropriate for this study because these two variables are in part being addressed in this study. The inclusion of family income and the delineation to academically talented students relate to Sewell and Shah's inclusion of socioeconomic status and intelligence as variables to explore in status attainment theory as a theoretical foundation for why students attend postsecondary education. Sewell and Shah's research connects status attainment theory to the desire to achieve a college education.

Sewell, Haller, and Ohlendorf. Sewell, Haller, and Ohlendorf (1970) connected and tested a model that explores social structural and psychological factors in an individual's educational and occupational aspirations. Surveying and interviewing Wisconsin high school seniors, Sewell and associates found that social origins and ability connect directly to an individual's desire to obtain a higher occupational attainment for their first job. To enter the workforce at a higher position than their families, individuals increased their occupational

attainment by achieving a college education (Sewell et al.). Economic background influenced an individual's educational and occupational attainment.

An individual's academic ability and economic background impacted the occupational attainment for the individual's first job (Sewell, Haller, & Ohlendorf, 1970). The path analysis conducted by the researchers demonstrated that those individual's with high academic performance were more likely to have higher levels of occupational attainment (Sewell et al.). Although this finding was unique, Sewell and associates reinforced other findings that socioeconomic background and a father's education impacts the occupational and educational aspirations, indicating that those from lower status-attainment backgrounds were less likely to desire a high status attainment, while those from high status-attainment backgrounds were more likely to desire a high status attainment for themselves. The economic and occupational attainment of one's family impacted an individual's own status attainment desires.

Sewell, Haller, and Ohlendorf (1970) continued the work of Sewell and Shah (1969) in connecting the theory of status attainment to college enrollment. A father's occupation and family's socioeconomic status impacted the decision of individuals to attend college and the level of occupational aspirations that an individual has. Sewell and associates continued to connect college enrollment to the occupational attainment of an individual's first job, a direct connection to Blau and Duncan's (1967) theory of status attainment. In addition to testing the work of Blau and Duncan and that of Sewell and Shah, Sewell, Haller, and Ohlendorf's

study impacts this dissertation because of the inclusion of academic and occupational aspirations and expectations, which impacts the variables being evaluated in this study. Socioeconomic backgrounds directly impacted an individual's occupational aspirations, which educational attainment levels will impact.

Burke and Hoelter. Burke and Hoelter (1988) contributed to the development of status attainment theory by addressing its appropriateness to diverse populations. Noting that previous studies concentrated only on the population as a whole, Burke and Hoelter focused their study on the inclusion of identity characteristics to determine the relationship between identity, educational attainment, and occupational attainment. By including identity theory as a variable, Burke and Hoelter found that race and gender impacted the factors of educational and occupational attainment. Burke and Hoelter also demonstrated that academic identity impacts the educational attainment and occupational attainment desires differently for Black males as compared with other identity groups. "Family background, past school performance and teachers as significant others" play an important aspect for Whites (Burke & Hoelter, p. 41). Family background did not influence Blacks, while teachers' influence did not impact Black males but did impact Black females (Burke & Hoelter). The addition of a non-White population for status attainment theory was an important addition to the theory by Burke and Hoelter because previous analysis of status attainment theory

concentrated only on white families, and minorities have a unique cultural and historical experience that may not have easily translated into status attainment.

Burke and Hoelter (1988) questioned the legitimacy of the importance of significant others in the determination of educational and occupational attainment. Since certain groups have historically been kept from the power structure of high occupations, status, and education, significant others would not have the same influence as populations who have had access to power, status, and education (Blau & Duncan, 1967). In addition to family backgrounds, individuals from minority populations often failed to have the access to teachers and counselors who would put them on the college track with adequate resources and counseling throughout their high school years. This brings into question the influence of teachers and staff on diverse populations (Burke & Hoelter, 1988). Burke and Hoelter compensated for the lack of importance of significant others by including identity model variables to compensate for the differences in subpopulations and the resources and influences available. The importance of significant others was questioned by Burke and Hoelter, but compensated for by the inclusion of identity theory.

Relationship to dissertation. Blau and Duncan's (1967) theory of status attainment demonstrates the appropriateness of this theory as a reason that individuals would attend college. Developments to status attainment theory include two areas of importance that affect this research, the inclusion of additional variables (i.e., Sewell & Shah, 1967) and the inclusion of diverse

populations (Burke & Hoelter, 1988). Important variables to explore in the college choice decision include socioeconomic status, parental educational attainment, intelligence level, and academic achievement, which are connected to the theory of status attainment (Blau & Duncan, 1967; Sewell, Haller, & Ohlendorf, 1970; Sewell & Shah, 1967). In addition, as the college-going population has become more racially diverse, minority populations fit into the precepts of status attainment theory and are appropriate to consider alongside students of majority when evaluating college choice (Burke & Hoelter, 1988). Status attainment theory, through its inception with Blau and Duncan (1967) and those who expanded the theory, impacts this dissertation by including more appropriate variables and including diverse populations.

Status attainment conclusion. Blau and Duncan's (1967) theory of status attainment and the developments from that theory provided an explanation as to why individuals would go to college. As their lived experiences and an individual's family impact individuals, it would be evident that the careers of parents as well as their socioeconomic status would influence the occupational aspirations that an individual would have (Blau & Duncan, 1967; Sewell & Shah, 1967). To rise above their family's economic and occupational background, an individual would see a college education as a possible way to obtain a career that would ensure a high-level status attainment (Burke & Hoelter, 1988; Sewell & Shah, 1967). Status attainment theory explained a possible reason for individuals to attend higher education, to move up the status attainment ladder.

Cultural capital theory. Cultural capital theory explains that knowledge and experiences that individuals have over the course of their lives (cultural capital) enables them to succeed over those that do not have those experiences and knowledge (Barker, 2004; Bourdieu & Passeron, 1979; St. John, 2006). Individuals acquire habitus, defined as a set of patterns, thoughts, behaviors, and tastes, through their families, backgrounds, interactions, and cultural backgrounds (Scott & Marshall, 2007). As individuals obtain their habitus through the expectations set forth from their social connections, cultural capital theory focuses on the roles that family and communities provide for individuals (St. John, 2006). Cultural capital theory explains why individuals choose college as a twofold event. On one hand, an individual is influenced in their habitus, through family, friends, and community, to attend college or not to attend college as a value that the larger community may or may not hold (St. John). On the other hand, by attaining a college education, an individual is able to increase the knowledge and experiences that they can undertake versus individuals who do not attend college. This provides college-educated individuals an advantage in lifetime success (St. John). Cultural capital theory explains college-going behavior as an extension of habitus to give them an advantage of knowledge and experiences.

This section will begin by presenting and critiquing Bourdieu and Passeron's (1979, originally published in 1964) seminal work of cultural capital, which created the theory of cultural capital. Then Bourdieu (1986) will be summarized, explaining the definition of cultural capital in opposition of other

types of capital. Finally, Lamont and Lareau (1988) will be surveyed, applying cultural capital theory to an American population, demonstrating the appropriateness of this theory as an influence on this dissertation.

Bourdieu and Passeron. In their seminal work *The Inheritors*, Bourdieu and Passeron (1979, originally published in 1964) developed the concept of cultural capital, a second major sociological theory that informs the decision to enter into postsecondary education. Bourdieu and Passeron explained cultural capital as the lived experiences and learned knowledge that an individual obtains through the experiences they have over the course of one's life. Theoretically, those individuals with a greater variety of experiences and knowledge would be more successful in their endeavors and lives than those individuals who lack such experiences (Bourdieu & Passeron). Bourdieu and Passeron explained cultural capital as lived experience and additional education.

Description. Bourdieu and Passeron (1979) connected cultural capital to educational attainment. First, by obtaining greater cultural capital, an individual is more likely to be acculturated to obtaining a college education. As individuals gain greater experiences and knowledge, they are more likely to realize that obtaining a college education will be a benefit (Bourdieu & Passeron). Second, individuals who obtain a college education will have an increased knowledge base and be more successful economically after graduation. As the college degree will carry weight in the job process, plus the level of professionalization that this group of individuals will go through in the college curriculum, college graduates will

obtain better paying and more professional occupations than those who do not obtain a college education (Bourdieu & Passeron). Cultural capital is directly connected to educational attainment by helping develop that capital in an individual, which will help them succeed throughout their life.

Educational attainment, according to Bourdieu and Passeron (1979), was directly connected to the economic backgrounds of the individuals studied. Economic backgrounds were determined, similar to Blau and Duncan, through the occupation of an individual's father (Bourdieu & Passeron, 1979). The researchers found that those individuals from more manual-labor backgrounds were less likely to pursue higher education (Bourdieu & Passeron). Bourdieu and Passeron theorized that the lack of educational attainment for this population of individuals was twofold. First, individuals from low economic classes were neither encouraged nor expected to continue their education into the college and university realm, while their wealthier counterparts were regularly imbued with the idea that a college education was expected of them (Bourdieu & Passeron). Second, individuals from the lower economic groups did not have the same opportunities to add to their knowledge base as did those from a wealthier background, because of the inability to afford a college education (Bourdieu & Passeron). Economic background provided a direct connection to the cultural capital of an individual.

Beyond obtaining a college education and entering the workforce, cultural capital can expand one's power economically based on the experiences they

undertake (Bourdieu & Passeron, 1979). Knowledge can reflect one's economic power in society, which can help increase one's economic standing through informal and unofficial networking (Bourdieu & Passeron). Having knowledge, for example, of how to identify a good wine would only be identified with high economic backgrounds, and individuals would benefit from this knowledge in influencing individuals who are economically well-off and in positions of influence (Bourdieu & Passeron). Cultural capital increases an individual's position in society by reflecting the knowledge of one's class, and creates an informal network to increase one's occupational and economic standing.

Methodology. Bourdieu and Passeron (1979) based this work and cultural capital theory on a large-scale survey project conducted in France by the Center for European Sociology. Bourdieu and Passeron oversaw a number of the segments of this survey project, specifically on “students’ mutual acquaintance, attempt at integration, students’ image of the student, and the Sorbonne Greek Drama Society (p. ix).” Other survey aspects, in addition to Bourdieu and Passeron’s segments, included “examination anxiety and students leisure (p. ix).” The broader project included both qualitative and quantitative surveys. Bourdieu and Passeron created cultural capital theory from a broad-based survey project conducted with college students across France.

Results. Although no research protocol was established in this research, Bourdieu and Passeron’s (1979) theory of cultural capital developed from the results of the survey project conducted by the Center for European Sociology.

Individuals who have less cultural capital are less likely to obtain a college education because they are not introduced to the expectations of a college education (Bourdieu & Passeron). The cost of a college education may not be a chief deterrent to a higher education for those from lower economic classes because educational attainment comes from a development of expectations that can begin when an individual is young. This implication for policymakers may be that financial aid and affordability are not as important an aspect as introducing individuals to higher education at earlier levels because the larger deterrent to achieving a college education was expectation development, not cost. Cultural capital theory impacted the educational attainment of individuals by demonstrating the importance of expectation development over the affordability of higher education (Bourdieu & Passeron).

In addition to the relationship between cultural capital and educational attainment levels, cultural capital impacts the ability of individuals to move into higher-class careers (Bourdieu & Passeron, 1979). As those with cultural capital go to college in greater numbers, they have more opportunities in the job market due to the prestige of having a college degree and the increased knowledge that college gives to students (Bourdieu & Passeron). Those with cultural capital can use their capital to make contacts who are of the same economic group and take advantage of unofficial networking opportunities to advance their career, similar to the concept of playing golf with one's boss (Bourdieu & Passeron). Cultural

capital allows one to improve their occupational attainment, in addition to their educational level (Bourdieu & Passeron).

Strengths. The major strength of Bourdieu and Passeron's (1979) theory of cultural capital is their relationship between the theory and higher education. By eliciting the material from college students to obtain information about cultural capital, it is clearly applicable to college students and the attainment of a college education. The theory of cultural capital demonstrated the impact that a college education can have on one's future occupational attainment. Although Blau and Duncan (1967) posited that a college education increased one's occupational attainment, Bourdieu and Passeron (1979) explained the details of the actual connection between attaining a college education and receiving a higher occupation upon graduating. Through this connection, cultural capital theory was presented as an obvious theory to consider when exploring the predisposition of individuals to attend college, and should be considered when researching college choice. The direct connection between cultural capital and education, as established by its authors, was one of the strengths of this research because the authors based their theory in the concept of college choice and why individuals decide to attend higher education.

A second strength for this research was the use of multiple research projects to establish cultural capital theory (Bourdieu & Passeron, 1979). Although no direct protocol was established, Bourdieu and Passeron explained that this is part of the larger research of the Center for European Sociology and specifically came

out of at least six separate studies. By triangulating the theory from multiple informational sources, Bourdieu and Passeron strengthened their concepts by demonstrating the theory's applicability to multiple populations and in multiple situations. Cultural capital theory would not have been as strong a theory if it only consisted of one source of information. The triangulation of information from multiple sources added a second major strength to cultural capital theory.

Limitations. Limitations exist for Bourdieu and Passeron's (1979) theory of cultural capital. The chief limitation of this research was the lack of research protocol. Although the authors explained that multiple surveys were conducted to explore cultural capital, no details were established demonstrating who was surveyed, when they were surveyed, who responded to the survey, or what questions the surveys asked. This greatly limited the knowledge of the reader toward an understanding of the context of the theory. The explanation of cultural capital theory would have been greatly enhanced with knowledge regarding what questions were asked and what survey results were directly attributed to the formulation of the theory.

A second limitation of Bourdieu and Passeron's (1979) theory, as established by the translator, was the dated material of the surveys conducted. Beginning in May 1968, student protests in France caused major changes in the higher education system of France, and these were not accounted for in cultural capital theory. Refocusing the nature of higher education and the desired attendants to include a more diverse student body (both racially and economically)

may change the predisposition argument of Bourdieu and Passeron's theory. The dated material and historical changes to higher education in France limit this research.

Connection to dissertation. Bourdieu and Passeron's (1979) cultural capital theory applies to the current research by providing another framework to consider why individuals decide to attend college. Cultural capital theory explains the reason to attend college to be a way to increase an individual's knowledge and experiences in life, which will greatly increase an individual's ability to succeed. Although both cultural capital theory and status attainment theory theorize that a college education will lead to a better occupational attainment level, the theories are different in the onus of what the importance is. Although status attainment theory posits that individuals go to college specifically to get a better career and increase their social class, social capital theory explains that an occupational attainment level is a by-product of one's experience and knowledge level. Cultural capital theory illuminates some factors of importance in the college choice decision process. College provides a perfect opportunity for the increase of knowledge and experience in an individual's life, and educational attainment desires would prove to be a more important variable in college choice, according to cultural capital theory. In addition, cost factors would prove to be less important variables because if costs issues were eliminated due to financial aid, these individuals may still be less inclined to attend college because they have not had the influences that provide the expectation of higher education as an accepted

goal of life. Capital cultural theory provides additional explanations about why individuals attend college and refocuses attention to variables within the college choice process.

Bourdieu. Bourdieu (1986) developed cultural capital theory by explaining the difference in the types of capital, traditional economic capital (money), social capital (connections to individuals in power), and cultural capital (as previously explained). Although Bourdieu conducted no additional research, he provided a theoretical exposition to further explain cultural capital. Developing cultural capital theory as an explanation for why children from different social classes had unequal academic achievement, Bourdieu (1986) explained that economics underpin an individual's experiences. Those individuals from higher economic classes have the ability to participate in a greater number of things than those from lower economic classes (one example would be the ability to travel and see national/international landmarks). Individuals with additional experiences and the knowledge picked up from those experiences are more likely to have a higher academic achievement, while those who do not have the additional experiences and knowledge are less likely to achieve academically (Bourdieu). Cultural capital theory explained why students from differing economic classes have differing academic achievement levels.

Bourdieu (1986) further explained cultural capital in three types—embodied, objectified, and institutionalized—as a way to explain the differences in types of capital. The embodied state is where cultural capital is imbued internally

through time and socialization from one's social circle and family to an individual (Bourdieu). As individuals are socialized to believe certain things, or to have certain values, they are developing embodied cultural capital (Bourdieu).

Examples of embodied cultural capital are attaining a higher education, or valuing museums. Objectified cultural capital is cultural capital that can be owned, such as works of art. Although an actual object can be sold to anyone in a physical manner, one retains cultural capital for it by understanding the value of such art in a noneconomic sense (Bourdieu). An institutionalized state is the recognition one receives from the cultural capital they hold, such as an academic degree.

Although having a degree in itself provides no economic benefit, institutions accept that an individual with a degree has a certain level of education and knowledge and is therefore more valuable than those without the degree (Bourdieu). Bourdieu's explanation of the types of cultural capital was the contribution to the development of cultural capital theory that this important work made to the literature.

Lamont and Lareau. Lamont and Lareau (1988) contributed to cultural capital theory by applying the theory to an American population and introducing a new definition for cultural capital. The researchers conducted meta-analysis of other studies, including the original Bourdieu and Passeron study, disentangling concepts from the original French research and applying them in American society (Lamont & Lareau). In addition, Lamont and Lareau introduced a new definition for cultural capital, one that focuses on the aspect of exclusion of individuals.

Lamont and Lareau contributed to the development of cultural capital by applying cultural capital theory to American students.

Lamont and Lareau (1988) argued that research had successfully been conducted demonstrating that cultural capital theory could be applied to students in the United States, beyond the original French subjects of Bourdieu and Passeron. Lamont and Lareau explained that since multiple studies had been conducted reflecting how cultural capital successfully translated to the United States, cultural capital theory was applicable to students in the United States and was not just a unique experience that the researchers found (e.g., DiMaggio, 1982; Dimaggio & Mohr, 1985; Lareau, 1987). Lamont and Lareau contributed to the development of cultural capital theory by assessing its viability for non-French populations, specifically students in the United States.

Lamont and Lareau (1988) introduced a new definition of cultural capital, adding to the important contributions to the theory. Although previous definitions focused on the benefits that cultural capital can give to an individual, Lamont and Lareau expanded that definition to focus on how excluding certain groups from the attainment of cultural capital can adversely affect those groups' social mobility. Cultural capital was defined as "institutionalized, i.e., widely shared, high status cultural signals (attitudes, preferences, formal knowledge, behaviors, goods and credentials) used for social and cultural exclusion ... referring to exclusion from jobs and resources and ... from high status groups" (Lamont & Lareau, 1988, p. 156). By altering the definition of cultural capital, Lamont and Lareau introduced

the importance of cultural capital by exposing how those who lack cultural capital fail to succeed in society based on the lack of cultural capital. Lamont and Lareau introduced a new definition for cultural capital, one which demonstrated its true influence on social class and success.

The exclusion of power and the ways that individuals were relegated to less cultural capital were explored in this research (Lamont & Lareau, 1988).

Individuals were excluded from power in four possible ways: self-elimination, overselection, relegation, and direct selection (Lamont & Lareau). Self-elimination occurred when individuals adjust their aspirations based on their chances of succeeding (Lamont & Lareau). This would occur in the college choice decision when individuals decide not to apply to college because they feel that they would not be able to get into the institution of their choice.

Overselection occurred when those with less privilege are subjected to the same criteria as those with more privilege (Lamont & Lareau). In college choice, overselection would occur when the admissions office decides to admit or deny a student in comparison to those who are also applying to the institution. Relegation occurred when those with fewer resources end up in less desirable positions than those with greater resources (Lamont & Lareau). Relegation would occur when those with fewer resources attend community colleges rather than elite four-year institutions. Direct selection occurred when those with similar tastes socialize with like individuals, excluding those who do not share similar tastes (Lamont & Lareau). Although this does not translate directly to college choice, those who are

not introduced to the same cultural capital during college may be excluded far into the future based on the education, tastes, and social networks that are developed during college. Lamont and Lareau's four ways of exclusion contributed to the development of cultural capital theory by including a new definition of cultural capital theory that focused on the effects of being excluded from cultural capital.

Relationship to dissertation. The contributions to cultural capital since the original work of Bourdieu and Passeron (1979) impact the conception of this dissertation. Bourdieu's (1986) definitions of the types of capital reflected that an individual does not have to increase their knowledge to have cultural and social capital. However, the development of cultural capital can be greatly enhanced by a college education, as a college education will increase the knowledge base and list of social contacts that an individual attains. This may minimize the impact of economic and family background characteristics when exploring college choice. However, elements of academic preparation and academic attainment could be increasingly valued under cultural capital theory. Lamont and Lareau (1988) impacted this dissertation by testing cultural capital theory on an American population, which reflects the theories appropriateness for inclusion in this dissertation, since this dissertation will study American students. Definitions of cultural capital, which emphasize different variables and the inclusion of American students as a population, demonstrate the connection between these additions to cultural capital theory and the current dissertation.

Cultural capital conclusion. Bourdieu and Passeron's (1979) theory of cultural capital posits that an individual is more successful in his/her life by having a greater number of diverse experiences, increased knowledge, and a larger number of social contacts. Individuals use a college education for the ability to learn a wide variety of subject areas as well as to make professional contacts with their classmates (Bourdieu, 1986). Those who do not make these connections are often excluded from economic and intellectual rewards, such as the ability to use connections to make business deals, or to take advantage of museums in the local area (Lamont & Lareau, 1988). Cultural capital reflects the use of knowledge and connections to make an individual successful.

Economic theory. In addition to status attainment and social capital theory, a third theory exists regarding why individuals choose to attend college. Economic theory, also referred to as economic theory, applies to the college choice decision as individuals view higher education through economic principles, such as costs versus benefits (St. John, 2006). Individuals considering college determine the opportunity cost, which weighs the financial cost of college attendance, such as tuition, room/board, and wages lost by not entering the workforce right away against the benefits that could be attained through college education such as increased wages due to an advanced degree (St. John). Variables in this theory focus on cost and financial aid factors (St. John). Financial aid is seen as important contribution to college attendance in this theory, as it directly reduces the cost of higher education for individuals to obtain (St. John).

Economic theory focuses on the cost benefits analysis for making a decision, and in the context of college choice the value of the education versus the opportunity cost of delayed workforce entry.

Manski and Wise. In their seminal work, Manski and Wise (1983) combined thematic elements from economics and statistics to the field of education, which was seminal because it provided the first cohesive study that explained the decision to pursue postsecondary education in economic terms, with individuals weighing the costs and the benefits of obtaining an advanced education. Exploring college-going and persistence decisions from the perspective of economics, Manski and Wise discovered connections between the economic costs and economic benefits of attending and completing college. Manski and Wise connected earning potential with an individual's economic level to determine the connection between the two. Manski and Wise explored economic principles to study education, which established the importance of cost factors and future economic earnings.

Description. Economic principles play into an individual's college choice decision, according to Manski and Wise (1983). As individuals determine whether to attend college, they consider the economic outcomes of their college choice decision (Manski & Wise). An individual must determine whether the costs of a college education are worth the possible rewards that they might receive upon graduation (Manski & Wise). Traditional costs, such as tuition, fees, and housing, can be mitigated by the offering of financial aid, reducing the economic

responsibilities of students (Manski & Wise). By reducing these costs, individuals would be more likely to attend higher education. Nontraditional costs also play a role in the decision to attend college, as individuals must determine whether to achieve deferred compensation, since they will not be entering the workforce immediately after graduating high school (Manski & Wise). An individual who is deciding whether to attend college must examine economic considerations.

Manski and Wise (1983) found that just choosing a college would not be enough to ensure the economic benefits of an increased educational attainment. To receive the benefits of increased wages, Manski and Wise demonstrated that an individual must actually complete their college education, as those individuals who did not persist and failed to graduate did not receive higher wages in their careers. Through the emphasis on persistence and degree completion to achieve economic rewards in Manski and Wise's study, college choice was only half of the economic equation to determine a cost-benefit analysis of attending college. Degree completion constituted the second important element for individuals to achieve the higher economic benefits of attending college in Manski and Wise's study. To garner the economic benefits of a college education, according to Manski and Wise's theory, an individual must complete college and obtain a degree, rather than just entering into a higher education.

Methodology. Manski and Wise (1983) used a large, established database and quantitative data analysis to form the basis of their economic theory about college choice and persistence. The data came from the National Longitudinal

Survey (NLS) as established by the Department of Education, which surveyed the high school graduating class of 1972 and paid special attention to the implementation of the Basic Educational Opportunity Grant (now named the Pell Grant) and its impact on the college-going characteristics of the population (Manski & Wise). From the data set, the researchers constructed structural equations to assess the impact of a number of characteristics on the decision of whether or not to attend and complete college, as well as the amount individuals earned from their job at the time of the survey (Manski & Wise). Characteristics of the individual and the institution were taken into account in the data analysis. Quantitative analysis and the NLS database provided the basis of methodology for Manski and Wise's (1983) research.

Results. Manski and Wise (1983) found that completion of degree impacted the amount of money one would make during their subsequent careers. Although the decision to attend college was a prerequisite to these enhanced earnings, the selection of college was not as important as degree completion to enhance one's earnings (Manski & Wise). Racial comparisons showed varied results. When comparing White and Black subjects of similar economic backgrounds and academic proficiencies, Manski and Wise found little difference in college choice decisions, contrary to conventional wisdom (Manski & Wise). On college completion, Manski and Wise found similar graduation rates between Black and White students, with the exception of Black students at predominately white institutions, which graduate at much lower rates than their counterparts at

other institutions (Manski & Wise). Black graduates still reflected a significantly smaller number than White graduates (Manski & Wise). Gender comparisons were not made by Manski and Wise. Degree completion impacted the earning potential of individuals, as those who graduated earned more money on average than those who neither attended nor graduated.

Net cost and financial aid were deemed to be significant in the decision to attend and to complete college by individuals (Manski & Wise, 1983). By exploring the college-going rates before and after the implementation of the Basic Educational Opportunity Grants, Manski and Wise found that the additional funding through federal financial aid (and subsequent decrease in tuition cost to the individual) increased college-going rates and persistence for students. Since college-going rates increased based on a change in the economic investment from the students, Manski and Wise determined that individuals consider the economic risks and benefits when deciding to enroll in college. Tuition charges and financial aid impacted the decision of individuals to attend college, as a decrease in the net cost of college increases the enrollment of institutions.

Strengths. Manski and Wise's (1983) research had many strengths, especially related to their methodology. By using a national database, Manski and Wise had access to a large, national sample. Such a sample increases the generalizability of their results. Also, since the NLS utilized longitudinal data, the researchers were able to determine the longer-term effects of college attendance. In addition to the large database, the quantitative nature of the data analysis

contributed to the generalizability of the research. By having a large database that focuses on longitudinal data, the researchers were more likely to obtain a representative sample of what the average individual might consider in their college choice decision. The purpose of quantitative research is to generalize its results to a greater population, and the analyses conducted by Manski and Wise reflect that intent. The methodology of Manski and Wise's research contributed to its strength because a large representative sample and quantitative research methods increased the generalizability of the results.

The timing and focus of this research contributed to the strengths of Manski and Wise's (1983) research. The research was conducted at an appropriate time to study the impact of financial aid on the ability of individuals to go to college. Due to the individualized financial aid awarding strategies that institutions have, which limits the large-scale impact of institutional aid, the impact of the first federal financial aid grant program can demonstrate the impact of financial aid and the reduction of net cost on a large group of diverse students. The implementation of the Basic Educational Opportunity Grant allowed for a full-scale analysis of the impact of cost and financial aid on students throughout the country. Manski and Wise's research gave the opportunity to study the influence of financial aid on a wide variety of students, rather than a small select population at a particular institution.

Limitations. Manski and Wise's (1983) research does have some limitations. Although Manski and Wise tested for the impact that the

implementation of the Basic Educational Opportunity Grants had on college attendance, they did not have information regarding the impact that cost and financial aid had on the decision to attend college. The possibility exists that individuals may have found college to be affordable, but did not attend for a number of other reasons, or that the value of financial aid was not enough for individuals to be able to attend an institution of higher education. In either situation, Manski and Wise do not have the data to assess perceptions of affordability. The data obtained by Manski and Wise do not completely allow for the analysis of affordability perceptions because their research does not ask respondents questions about cost perceptions, but only conducts correlational analysis between the awarding of grants and the decision to enroll in an institution of higher education. In addition, Manski and Wise do not address the possibility that those who do not go to college fail to do so for noneconomic reasons. The data used by Manski and Wise do limit the analysis that the researchers can conduct because it does not answer questions with how individuals internalize the perceptions of the affordability of a college education.

A second limitation to Manski and Wise's (1983) research is the focus on persistence. Although some analysis did include the impact of financial aid on the ability to attend college, the focus on the analysis was on the impact of persistence on postgraduation earning potential. Manski and Wise's research would be appropriate as background for persistence studies, but Manski and Wise fail to make the argument that their development of economic theory would be entirely

appropriate in understanding college choice decisions. Individuals who have already decided to attend college have made the decision to forgo early workforce entry and increase their likelihood to obtain a college degree when compared with those who enter the workforce early. The continuation of education should be constant, as an individual would have an estimation of how much the tuition net cost would be, unless a tuition increase or financial aid decrease occurred. These factors do not hold true for an individual's college choice process, as individuals may be unaware of what the net cost of tuition will be until they go through the application process. The focus on persistence, rather than on college choice, adds a limitation to their research because of the knowledge that an individual has when persisting that an individual did not have when making a college choice decision.

Connections to dissertation. Economic theory could be used to analyze why individuals choose to go to college and why they choose one specific institution over others. As current focus in policy and in the news is on college affordability, the decision to weigh costs versus benefits proves to be a valid concern. It gives weight to the variables of cost and financial aid that are deemed less valid in cultural capital theory. The importance for variables such as tuition and the awarding of financial aid would be greatly enhanced under economic theory. The type of institution that an individual decides to attend would be of great importance as well, as two-year public institutions are often less expensive and four-year private schools are often more expensive than other types of institutions. The economic background of a family would also be important in the

decision of college attendance, as that directly impacts the amount of expendable income a family could put toward the tuition. Economic theory provides an opportunity to understand college choice behavior through an economic lens, giving weight to variables directly associated with the net cost of an institution.

Kane. Kane (1994) contributed to economic theory by using an updated population to determine the accuracy of Manski and Wise's conclusions. Using the High School and Beyond database, Kane explored the relationship between college choice, persistence/degree completion, and earnings for the high school class of 1980. Kane's analysis updated economic theory in college choice by using a more current sample to determine whether the concepts continue to prove accurate with different populations.

Although Black students showed a greater increase in college entry than their White counterparts, the amount of Black students graduating from four-year institutions failed to keep pace with White student graduation rates (Kane, 1994). Black students did not see the same economic benefits when deciding to attend college as their White counterparts, since they are unlikely to complete their education and see the economic benefits of a college education (Kane). The racial disparities between potential college students reflect a variation in the opportunity to receive the economic benefits, which may negatively affect minority students' decisions to attend college.

Kane's (1994) addition to economic theory was limited to proving that economic theory could be appropriate for populations at different times. Although

this demonstrates the appropriateness of using economic theory as a background theory for this research project, Kane failed to address the limitations and weaknesses of Manski and Wise's research. Kane did not take into consideration the perceptions of his sample, but focused on the enrollment patterns of individuals receiving financial aid. As such, there may be unaccounted-for factors in the sample that affect the perceptions about cost and affordability, such as widespread coverage of high tuition costs. With this failure, Kane's research does not contribute to solving theoretical holes within economic theory because he conducted the same analysis of Manski and Wise with a more current sample.

Paulsen and St. John. Paulsen and St. John (2002) contributed to the development of economic theory in three ways, connecting college choice to persistence, testing economic theory on various economic classes, and integrating choice theory into college choice. Paulsen and St. John connected college choice to persistence through economic theory. Although previous researchers (e.g., Manski & Wise, Kane) failed to make the connection between college choice and persistence, Paulsen and St. John explained that those individuals who make college choice decisions based on economic concerns and cost factors are most likely to make decisions to remain enrolled in college based on the same factors. In essence, if economics became an individual's top concern for enrolling at a particular institution, those factors would continue to influence his/her ability to continue and finish his/her education (Paulsen & St. John, 2002). Although persistence may still be seen as the chief goal for individuals in higher education,

the college choice decision impacted the ability to finish their education, according to Paulsen and St. John. The connection between college choice and persistence was the chief contribution that Paulsen and St. John made to economic theory.

Economics impacted the college choice decision on individuals differently, depending on their economic class (Paulsen & St. John, 2002). Low-income students were most affected by economic issues when deciding to attend college (Paulsen & St. John). Approximately half of these individuals were independent students who took a break upon graduating high school until they were deemed independent for purposes of financial aid eligibility (Paulsen & St. John). The other half of the low-income population were families who were living on less than \$11,000 a year, which often consisted of large numbers of racial minorities (Paulsen & St. John). Low-income families (those earning under \$11,000 a year), according to Paulsen and St. John, were the most likely of all populations studied to receive larger-than-average loans and grants, but attended lower-cost institutions of higher education. Lower-middle-income students (those earning between \$11,000 and \$30,000 a year), often referred to as working class, considered both living costs (i.e., room and board) as well as tuition costs to be important factors in their college choice decision (Paulsen & St. John). Upper-middle-income students (those earning between \$30,001 and \$60,000 a year), considered to be the “middle class,” tended to have small numbers of minority individuals and considered cost factors to be important, but not an overwhelming influence in their college choice decision (Paulsen & St. John). Upper-income

students (those earning greater than \$60,000 a year) did not report that cost considerations played a substantial role in their college choice (Paulsen & St. John). The exploration of economic theory by economic background, rather than race, demonstrated an appropriate expansion of economic theory.

Paulsen and St. John's (2002) third contribution connected economic theory to choice theory, which posited three major assumptions regarding college choice. Paulsen and St. John listed as the first assumption that there existed "a sequence in educational choices with explicit policy linkages" (p. 192). The researchers believed that each step along the way to attaining a college education would have direct applications that education policy could and should address, such as aspirations, choice-of-college, choice of major, and persistence (Paulsen & St. John). Paulsen and St. John explained the second assumption that due to the "diverse patterns of student choice, diverse groups merit study" (p. 192). Similar to the way that the researchers applied economic theory to various economic groups, they encouraged the exploration of economic theory to a multitude of populations to demonstrate that diverse groups may differ in decision-making based on diverse characteristics (Paulsen & St. John). Paulsen and St. John explained the third and final assumption that "students make educational choices in 'situated' contexts" (p. 192). Although most college choice research makes certain assumptions about the conditions that individuals come from, such as geographic, social and economic, educational choices are usually made from an individualized context of an individual's culture (Paulsen & St. John). Connecting

choice theory assumptions with economic theory constituted a major contribution to economic theory made by Paulsen and St. John.

Relationship to dissertation. The additions to Manski and Wise's (1983) original research relate and impact this dissertation. Kane's (1994) research a decade later proves the importance that economic theory can have on the enrollment decisions of an individual as the importance of affordability and net cost reflect in the ability to attend an institution of higher education. As college affordability has permeated the news over recent years, economic theory proves to be a salient consideration for an individual making a decision to attend college. Paulsen and St. John's (2002) research demonstrates the importance and differing impact that net cost may have on college choice, as an individual from a low economic group will be more affected by price than an individual from a high economic group. The applicability of economic theory to students of different time periods and the varied impact of net cost to an individual based on their economic group make economic theory an appropriate theory to include in this dissertation.

Economic theory conclusion. Economic theory provides an economic rationale for why an individual decides to attend college. An individual will weigh the opportunity cost of delayed workforce entry with the potential increased earnings from having an advanced degree to determine if a higher education is right for them (Manski & Wise, 1983; Kane, 1994). The impact of economic concerns on the decision to attend college may affect individuals differently, as

low-income families are impacted more severely by cost factors (Paulsen & St. John, 2002). Economic theory is an important theory of college choice, as it highlights the cost benefits of a college education, which is portrayed profusely in the media for today's students.

Sociological underpinnings conclusion. Status attainment, cultural capital, and economic theories provide a background of theoretical frameworks on why an individual may decide to attend college and increase their predisposition to attend college. Status attainment theory focuses on the need for a better career than an individual's family might have, which will come with better responsibilities, less blue-collar work, and more pay (Blau & Duncan, 1967). Cultural capital focuses on the appreciation of knowledge and networking to give an individual power and success, which is greatly enhanced by the decision to attend college (Bourdieu & Passeron, 1979). Economic theory focuses on the direct economic benefits and costs of attaining a college education, looking at the benefits of increased pay versus tuition costs and delayed earnings (Manski & Wise, 1983). These theories provide a comprehensive background for why an individual may decide to attend college or enter the workforce early.

Factors of College Choice

While status attainment, cultural capital, and economic theories provide the underpinnings for sociological reasons that individuals decide to pursue postsecondary education, models of college choice exist to assess what characteristics and variables influence the postsecondary attainment decision of

individuals. The study of college choice in its modern form through the use of models and assessment of individual variables stems from the underpinnings previously discussed.

This section of the literature review will focus on the particular factors of college choice that influence an individual's college choice so that the reader can understand the variables to be explored in this research. This section will begin with a presentation and critique of the model that serves as the theoretical basis for this research, Chapman's (1981) model of college choice. Factors of college choice will be analyzed in two conceptual areas, internal characteristics and external characteristic, which were first conceptualized by Chapman (1981) and whose theory underpins this research. Internal characteristics are those characteristics that the individual themselves bring to the equation, such as race, sex, or family background. External characteristics are those characteristics that the institution of higher education brings to the equation, such as geographic location, cost, or college type. The influence of others refers to how individuals who are not the applicant may impact an individual's college choice decision.

Models of college choice. Many models have been developed to explain college choice. Hossler and Gallagher (1987) explained the college choice process in terms of a chronological process. In the predisposition phase, a student determines the likelihood of pursuing a postsecondary education. Then the individual conducts a search to determine what institutions they will apply to. In the choice stage, the third and final of the Hossler and Gallagher model, a student

decides to apply to an institution of higher education. In Litten's (1982) model, college choice is a function of the cost of higher education and how financial aid helps mitigate the economic difficulties of attending college. In Litten's three-stage model, an individual (in addition to selecting and applying to college) decides to apply for financial aid, submits applications for financial aid and is awarded financial aid by the institution in determining to attend college. In addition to these models, multiple large-scale studies exist that explore what variables factor into the decision of individuals to attend postsecondary education (e.g., Hossler, Schmit, & Vesper, 1999; McDonough, 1997), but the studies fail to articulate a comprehensive model of college choice. While other models and studies exist regarding college choice, Chapman's (1981) model of college choice provides a unique model that is appropriate for this study.

Chapman's model of college choice. Chapman's (1981) model of college choice is appropriate for this study for three reasons: the development of a comprehensive model of college choice based on separate variables, the treatment of the choice decision, and the institution's choice decision. Chapman was the first to develop a comprehensive model of college choice. While it can be debated that other variables should be included based on how the definition of access has become important in college choice, or how the development of technology has attained a greater importance than written material in regards to higher education, the variables that Chapman included are still considered important ones to the decision of college choice (as will be explored later in this section of the literature

review). In other models of college choice the decision to enroll in college is seen as the end result of the decision to pursue postsecondary education, while in Chapman's model, the decision to apply to colleges is treated as an integral phase of the college choice model. Chapman introduced an aspect in the college choice discussion that has not been replicated in other models, that is, the decision of the institution to admit the student. The decision of the institution is particularly salient when looking at an individual's choice-of-college as the college needs to admit the student for the student to be able to enroll at that particular institution. Chapman's model of college choice offered three unique aspects that influence this study as compared with other models of college choice.

Chapman (1981) introduced a model of student college choice that incorporated multiple strands of thought on the subject at that point. He developed his model from two trends in higher education in the early 1980s, an expected decline in college applications and enrollments and an increase in funding to "develop more sophisticated marketing strategies, more appealing programs, and better recruitment literature" (Chapman, 1981, p. 490). By analyzing these trends, Chapman had a threefold purpose: (a) to assist those responsible for setting recruitment policy to better identify the factors that influence the applicants' college choice decision; (b) to review and add to the current research on student college choice; and (c) to assess the importance of printed recruitment materials on the college choice decision. [As purpose (c) is unrelated to the analysis of the model used as a theoretical framework, it will not be addressed].

Explanation of the model. Chapman's (1981) model brings together two main conceptual areas of college choice—internal and external influences. The model begins by examining student characteristics, such as socioeconomic status, aptitude/expectations, and high school performance. Chapman combines these internal characteristics with external influences that impact on an individual, which fall within three areas: significant persons (friends, parents, high school personnel), fixed college characteristics (location, academic programs, cost/financial aid), and college efforts to communicate with students (campus visits, admissions/recruitment). These three areas combine to determine the “general expectation of college life (1981, p. 492)” and then to impact the student's choice-of-college. Unique to Chapman's model, however, is that there is a second choice made in the college choice process, that being the university's decision to admit or deny the student. Chapman's model explained three areas of characteristics and the decision of the school in the creation of a model of college choice.

Results. Among internal characteristics, socioeconomic status, aptitude, level of educational aspiration/expectation, and high school performance proved to be important factors in a student's college choice decision (Chapman, 1981). Socioeconomic status and family income impact the type of institution that an individual decides to attend, as “upper income students appear to prefer private universities, middle income students tend to prefer state universities, and lower income students are apt to prefer community colleges or state colleges” (Chapman,

p. 493; Davis & Van Dusen, 1975). Aptitude influences college choice, as students desire to be around students who are similarly inclined academically and do not want to be around those who are extremely more or less intellectual than they are (Chapman). Chapman mentioned that educational expectation level has a moderate impact on college decision, as individuals who want to go beyond receiving a bachelor's degree will be more likely to enroll at an appropriate institution to reach their goals. Chapman's model reflected on both educational aspirations and educational expectations as similar concepts that impact the college choice decision of individuals. For the purposes of this research, educational expectations will be explored to ascertain the influence of this variable on the choice-of-college decision. The better an individual does in high school the more likely he or she is to eventually enroll in an elite and selective institution (Chapman). Chapman's study introduced a set of internal characteristics that may influence an individual's college choice decision. Through the introduction of variables, Chapman's research influences the future of college choice research by providing a starting point of potential variables that may impact the decision of an individual to attend an institution of higher education. The main characteristics that impacted an individual's decision to attend college were socioeconomic status, academic achievement, and family income.

Among external influences, Chapman (1981) found a number of important influences on college choice. Friends and family exert a strong influence on the individual by shaping "the student's expectations of what a particular college is

like, offer direct advice as to where the student should go to college, and in the case of close friends, where the friends themselves go to college” (Chapman, 1981, p. 495). Location is an important factor of college choice, as “over 50 percent of entering freshman attend colleges within fifty miles of their home and 92 percent attend college within five hundred miles of their home” (Chapman, p. 497). Also, the availability of desired courses is important to students, who are more likely to go to an institution that they believe will prepare them to enter graduate school or obtain a job (Chapman). These external influences provide another group of variables that impact an individual’s college choice decision. The categorization of these variables demonstrated that forces beyond the individual may impact the ability of an individual to enroll in postsecondary education. External influences impact the ability of individuals to enroll at an institution of higher education.

An interesting finding of Chapman (1981) is that cost and the availability of financial aid are not a definitively salient factor in the decision of which college an individual decides to attend. The results of this study indicate that cost is a larger issue on the predisposition of a student’s decision on whether or not to attend college, but not on what particular institution to attend. However, other studies reviewed by Chapman indicate that cost is a factor that can make a decision of college selection, such studies as that of Tillery and Kildegaard (1973), who found that cost was a factor in the type of institution an individual will attend. However, Chapman addressed financial aid as a mitigating factor that will influence college

choice only if cost is a factor of importance to a particular applicant. Chapman found that financial aid was not a major factor in an individual's college choice decision, even though some of the research Chapman examined reflected the importance of financial aid.

Conclusion. Chapman's (1981) model of college choice provides a comprehensive model to explore the factors that exist in the college choice decision. Chapman categorized college choice variables into three arenas: internal characteristics (those dealing with the students), external characteristics (those relating to the institution of higher education, the influence of important individuals, and the communication between the school and the student), and influential individuals (those individuals who may impact the decision of the student). In addition to the categorization of the model, the variables that were studied are still demonstrated to be salient in the college choice of individuals (e.g., NPEC, 2007). Chapman created a unified theory that combined different factors into a comprehensive model that covered the variables that might impact an individual's college choice decision. Chapman's model of college choice provided an organized system to analyze the factors that influence an individual's college choice.

Relationship to dissertation. Chapman's (1981) research provided the theoretical framework upon which this dissertation is based. The delineation between internal and external characteristics, and the influence of influential individuals, provide an organization that this dissertation will utilize to explore the

impact of variables on an individual's college choice decision. In addition to the organization of the variables, Chapman's research provided an extensive list of variables that this research will explore, including socioeconomic status, race, location, and others. Chapman's research provided a comprehensive background on important variables to consider and an organization for this dissertation.

Summary of current literature. The remainder of this section will focus on a summary of pertinent and recent studies conducted on the college choice process and decision of traditional-age students. Pertinent factors that affect college choice will be addressed through categorization as internal characteristics (characteristics related to the student and family) or external characteristics (characteristics related to the college or university, the influence of important individuals, and the communication between the college and student).

Internal characteristics. Chief among the characteristics that impact an individual's decision to attend a particular institution of higher education are the characteristics that the student and the student's family bring to the equation. Student characteristics that impact an individual's college choice decision are race/ethnicity, socioeconomic status, and academic achievement. Family characteristics also play a large role in the college choice decision. As students are influenced on a daily basis by their family circumstances, it is virtually impossible to differentiate between the inherent characteristics of an individual (i.e., race) from his family's influence. Among the characteristics that a family possess include the educational background of parents and siblings. There are no

greater influences for an individual's college choice decision than the characteristics that they themselves bring to the equation.

Race/ethnicity. The race or ethnicity of an individual has been shown to impact the decision of which institution a student applies to (Hossler & Gallagher, 1987; NPEC, 2007). Differences existed between White, African-American, and Latino students and the decisions they made in applying to an institution of higher education (Ceja, 2006; Kim, 2004; Pitre, 2006). Hossler and Gallagher (1987) found that White students, compared with Latino and Black students, are more predisposed to go to college. In addition, White students are more likely to attend private four-year institutions and elite institutions than are individuals of other races (1987). White students are less likely to be confined by geography, distance, and cost, but this may be due to economic advantages that White families have in relation to those of minority families (NPEC, 2007). White students were more likely than non-White students to attend their first-choice institution (2004). Advantages exist for White students, who were significantly advantaged in being able to attend their top-choice college and to overcome many obstacles, such as distance and cost.

Latino students differ from White students by not having as much flexibility in their college choice decision. Students from Latin backgrounds are often encouraged to remain close to home since they are often more supported by their family, both financially and academically (NPEC, 2007). Latino parents tend to be less likely to have obtained a college education, which limits their

participation in the college choice process (Ceja, 2006). According to Ceja (2006), parents of Latino students often have high aspirations for their children to achieve a college education, but do not know how to provide information and guidance through the college choice process. Latino students have less flexibility than White students in their ability to attend an institution of higher education because of the lack of cultural capital that Latino students receive from parents who generally have not received a college education.

African-Americans also are more limited than White families in their college choice decision. African-Americans have been shown to be skeptical about the value of a college education (Freeman, 1999). If African-Americans believe that they will be unable to obtain a job through their postsecondary educational experiences, they are less likely to put the time and energy into obtaining a higher education (Freeman, 1999, 2005). Freeman (1999) also found that African-American students felt increasingly intimidated and lost hope of enrolling at an institution of higher education with the more information they collected about colleges and the college choice process. Also, African-American students who attend predominantly White high schools report feeling isolated, which impacts the type of institution they plan to attend (NPEC, 2007). However, Pitre (2006) found that race did not impact educational aspirations and African-Americans were as likely as White students to aspire to attend college. In addition, African-American students who attend predominantly African-American high schools in urban areas are increasingly more likely to attend an HBCU

(Freeman, 1999; NPEC, 2007). African-American students also rate the information from the institution as more beneficial and helpful in selecting a particular institution of higher education than those of other racial backgrounds (Paulsen, 1990). African-American and Latino students were found to be less likely than White or Asian students in attending their top-choice institution (McDonough, 2004). African-American students, similar to Latino students, were less likely than White students to be able to attend college.

Socioeconomic status. The socioeconomic status (SES) of an individual's family has also been shown to be an influential factor in the college choice of a student. Those individuals from higher socioeconomic status groups are more likely to determine that they will pursue a college education, while those from lower SES groups are less likely to continue on beyond a high school education (Chapman, 1981). An individual from a higher academic background is more likely to attend an institution of higher education, as is demonstrated by Blau and Duncan (1967), because an individual will want to remain in a high economic group by obtaining an education to get a well-paying career. Socioeconomic status plays a direct role in the college choice process as individuals from high economic groups are more likely to attend an institution of higher education.

Socioeconomic status (SES) also impacts the type of institution an individual chooses to attend. Individuals from high SES groups are more likely to apply and enroll at private four-year institutions, while individuals from middle SES groups tend to enroll at four-year public institutions and individuals from low

SES groups are most likely to enroll at community colleges (Chapman, 1981; Cooper, 2006; Davis & Van Dusen, 1975; Hossler, Schmit, & Vesper, 1999; McDonough, 1997; Wyner, Bridgeland, & DiIulio, 2007). Students from high SES backgrounds have more options available to them when weighing colleges against each other due to the cost factor being nullified, as they have the ability to visit campuses and afford tuition, whereas students from low SES backgrounds have fewer colleges to choose from due to the lack of financial resources available to visit, apply to, and pay tuition for high-priced colleges and universities (McDonough, 1997). Socioeconomic groups have a direct impact on an individual's college choice decision, as an individual from a high economic group is more likely to attend their college of choice than those from lower economic groups.

Academic achievement. The academic background of the student may impact the college choice decision of an individual, especially what type of institution they apply to (Bers & Galowich, 2002; Hossler, Schmit, & Vesper, 1999; Hu & Hossler, 2000). While a majority of students preferred to apply to public four-year institutions, Hu and Hossler (2000) found that the 15% of students surveyed who planned on attending a private four-year institution (a higher percentage of any academic group) had high grades, consisting of mostly As and Bs. Many studies reflect the academic achievement of the student to be one of the most effective indicators on whether a student will attend a college or university (Bers & Galowich, 2002; Hossler, Schmit, & Vesper, 1999). African-

American students report feeling less prepared for college than Caucasian students, regardless of actual academic records (Pitre, 2006). Students with higher academic achievement were more likely to attend their first-choice institution, compared with those students who had lower academic achievement (Kim, 2004). Individuals with high academic achievement are most likely to attend, especially as their first-choice, an institution of higher education compared with those of lower performance groups.

Educational expectations. The educational expectations of an individual influence the college choice decision of students. The higher a degree an individual wants to obtain, the more likely an individual is to enroll in college (NPEC, 2007). Individuals that were first-generation had lower educational aspirations and were less likely to enroll in college (Cooper, 2006; Terenzini et al., 1996). Terenzini and associates found that individuals who received less encouragement were also less likely to aspire to obtain higher degrees and enroll in college. Ceja (2006) found that students who received parental encouragement in education were more likely to aspire to a higher degree and were more likely to enroll in college. Individuals with higher educational aspirations were more likely to enroll in postsecondary education.

College characteristics. In addition to the individual, the university itself plays a role in influencing the college choice decision. Among the characteristics of the institution that influence a student are the cost of the institution, the location and geographic proximity of the institution, the net cost of the institution, and the

academic programs offered by the university. Characteristics inherent in the institution impact the ability of students to enroll by the tuition they charge and by offering programs in which students would want to participate.

Cost and financial aid. The ability to afford a college education is arguably one of the most important determinants in the college choice decision. The inability to afford the tuition at private institutions and public four-year institutions push individuals to enroll at community colleges, due to the low tuition (Kurlander, 2006). Perceptions of cost and the inability of individuals to enroll in college due to cost may impact those from low socioeconomic classes disproportionately (Grodsky & Jones, 2007). College administrators reflect that those students who are qualified to attend college, but do not, are most impacted by the cost of tuition and the inability to afford college (Hahn & Price, 2008). Therefore, costs may be an inhibiting factor for individuals who want to attend postsecondary education.

To mitigate the costs of tuition, grant aid helps increase the enrollment of students who view the costs as too great to attend college. Receiving grant aid increases the ability of students to enroll in school. Studies of grant aid that are transportable to multiple schools, such as the DC Tuition Assistant Grant or the Georgia HOPE Scholarship, increases the application rates of those students who qualify for such awards (Abraham & Clark, 2003; Dynarski, 2000). Grant aid as the only source of aid and grants with loans were the types of financial aid that influence an individual to attend their college of top choice (Kim, 2004). Students

who received loans only or no financial aid were less likely to attend their top-choice institution of higher education (Kim). Financial aid may assist families from lower incomes more than families from higher incomes in their ability to afford colleges (Cabrera & La Nasa, 2000). Grant aid helps mitigate the cost of tuition and helps students afford tuition at colleges and universities.

Location and proximity of the institution. The geographic location and the proximity of the institution in relation to the residence of the family also impact an individual's college choice decision. First-generation students ranked a close proximity to their home as the 9th (of 25) most important factor in their college choice decision (Merranko, 2005). Black and Latino students were more likely to enroll at an institution of higher education that was closer to home than were White students (Kelp Kern, 2000; Kurlaender, 2006; NPEC, 2007; Santiago, 2007). Kelp Kern (2000) found that Black students responded negatively to the concept of using college to get away from their homes, reflecting a desire to stay close to their homes and families. Latino students were more likely to enroll at institutions near their homes to compensate for the cultural links to their family, as well as the fiscal savings that were associated with living at home during one's college education (Kurlaender, 2006). Academically talented White students have been drawn to specific geographic areas that have unique cultural and professional opportunities (Filter, 2007), which may be limited to certain cities, such as Washington, D.C., or New York. The proximity between an individual's home and a college is influential in the college decision of an individual, and certain

geographic locations may have broad appeal to students based on the benefits of a large-city atmosphere.

Impact of important individuals. In addition to the impact of the individual student and the institution, an individual's college choice decision is impacted by the influence of other individuals. Those people who are closest to the student or have important information regarding the process can affect the student's impressions of a college/university and what institutions are within his/her reach. Among the influential individuals that can influence a college applicant include family, friends, high school counselors, and the staff of higher education institutions. Others may impact the college choice of an individual by creating expectations of educational attainment as well as navigating the application and decision process.

Parents. Families often have the most direct impact on the college choice decision of an individual based on their ability to comment and advise on the process, as well as an understanding of the factors that would make a good fit between the student and the institution (Boatwright, Ching, & Parr, 1992; Chapman, 1981; Dixon & Martin, 1991; Hossler & Stage, 1992; Isherwood, 1991; NPEC, 2007). Parents have often been shown to be most influential at the beginning of the college choice process, the predisposition phase, by encouraging students to attend college and by increasing the expectancy that a student should attend college (Flint, 1992; Hossler & Gallagher, 1987). In Chapman's (1981) study, 43% of students reported that their parents were the most important

individuals influencing the college choice decision. Parents were seen, in many cases, as purveyors of information that a student views as accurate and important when they are considering which college to attend (NPEC, 2007). According to Cabrera and La Nasa(2000), parents encourage their children to have high educational expectations. An individual's family may provide the greatest influence on a decision to attend college because they influence the expectations that an individual should obtain a college education.

A difference may exist in the importance of each individual parent. Research that separates mothers from fathers as influential individuals in the college choice process shows that mothers are more important in the college choice process, as they are more involved in the process than fathers tend to be (Isherwood, 1991; Pagano & Terkla, 1991). Female students in Isherwood's (1991) research ranked their mothers as the most influential figure in the college choice process, while fathers ranked in the second tier, even behind friends. McDonough's interview with parents, the large majority of whom were mothers, demonstrated that mothers may indeed be more involved in the college choice decision of their children (McDonough). An individual's mother may impact their college choice by being more involved in their college choice process.

McDonough (1997) also demonstrates that parental involvement can have both a positive and a negative impact on the student college choice process. While students with parents who were involved in the college process tended to be more likely to enroll at an institution of higher education, many students often found

that their parents were overbearing and controlling of the process, which caused the student to rebel against parental involvement (Filter, 2007; McDonough, 1997). In certain cases, students sabotaged college interviews and applications that were forced on them by their parents (Filter, 2007). Parental involvement can be seen as a negative by an individual if he or she considers parental involvement to be overbearing and dominating.

Educational background of parents. The educational background of parents has been shown to be significant to an individual's college choice decision (Hossler & Stage, 1992; NPEC, 2007). Students with parents who have received a bachelor's and/or advanced degrees are more likely to attend an institution of higher education, while students whose parents do not have any postsecondary education are less likely to enroll at a college or university (Hossler & Stage). In addition, those students whose parents have had some college education are more likely to begin the college selection process earlier than those students whose parents had no college education (Litten, 1982). Students whose father received no more than a high school education were less likely to attend their first-choice institution, compared with students whose father achieved greater than a high school education. According to NPEC (2007), students with parents who have a college education are more likely to value the information that their parents provide regarding the college choice process. Multiple studies have shown that the educational background of parents is one of the most important indicators on the predisposition of an individual's college choice process (Bers & Galowich,

2002; Hossler, Schmit, & Vesper, 1999). Students whose parents do not have a college education had degree aspirations that were substantially lower than those individuals whose parents have had a college education (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). Parents who have a college education are more likely to increase expectations and enrollment of an individual than those parents who do not have a college education.

High school counselor. The staff at the high school, especially college counselors, have been shown to have mixed levels of influence on an individual's college choice. Generally, these individuals are seen to be information bearers who can help students by guiding them to specific institutions, programs, and navigating through the college application process (Chapman, 1981; Isherwood, 1991; Kealy & Rockel, 1987; McDonough, 1997; NPEC, 2007). However, these individuals can also be seen as unavailable, unaware, and only responsible for the gathering of documents (i.e., recommendations and transcripts) to complete the application process for students (Filter, 2007; McDonough, 1997). High school personnel were not seen as influential in the decision process as they often are out of touch with the students at their high school.

A number of studies reflect that high school counselors have an important influence on the college choice decision based on the information they provide. Chapman (1981) found that 22% of college applicants listed counselors as an important individual in the college choice process, based on their possessing information and guiding students to make appropriate decisions to achieve their

educational goals, making this the second most important group to students in his research. A gender difference may exist in who finds the college counselor to be important. Litten (1982) demonstrated that men are more likely to rely on college counselors than women. While this finding was not duplicated by McDonough (1997), the difference may rely on the number of men versus women who are now attending higher education throughout the country. Advice from high school counselors and staff was ranked 11th (of 25) for first-generation students in helping decide on a college in which to enroll (Merranko, 2005). NPEC (2007) found that individuals from low SES groups and those whose parents did not have a college education tended to rely more on the counselor for information than those from high SES backgrounds and those whose parents had a college degree. Students whose parents did not receive a college education are more likely to rely on school counselors for information about colleges and the process of college applications (NPEC, 2007). McDonough (2004) reflected that high school counselors play an important part in the college choice process through the influence they have on an individual's aspirations, plans, and financial aid knowledge. Cabrera and La Nasa (2000) explained that the more that an individual met with a high school counselor, the more likely a student is to attend college. High school counselors, depending on the institution, may have more impact if they have the availability to actually meet with students and develop a relationship with them.

Institution's attempt to communicate. In addition to the college characteristics and the impact of significant individuals, Chapman's (1981) external characteristics also include the institution's attempt to communicate with the applicant. Through written information, campus visits, and connection to the college staff, colleges and universities impact the college choice decision through communication.

Campus visits. Only one study of empirical research could be identified that addressed the impact of visiting the campus and the influence that visit has on the college choice of a student. Chapman (1981) explained that the way a campus visit impacted the general impression of college-going life would be by the experience of what the college experience might be like on a day-to-day basis. This experience would impact both the student by seeing the academic life of the institution as well as the social life of the institution. The impact of the campus visit on the college choice decision allowed students to visualize what going to a particular institution might be like and whether there was a match between the student and the institution.

While little empirical research exists on how a campus visit impacts the college choice decision of students, practitioner writings do focus on the impact of campus visits on the college choice decision. Mayher (1998) wrote that the campus visit allows the student to determine the true culture of the institution and determine if the school is a good fit, both academically and socially. The timing of the campus visit is important, as a visit too early may intimidate a student from

attending a college or university, and depending on the time of year, a student may see an extreme sales pitch by the school or what the school may really be like from day to day (Mayher).

Factors of college choice conclusion. Chapman (1981) provided a strong organization and analysis regarding what variables are important in an individual's college choice. Internal characteristics, such as socioeconomic status, impact an individual's ability to attend college. External characteristics of the institution impact upon which college an individual might apply to. Individuals are also impacted by the influence that other people who are significant in their lives may have upon them. The characteristics of Chapman's (1981) model provide illumination on what variables will be appropriate in this study in testing college choice, which is defined as the decision between multiple institutions as well as the decision to even attend postsecondary education. The selection of variables for this research was influenced by Chapman's model of college choice.

Academically Talented Students

Academically talented students come from unique backgrounds and have unique experiences. These individuals have access to certain programs to help spur their academic progress, such as gifted and international baccalaureate programs. In some instances, as a way to increase schoolwide assessment scores, schools offer special resources for these individuals as test scores have become the basis for school funding with recent education policies, such as NCLB. In other instances, these students are considered to be the least-catered-to special

population, as classroom instruction is taught at a level to target students at a lower academic level. The unique background of academically talented students influences their college choice decisions in unique ways, and an understanding of this population is needed to understand the context in which they make their college choice. This section of the review of the literature will focus on academically talented students and what the literature says about their development during their high school years. This research requires an understanding of the academic, social, and cultural backgrounds of this population to understand what factors may influence their decision to attend a particular institution of higher education. The unique experiences of academically talented students affect their development and how they will make a decision to attend a particular institution of higher education.

Types of academic programs. As discussed in Chapter 1, the term “academically talented students” for this research is defined as students who receive A’s and A+’s in high school. However, the literature uses the term to include students who participate in various academic programs, such as Advanced Placement and Gifted Programs (e.g., Van Tassel-Baska, 2001). Including them in this review of the literature is appropriate because grades are often a requirement to determine eligibility for these programs. Academically talented students have many options to increase their academic proficiency. Outside of the traditional curriculum offered by an institution, whether the classes be regular level or honors/advanced classes, academically talented students can participate in an

International Baccalaureate (IB) degree program, Advanced Placement (AP) classes, or Talent Identification Programs. Academically talented students have the opportunity to participate in multiple programs that emphasize their academic development.

International baccalaureate programs. Started in the 1980s, the IB program is a high school program of study, in which students focus on interdisciplinary studies and critical reflection (Matthews & Kitchen, 2007). The IB program is sponsored in over 100 countries around the world and over 520 schools in the United States (International Baccalaureate Organization, 2009; Tookey, 2000). Approximately 38,000 individuals are enrolled in an International Baccalaureate program (International Baccalaureate North America, 2004). In the 9th and 10th grades, students must obtain grades higher than 80% in their pre-IB program classes, which are considered to be more challenging than regular and advanced courses (Matthews & Kitchen, 2007). Students are expected to garner experience both in and out of the classroom and focus on the appreciation of other cultural perspectives (Matthews & Kitchen). The IB program also requires a public service aspect, externally evaluated examinations, and essay writing (Matthews & Kitchen). According to Van-Tassel-Baska (2000), the IB program is considered to be college preparation for high-ability learners, and to be the highest academic attainment possible for students.

Advanced placement. Advanced Placement (AP) courses are individualized classes that are academically intense compared with having an

entire advanced curriculum (such as with the IB program). AP courses, developed during the 1950s, became a tool to stop white flight from public schools and to retain academically talented students in their home high school rather than transferring to private schools (Callahan, 2000). Advanced Placement courses are offered nationwide in over 13,000 high schools (College Board, 2005). Advanced Placement is reported as the most popular secondary program among students, parents, and their schools for academically talented programs (Kolitch & Brody, 1992; Van Tassel-Baska, 2001). AP Courses are offered in all states across the United States (College Board, 2006). Twenty-three states explicitly have AP listed in their state education policy, including teacher training, support for school district participation, and paying the fees for test takers (Van Tassel-Baska, 2001). Currently, 33 courses are now offered as AP level and the program now serves over 700,000 students a year (College Board, 2006).

Talent identification programs. Talent Identification Programs were created approximately 35 years ago by Dr. Julian Stanley (Lee, Matthews, & Olszewski-Kubilius, 2008). Stanley wanted to provide educational opportunities to students who had academic talents advanced beyond the student's age group and created a program at Johns Hopkins University that taught higher level mathematics to young students during a summer program (Lee et al.). The Johns Hopkins University program expanded to include additional programs and also other universities across the country (Lee et al.). There are now six programs across the country and they have served over three million students in these

programs (Lee et al.). Participants in the program are determined by scoring substantially above their grade level on the Scholastic Assessment Test, which is taken during Middle School (Lee et al.). Programs, in addition to the one currently at The Johns Hopkins University, are now located at Duke University, Northwestern University, University of Denver, University of Iowa, and Carnegie Mellon University (Lee et al.). Talent Identification Programs provide acceleration to students at six universities through the country.

Gifted programs. Gifted programs are the most commonly known program for academically talented students, as they are established at all grade levels (National Association of Gifted Children/ NAGC, 2008). Requirements for gifted students are established on the state level, but usually include some combination of achievement test scores, academic performance, recommendation, and intelligence tests (NAGC). Often, academic performance and recommendations trigger schools to test the intelligence level of students as an entrance test to gifted programs. Just under three million students are enrolled in gifted programs and gifted students account for approximately 6% of enrollment in elementary and secondary education (Ruf, 2005). Gifted students usually participate in one or two classes a year that are designated as gifted and are taught at an increased academic level over nongifted classes (NAGC, 2008). Gifted programs are the most commonly found program for academically talented students.

Demographics. Academically talented students, regardless of definition, tend to be racially White (e.g., Matthews & Kitchen, 2007). Racial minorities are

hugely underrepresented in academically talented programs (Matthews & Kitchen). Research has not indicated what percentage of minority students would receive GPAs in the categorization of academically talented students, but proxies of academically talented students would seem to reflect that these students are not adequately represented in academically talented students. In 2003, White students composed 76.5% of students participating in Talent Search Programs, while Black students composed 9.8% (Lee, Matthews, & Olszewski-Kubilius, 2008). The number of Black students taking AP exams in 2006 increased, but still account for a small percentage of the overall number of tests taken each year (College Board, 2006). The overwhelming representation of White students who are academically talented have led to criticisms toward schools on how they encourage minority participation in academic programs (Matthews & Kitchen, 2007). The special programs geared toward academically talented students, especially gifted programs, have been criticized for their exclusion of minority students (Matthews & Kitchen). Schools have implemented these types of programs as a way to stem white flight and encourage White students to remain in schools that have growing minority populations (Sapon-Shevin, 1994). White students overwhelmingly dominate the population of academically talented students, while racial minorities are severely underrepresented.

Lack of minority participation in gifted and talented programs may arise from many factors. Lindstrom and VanSant (1986) found that among the characteristics that decrease enrollment of minority students, the chief detractor is

the low cultural expectations of minority students. In addition, students who succeed academically may encounter obstacles as they are seen as culturally assimilating to the mainstream culture and turning their back on the individual's cultural background (Lindstrom & VanSant). Specifically noted by Lindstrom and VanSant, young Black men may face rejection from their peers for academic success. Any combination of these factors, in conjunction with other traditional complaints about elitism of these programs, may impact the low enrollment rates of non-White individuals into academically talented programs. Cultural influences may detract from minority participation in academic success and academically talented programs.

Gender may impact the success of all students, including those who are academically talented. In 2003, 52.4% of students who participated in Talent Search programs were male, while 47.6% were female (Lee, Matthews, & Olszewski-Kubilius, 2008). Even though close to half of Talent Search participants were female, most females, regardless of age and talent level, encounter obstacles that may inhibit their academic success, such as stereotype threats that discourage women from pursuing increased levels of education but influence them to remain at home with their family (Reis, 1998). Stereotyping is known to decrease the likelihood of female students to participate in class discussions, and it lowers the attention that female students receive in classes (Reis & Callahan, 1996). When asked questions, female students are more likely to receive questions that are simple, closed, and concrete, while male students are

asked abstract, open-ended questions that require greater intellectual ability to answer (Pipher, 1994). Female students report that they feel a stronger sense of belonging in school than male students, which can impact their expectations, work ethic, and effort toward academics (Goodenow & Grady, 1993). While the percentage of male and female academically talented students may be somewhat equal, females have a number of obstacles to overcome to be academically successful.

Academically, female students tend to receive better grades than their male counterparts (e.g., American Association of University Women Educational Foundation, 1998). In all levels of precollege education and in all subjects, females receive higher grades than males, from elementary to high school, including in math and science (American Association of University Women Educational Foundation, 1998; Pomerantz, Altermatt, & Saxon, 2002). Females graduate high school with overall GPAs that are higher than their male counterparts (Perkins, Kleiner, Roey, & Brown, 2004). The type of assessment in coursework may impact the performance of females. Female students tend to do better on tests requiring free-response answers, which tend to be overwhelmingly the mode of testing (excluding standardized testing, on which males do better) most common with classroom assessment (Willingham & Cole, 1997). Female students tend to have higher grades than male students.

Academically talented students, and specifically those in gifted programs, tend to come from families of high social economic status (McLeod & Cropley,

1989; Robinson et al., 1998). Students from higher economic backgrounds tend to have greater financial resources at their disposal to be academically successful (McLeod & Cropley). Robinson and associates (1998) found that those students who were high achievers came from families who had slightly higher incomes, fewer children, and parents with higher levels of education. In 2003, 38.7% of students participating in Talent Search Programs had a household income of over \$80,000 and an additional 16.7% of individuals had household incomes between \$50,000 to \$79,999 (Lee, Matthews, & Olszewski-Kubilius, 2008). Students whose families have higher economic backgrounds tend to be more academically successful.

Extracurricular participation. Academically talented students tend to be very involved in extracurricular activities at their school (Matthews & Kitchen, 2007). Matthews and Kitchen reported that the teachers and administrators in their study reported that gifted students were very involved in school activities, and that these students are a positive influence on others and give the school a good reputation. As one teacher reported in the study, “the gifted students are the ones who get involved with many of the projects both in and out of school” (p. 265), reflecting the high level of participation that gifted students have in extracurricular activities. Academically talented students widely participate in extracurricular activities.

The areas of participation differ based on subgroups of academically talented students. The top areas in which academically talented students

participate are sports, music bands/groups, and academic clubs (Olszewski-Kubilius & Lee, 2004). Males tend to participate in sports in greater numbers than females (Olszewski-Kubilius & Lee, 2004). While males in this population participate in sports in a greater number, females are significantly more active in their extracurricular activities than males (Bucknavage & Worrell, 2005). Females also favored dance and musical activity as the events where there was most participation (Bucknavage & Worrell). So male and female academically talented students participate in differing extracurricular activities, much like the general population.

The involvement in extracurricular activities has multiple impacts on student development. The number of extracurricular activities in which an individual is involved has been demonstrated to have a positive impact on social development, such as social self-concept (Camp, 1990; Eccles & Barber, 1999; Marsh, 1992). Academics are also impacted by extracurricular involvement. Individuals who participate in extracurricular activities are shown to have improved academic self-concept, take advanced courses, have higher GPA, and have lower absenteeism (Marsh, 1992). Academically talented students are very involved with extracurricular activities, making them even more appealing to colleges and universities.

In addition to extracurricular activities, academically talented students spend a significant portion of their nonschool time in academic preparation. Study groups help students across all different types of academic programs with the

ability to understand curriculum and provide emotional support for academically talented students (Vanderbrook, 2006). The usage of academic support groups as a tool to support the emotional needs of academically talented students has been shown to benefit students in gifted, AP, and IB programs (Vanderbrook).

Academically talented students spend time in academic preparation to support their academic performance.

Self-concept. Gifted students who are enrolled in classes with other high-achieving students show differing effects with regard to their self-concept. Gifted-caliber students who are educated with nongifted-caliber students reflected a high self-concept about their academic abilities and believe that they are strong students (Neihart, 2007). Many gifted students who are educated in classes only with other gifted students reflected a diminished self-concept with regard to their academic ability (Gross, 2003; Neihart, 2007; Shields, 1995). The decreased self-concept can be explained in various ways: an adjustment to a more realistic understanding of an individual's academic ability (e.g., Rogers 2004), a discrepancy between their ability and their achievement that did not exist in mixed academic-proficiency classrooms (e.g, Gross, 2003), or a modesty effect where self-concept is reduced but their academic ability remains the same (Plucker, Robinson, Greenspon, Feldhusen, McCoach, & Subotnik, 2004). Other gifted students report that being grouped with similar ability peers gave them increased self-confidence as to their academic ability, because they were adequately challenged in their academic careers (Neihart, 2007; Rogers, 2004). In a study by Brody and Benbow

(1986), gifted students were shown to have the same level of self-esteem as those students with high academic ability that were not categorized as gifted. Being considered academically talented, especially gifted, can have varying impacts on a student's self-concept.

The grade point average of an individual may impact their academic self-concept. Students who have higher grades are more likely to have higher self-concept and will increase their academic aspirations regarding the level of programs the individual is willing to undertake and the selectivity of the college the student will apply to (Davis, 1966; Rinn, 2007). However, a difference may exist between those students who receive high grades and those students who are grouped in a particular academic talent program. When comparing students who were specifically identified as gifted to students who receive high academic marks, gifted students are shown to have higher socially related self-concepts than the comparison group (Bain & Bell, 2004). Receiving high grades may have different impacts on an individual's self-concept than those who enroll in separate classes.

College entrance. Academically talented students have the largest number of opportunities when deciding which institution to attend. Gifted students are more likely to attend highly selective institutions than nongifted students (Douglas & Powers, 1985; Hearn, 1984). These institutions work to recruit and enroll academically talented students, who are viewed as a beneficial population to the institution (Rinn & Plucker, 2004). These selective institutions are considered to be the most prestigious institutions in the country and in turn these students help

increase the prestige of the institution, as academic strength of the students is often a criterion in determining the selectivity of an institution (Rinn, 2007).

Academically talented students are recruited to the top-tier institutions across the country.

Practitioner literature also focuses on the importance of academically talented students for institutions of higher education. Moll (1994) wrote that institutions strive to increase the academic talent of the student body in the hopes of increasing the selectivity of the school, which will be seen as a way to increase the attractiveness of the school to other students. In addition to school rankings, this may be done to appease faculty members who want higher academic rankings to increase the faculty's academic reputation (Moll).

Academically talented students provide an appropriate group to evaluate the choice-of-college decision because of their high college-going rates. Students with high grades are the most likely to enter college (Bers & Galowich, 2002; Hossler, Schmit, & Vesper, 1999). Discussions of access for this population may be superfluous, but they are a group of individuals in whom practitioners have an interest when it comes to the group's enrollment patterns. The evaluation of a choice-of-college decision, which has not been studied previously, would be benefited by the inclusion of this group because of their college-going rates.

Academically talented students conclusion. Academically talented students have unique development patterns during their high school years. Some of these students may enroll in unique programs separated from nonacademically

talented students, which may increase their academic satisfaction level but hinder their social alignment with the school culture. Academically talented students have varied social interactions with their fellow students. They may be deemed as popular as every other student, or they may be seen as a social pariah who inhabits the lowest level of teenage social hierarchy. Academically talented students strive for perfectionism in their activities and academics. Compared with nonacademically talented students, academically talented students are the most likely to go on to attend college and be recruited by highly selective institutions of higher education. An individual who is part of the academically talented student population is impacted by that membership in the college choice decision by having a sizeable opportunity to attend colleges of their choice and being highly recruited by a number of institutions of higher education. Academically talented students have opportunities unavailable to the general population that impact the population's college choice decision.

Literature Review Conclusion

This review of the literature informed this study on the college choice of academically talented students. This exploration of the literature focused on the sociological underpinnings of why individuals decide to pursue postsecondary education, relevant literature on the variables of interest to this study, and the background of the population of academically talented students. The preceding review of the literature informs the current study.

Individuals who decide to pursue postsecondary education may choose to do so while acting under one or more sociological theories that illuminate college choice. Under status attainment theory, an individual decides to attend college to obtain a better career. Starting with an individual's father's career, a person may decide to attend college to get a better paying, more white-collar career than that in which the individual father was employed. The education that the individual received would help that person achieve a career with increased earning potential through the training that education provides. Under cultural capital theory, an individual achieves long-term success through the increased knowledge that a higher education provides. A college education provides higher-level information and networking opportunities that those who do not attend college fail to get. Over the course of an individual's life, the increased knowledge and connections that college gives to students help the student obtain better career options. Under economic theory, an individual will conduct a cost analysis on the decision to attend college, weighing the potential increase in earnings over the course of the individual's life against the cost of tuition (minus financial aid) and the delayed earnings potential incurred by attending college. If the economic benefits of obtaining a college degree are seen as greater than the costs, then the individual will begin a postsecondary education; otherwise, the individual will fail to enroll in college. Status attainment, cultural capital, and economic theories explain three theoretical bases as to why an individual may decide to attend college.

Various factors influence the decision of individuals to go to college. Chapman's (1981) model of college choice influenced the selection of variables for this study. Additional studies have explored many of the factors that Chapman espoused as integral to the decision of an individual to attend college. Individuals from higher economic backgrounds are more likely to attend college than those from lower economic groups. The more that an individual has to pay out of pocket for school, the less likely it is that the individual will pursue postsecondary education, whereas the less that an individual has to pay for school, the more likely he or she will be to enroll in college. Through a mixture of economic and cultural factors, people are more likely to attend an institution of higher education that is located relatively close to the family residence. However, individuals from higher economic groups are less likely to be constrained by geographic distance. Parents tend to influence the predisposition of students by creating the impression that the individual should attend college, and may offer many suggestions to students about what institutions should be considered for enrollment. However, a parent who is overwhelming during the college selection process may ultimately provide a negative influence on the college decision. High school counselors tend not to influence actual college decision making, but have been used as a way to navigate the long and difficult process of applying to college. While campus visits have been given little attention in empirical research, they may influence the selection of a particular institution, according to practitioners, but do not have much of an influence on the decision to pursue postsecondary education.

Chapman's model of college choice informs the selection of variables in this study.

Academically talented students have a unique experience to prepare themselves for the college choice experience. Diversity is an issue in the demographics of this population. Overwhelmingly, White students tend to populate programs that are geared to academic talent, but no studies have attempted to explore the demographics of those students who obtain high grades in high school. While males and females are found in relatively equal numbers in academic programs for talent, female students tend to achieve higher grades than do male students. Academically talented students tend to be very involved in extracurricular activities in high school and may be the most involved population on the high school level. Academically talented students may have a high self-concept when the individual compares himself with the student body at large, but may have a lower self-concept when educated with similar academically talented students. This population of students is nevertheless very likely to attend college and is an appropriate population around which to test a new definition of college choice.

III

Methodology

Research on college choice has focused on the decision of an individual to pursue a postsecondary education. There is a lack of literature exploring why an individual chooses to attend the individual's first-choice institution over another institution, but instead focused on the decision to generally pursue postsecondary education. The research of this dissertation focused on the reasons that a segment of students—namely, those with high academic grades in high school (academically talented students)—enroll in their first-choice institution of higher education rather than other institutions.

The purpose of this study was to explore the characteristics important to academically talented students when making their choice-of-college decision. The factors of college choice were determined through Chapman's (1981) model of college choice, which identifies seven influences to the college choice decision: socioeconomic status / family income, level of educational aspiration/expectation, aptitude, high school performance, influence of significant persons (e.g., parents, high school personnel), availability of academic program, college efforts to communicate with students (i.e., information and campus visits), and financial aid received along with cost of the institution. This study proposed to analyze data from the Freshman Survey using logistic regression, which is particularly appropriate for data analysis since the dependent variable (enrollment at a first-choice institution) is a categorical variable (Cohen, Cohen, West, & Aiken, 2003;

Pallant, 2005). This chapter presents the study's proposed methodology, and explains the primary dataset and the research design. The theoretical constructs, research questions, population, sample, and instrument are detailed at length. Additionally, the data collection and analysis are presented in this chapter. This chapter provides the methodological framework for this dissertation.

Research Questions

The purpose of this research was to explore the factors that are important to academically talented students when making their college choice decision. The study was guided by the following research questions and hypotheses:

1. To what extent does family income influence academically talented students' decision to enroll at their first-choice institution?

Hypothesis: Academically talented students from high socioeconomic statuses are more likely to enroll in their first-choice institution.

2. To what extent does the level of educational expectation of an individual influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: Academically talented students who have higher educational expectations are more likely to enroll at their first-choice institution.

3. To what extent does the family's out-of-pocket cost for the institution influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: Academically talented students who pay less from family resources are more likely to attend their first-choice institution.

4. To what extent does the distance from the college to an academically talented student's home influence the student's decision to enroll at their first-choice institution?

Hypothesis: Academically talented students are not likely to be constrained by distance in the decision to enroll at their first-choice institution.

5. To what extent do parents influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: Parents do not greatly influence the decision of academically talented students to enroll in their first-choice institution.

6. To what extent do high school counselors influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: High school personnel do not greatly influence the decision of academically talented students to enroll in their first-choice institution.

7. To what extent do campus visits influence the decision of academically talented students to enroll at their first-choice institution?

Hypothesis: Academically talented students are positively influenced by campus visits when choosing to enroll at their first-choice institution.

Research Design

This study employed a nonexperimental, quantitative research design to evaluate the factors related to college choice. Nonexperimental research occurs when the researcher does not have the ability to manipulate the independent variables (Wiersma & Jurs, 2005). This study analyzed data from a preexisting database using quantitative methods. Survey participation was obtained by institutions of higher education that decided to participate in the Freshman Survey conducted by the Higher Education Research Institute. A 40-item survey ascertained responses about the incoming student body, including demographic information, political viewpoints, and college choice influences. Institutions decide to participate in the Freshman Survey to obtain information about the incoming class as a tool to ensure persistence and to judge the institution against other institutions across the country.

Instrumentation. The Freshman Survey was conducted during orientation programs and/or registration periods as students begin their college careers (HERI, 2008). Institutions across the country administer the survey as a way to benchmark the students enrolling at that institution against other institutions. The Freshman Survey is the largest survey conducted in the United States relating to higher education (HERI). Institutions that participate in the study were provided with information about the students enrolled at their respective institution as well as national normative data of students at similar types of universities. The Freshman Survey is often used to help institutions of higher education in a number

of policy areas, including admissions and retention, academic programs, advancement, and institutional research (HERI).

The original data that will be used for this research came from the Freshman Survey, as developed by the Cooperative Institutional Research Program (CIRP) and administered through the Higher Education Research Initiative (HERI) at the University of California, Los Angeles (UCLA) in 2005. Survey design was appropriate to find information about college choice behavior because of the strengths of survey research. Surveys were conducted as a way to obtain information in a way that is considered quick and accurate (Alreck & Settle, 2004). For the large number of subjects that the Freshman Survey elicited information from, a survey was particularly useful because of the ability of surveys to gather large amounts of information in a timely and cost-efficient manner (Alreck & Settle). The Freshman Survey was administered on-site at colleges across the country during new student orientation; this provides it greater efficiency than surveys that are mailed or collected online and increases the response rate. The flexibility and efficiency of survey research allowed this research to analyze data from a large sample size.

Reliability and validity of instrument. The information from the Freshman Survey provided a reliable data source. Reliability was defined as the extent to which research can be replicated (Wiersma & Jurs, 2005). To demonstrate reliability, questions on a survey should return similar responses from year to year when given to similar populations (Wiersma & Jurs). The Freshman Survey has

been administered for over 40 years, and as such the questions that are included on the survey have been tested over multiple years to demonstrate the data's reliability (HERI, n.d.). New questions are tested over multiple years before they are included as part of the available data for research so that CIRP can test new questions for reliability. In addition to questions being repeated in multiple administrations, over 90% of institutions that participate in the Freshman Survey have participated previously in the Freshman Survey (HERI). This ensured a relatively consistent sample from year to year. Through the testing of new questions over multiple years and the high percentage of institutions that participate in the Freshman Survey, the data to be used in this research was considered to be reliable.

The Freshman Survey was an internally valid instrument as it had been tested repeatedly for accurate responses. Internal validity means "results can be interpreted accurately" (Wiersma & Jurs, 2005, p. 5). The questions asked in a survey must be aligned with the goals of the survey (2005). In this particular case, the Freshman Survey elicited information about the college choice decision that influences first-time college attendees. The Freshman Survey asked questions in a clustered format, whereby questions that evaluate similar factors were grouped together, and these responses were tested through the use of Cronbach alpha's or factor analysis to determine their validity (HERI, n.d.). Other researchers have explored the internal validity of the Freshman Survey (i.e., Astin, 1992). This proposed study explored issues of college choice, and all variables explored in the

underlying theoretical model correlated with questions asked in the Freshman Survey. The grouping of questions by theme and the testing of responses demonstrated that the instrument is an internally valid one.

External validity was defined as the “degree to which results are generalizable, or applicable, to groups and environments outside the research setting” (Fraenkel & Wallen, 2003, p. G-3). In order for research to be externally valid, a study must also be internally valid because it is not advisable to generalize results that have not been interpreted accurately (Denzin & Lincoln, 1994). In addition, the large number of institutions (over 700) that participated and the extremely diverse nature of the institutions demonstrated an inherent diversity in those who participated in the Freshman Survey, including racial, gender, background, and institutional-type diversity (Astin, 1991). The results of this research were delimited to those students who maintain A or A+ averages in high school because the proposed research focuses on academically talented students who participated in the Freshman Survey. However, the results of this research, because of the extremely large sample, had some generalizability to those students who earned A and A+ averages in high school who did not participate in the Freshman Survey. The large and diverse size of the Freshman Survey supported the external validity of this study.

This research utilized nonexperimental research focused on the factors that impacted the college choice decision of academically talented students.

Reliability, internal validity, and external validity have been demonstrated in the Freshman Survey, as administered through CIRP.

Description of instrument. The research instrument for the proposed study was a survey created and updated by CIRP. The instrument was four pages long. Many of the 40 questions were multipart, such as asking how many hours per week a student spent doing various activities, such as sleeping, studying, and socializing. The survey began with a number of demographic questions. Other topics included characteristics of the institution (e.g., costs, financial aid, size), characteristics of the family (e.g., economic and educational background), habits of the student (e.g., study habits and technology usage habits), and perceptions of the student (e.g., how important was financial aid and how influential were a student's parents; CIRP, 2008). All but one question were multiple-choice. One exception asked students to provide their ACT and/or SAT scores. Some questions were scaled in a Likert-style format. A Likert-style is a format "in which an individual responds to a series of statements by indicating the extent of agreement" (Fraenkel & Wallen, 2003, p. 131).

The survey instrument was originally developed in 1965 by the American Council of Education (American Council on Education, 1965). The Freshman Information Form (FIF), as it was called in 1965, focused on open-answer questions. Participants were asked to write in certain answers, such as probable career plans and major of study. Questions were separated out for male versus female students, asking females such questions as involved the desire or likelihood

of becoming a housewife (American Council on Education). The FIF only had 24 questions, but still had a number of questions that had multiple parts, such as in today's survey instrument. The questions used in the Freshman Survey have been used to create additional surveys used by CIRP. For example, the College Senior Survey began in 1993 and the Your First College Year Survey began in 2000. The history and development of the Freshman Survey have added to the Freshman Survey's strengths.

Relationship of the Variables to Research Questions and Instrument

For all research questions, the dependent variable was the enrollment of a student in their first-choice institution, referred to as college enrollment prioritization. This related to the 2005 Freshman Survey Question 17, which asked "Is this college your—? The options for response were first choice, second choice, third choice, and less-than-third choice. For the purposes of this study, responses were combined to be either first choice or not first choice.

Research Question 1 asked about the impact of family income on the decision of an individual to enroll at his or her first-choice institution. The independent variable was family income, while the dependent variable was college enrollment prioritization. The independent variable related to Question 23 in the 2005 Freshman Survey, which asked "What is your best estimate of your parents' total income last year?" Possible responses were Less than \$14,999; \$15,000–\$24,999; \$25,000–\$39,999; \$40,000–\$59,999; \$60,000–\$99,999; \$100,000–\$149,999; \$150,000–\$199,999; \$200,000–\$249,999; and \$250,000 or more.

Research has shown that those from higher economic groups are more likely to apply and enroll in higher education (Cooper, 2006; Hossler, Schmit, & Vesper, 1999; McDonough, 1997). Increased earnings allows for students to have more opportunities in higher education, as they have more resources to pay for tuition, academic services, or college visits (McDonough, 1997).

Research Question 2 asked about the impact of educational expectations on the decision of an individual to enroll at his/her first-choice institution. The independent variable was educational expectation and the dependent variable was college enrollment prioritization. The independent variable related to Question 20 in the 2005 Freshman Survey, which asked “What is the highest academic degree that you intend to obtain?” Possible responses were None; Vocational Certificate; Associate (A.A. or equivalent); Bachelor’s Degree; Master’s Degree; Ph.D. or Ed.D.; M.D.; or J.D. For this study, Ph.D. or Ed.D., M.D., and J.D. were combined into terminal degree designation. Research has found that individuals who desire to obtain a higher degree were more likely to enroll in postsecondary education, and those individuals who do not have a desire to obtain a higher degree are less likely to enroll in college (Ceja, 2006; Cooper, 2006; NPEC, 2006).

Research Question 3 explored the impact of out-of-pocket cost on the decision of an individual to enroll in his/her first-choice institution. The independent variable was out-of-pocket costs and the dependent variable was college enrollment prioritization. Out-of-pocket costs related to Question 22 on

the 2005 Freshman Survey, which asked “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? Family resources (parents, relatives, spouse, etc).” Possible responses were None; Less than \$1,000; \$1,000–\$2,999; \$3,000–\$5,999; \$6,000–\$9,999; and \$10,000+. Research has found that the increase in costs for tuition discourages students from enrolling in postsecondary education (Grotsky & Jones, 2007). Generally, financial aid cuts the cost and increases affordability for college enrollment, thus increasing enrollment (Dynarski, 2000; Kim, 2004).

Research Question 4 explored how the distance from the individual’s home to their college impacts the decision to enroll at his/her first-choice institution. The independent variable was distance from home and the dependent variable was college enrollment prioritization. Distance from home was related to Question 6 on the 2005 Freshman Survey, which asked “How many miles is this college from your permanent home?” Potential answers were 5 or Less; 6–10; 11–50; 51–100; 101–500; and Over 500. Research has demonstrated that students are more likely to enroll in colleges that are near to their permanent residence (Kelp Kern, 2000; NPEC, 2007). Economic class may transcend this limitation, as those with more financial resources are increasingly likely to attend universities further from their home (Kurlaender, 2006).

Research Question 5 explored the impact that a parent’s influence has on one’s decision to enroll at an individual’s first-choice institution. The independent

variable was parental influence and the dependent variable was college enrollment prioritization. Parental influence was related to Question 29 on the 2005 Freshman Survey, which asked “In deciding to go to this college, how important was each of the following reasons? My parents wanted me to go.” Possible responses were Very Important; Somewhat Important; and Not Important. Research has shown that parents have more influence than any other individual in encouraging individuals to attend higher education, as they set expectations about educational expectations (Hossler & Stage, 1992; NPEC, 2007). In addition, individuals look to their parents for advice on navigating the college selection process (McDonough, 1997).

Research Question 6 explored the impact that a high school counselor has on the decision to enroll at an individual’s first-choice institution. The independent variable was high school counselor’s influence and the dependent variable was college enrollment prioritization. High school counselor’s influence was related to Question 36 in the 2005 Freshman Survey, which asked “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? High school counselor advised me.” Potential responses were Very Important; Somewhat Important; and Not Important. Research has shown that the high school counselor may play a role for individuals whose parents do not have a college education and are unfamiliar with navigating the college application process (McDonough, 1997; NPEC, 2007). However, a large number of

individuals see high school counselors as being detached and unaware of student needs when assisting in the college selection process, thus leaving them relatively unhelpful in the process (Filter, 2007; McDonough, 1997).

Research Question 7 explored the impact that a campus visit has on the decision to enroll at an individual's first-choice institution. The independent variable was the campus visit and the dependent variable was college enrollment prioritization. Campus visits were related to Question 36 in the 2005 Freshman Survey, which asked "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? A visit to the campus." Possible answers were Very Important; Somewhat Important; and Not Important. Campus visits were shown in Chapman's (1981) model to be a significant factor, but have not been studied in empirical literature since. Practitioner literature reflected that the campus visit may be the most important factor in influencing the college choice decision, as it gives the student an opportunity to judge institutional fit with the campus (Mayher, 1998).

Pre- and pilot testing. New questions and topic areas were pretested by HERI in the development of future surveys. Additional questions were pretested on two Freshman Surveys and then posttested on two follow-up surveys that are conducted by CIRP. The follow-up surveys were conducted on a smaller-scale basis and sent to a portion of participants who have participated in the previous year's Freshman Survey. If the validity and reliability remains high and constant

during the pretesting phase, it will continue to be included in the Freshman Survey. Consequently, the results were given to the universities as part of the information collected as well as to researchers whose studies are approved by CIRP. Questions that were asked by a particular university were not pretested, and the results of those questions were only given to the particular institution that asked the additional questions.

Database Access

Data collection for this study was completed by HERI at UCLA. The Freshman Year Survey was administered to over 400,000 students entering college at over 700 institutions across the United States (HERI, 2008). The Freshman Survey was a nationally representative sample that includes responses from all 50 states and the District of Columbia. This study looked at those students who completed the survey in the fall semester of 2005 because it was the most recent information available to the researcher. Surveys were sent to institutions that wished to participate in the Freshman Survey. The institutions directly administered the survey instrument to students at the beginning of the fall semester, during new student orientation or registration. The surveys were submitted back to HERI for data collation and analysis. The researcher obtained access to the 2005 HERI Freshman Survey data to answer the research questions in this study.

To protect the anonymity of participants, HERI did not release identifiers to researchers who access their database. HERI did make identifiers available to the

institution that the student is attending, and only with the subject's permission. It was unlikely, if not almost impossible, for participant anonymity to be compromised, because the researcher did not have access to identifying information. In addition, the researcher was approved through the UCLA IRB process in addition to the researcher's home institution's IRB to ensure the protection of anonymity for respondents. Upon approval by HERI, data was sent in an SPSS file to the researcher for analysis to be conducted.

Population and Sample

The population for this study included students who participated in the 2005 administration of the Freshman Survey. Institutions who participated paid a fee to HERI and were given survey instruments to first-time incoming students during orientation and registration periods for the fall semester. Over 700 institutions participated in this collection and this included two- and four-year institutions, public and private institutions, and urban, suburban, and rural campuses. The participating campuses were located in all states and the District of Columbia. Participating institutions provided all incoming first-time students the opportunity to answer the survey. While the unit of analysis was the student, the wide range of diversity of the institutions who participate in the survey ensured a large and diverse population.

Sampling strategy. The sample for this study was determined by narrowing down those students who took part in the 2005 Freshman Year survey. This study narrowed the sample by only looking at those respondents who

responded that they earned A/A+ average in high school. From this group, the sample was narrowed down further by only analyzing those respondents who responded that they applied to more than one college. This allowed academically talented students who applied to more than one school to be evaluated in this research. Differences may have existed in the grading potential at the high school level. Certain high schools may have made it more difficult to achieve an A average, while other schools may have made it easier to achieve an A average. Survey respondents were selected from colleges and universities across the county, and therefore may have students from both types of high schools as respondents. However, this research did not have the potential to account for the potential grading differences on the high school level. The sampling strategy for this study allowed the college choice decision of academically talented students to be explored.

Design Issues

There were several design issues in this research. They were the survey instrument, survey questions, and survey construction. The researcher had no ability to influence the phrasing of questions that were of interest to this particular study because the Freshman Survey was conducted by another entity. The inability to formulate questions may not target the population or the variables of interest as strongly as the survey could have. However, the current version of the Freshman Survey asked a question that directly relates to the majority of factors in Chapman's model of college choice. But a limitation may have existed in the

categorizations used by CIRP in their responses, the construction of their questions, and the layout of the instrument. The length of the Freshman Survey, which covered topics other than college choice, may have impacted participants responses because the respondents may have felt overburdened and rushed by the length of the questionnaire.

A second design issue in this research was the selection bias of those who participated in the Freshman Survey. A true random sample of respondents did not occur. To participate in the survey collection, an individual would have had to be enrolled in an institution that participates in the Freshman Survey. Individuals who enroll at an institution that does not participate in the Freshman Survey and are not included in this research. To accommodate this non-response bias (those who did not participate in the survey), sampling weights were used; however, this does not solve the selection bias issue as well as if a true random sample was used. The characteristics of those institutions that participate in the Freshman Survey may have similarities, such as the ability to afford participation in the survey. The ability to have the additional resources for survey participation may also demonstrate having additional resources to put into student recruitment and the distribution of financial resources to enroll academically talented students. Therefore, the individuals who did not participate in the Freshman Survey because their institution did not participate may reflect different influences in their choice-of-college decision. In addition, those academically talented students who did not enroll in their first-choice institution would not have been sampled in this research

as they did not enroll in any college or university, thereby not having the opportunity to participate in the Freshman Survey. The selection bias of those who enrolled in college and in a college who participated in the Freshman Survey reflects a design issue with this research.

The collection methods of the Freshman Survey provided another design issue for this research. The ability to generalize results of this research may have been limited because the sampling strategy employed by CIRP was not a random sampling strategy. While the normative sampling strategy employed by CIRP for the Freshman Survey allowed for generalizability to a large population solely based on the large number of participants (over 10,000), there may have been skewed characteristics based on the likelihood that certain types of institutions may participate over other types of institutions (HERI, n.d.). Those institutions that participate, while very diverse in characteristics, still had in common the ability to afford participation in the survey and the interest in information obtained through the Freshman Survey. The sampling strategy of the Freshman Survey brought forward another design issue in this research that may limit generalizability.

Data Analysis

Upon receiving data from HERI, the researcher evaluated the data for completeness. Each research question was treated independently. A separate n value was computed for each question because each research question focused on the impact of one independent variable on one dependent variable. For any

variable that had missing values, that case will be disregarded for that question. However, that subject's particular survey's responses were included for other research questions if the survey participant completed that question. Upon inclusion in the final logistic regression model, missing values are held at their mean.

To answer each research question, the researcher conducted a logistic regression. Logistic regression allowed for multiple independent variables (categorical or continuous) to be tested for impact on a categorical variable (Pallant, 2002). A Wald chi square goodness-of-fit test was conducted to test whether the independent variable was statistically significant as a factor in the decision of the sample to attend the first-choice institution. Individual variables were tested at the .30 level to determine inclusion into the final variable. Those that met the .30 threshold were combined into a final model and tested for inclusion at the .001 level (Hosmer & Lemeshow, 2000). This test was testing the null hypothesis that the predictor variables included did not contribute to the outcome variable. If the test result is less than the established level, the test suggested the null hypothesis holds, which meant that there was no difference between the full and reduced models. If the value of the test was greater than the established level, the test suggested the inverse that there was a statistically significant difference (Gerson, 2008; Pallant, 2002). Results of the final model were explored using both the log-odds and the odds-ratio statistics. Post-regression analysis explored the discrete change that occurred in variables of interest while

holding other variables at their mean. Logistic regression was utilized to determine the college choice model's fit for academically talented students.

Data Presentation for Chapters 4 and 5

Chapter 4, which presents data analysis, will be organized in the following manner: First, the chapter will provide a brief overview of the relevant background for this study. Second, the chapter will provide analysis demographic information of the sample, including descriptive statistics established for the research questions guiding the study, specifically the gender, age, and race of the sample. Finally, the chapter will present data relevant to the research questions. The chapter will present information about the variables being tested independently followed by an analysis of the combined model. Tables and charts will be provided to condense, explain, summarize, and present findings. Chapter 4 of this dissertation will serve as the analysis of data to answer research questions.

Chapter 5 will provide a discussion of the findings. The chapter will begin with a summary of findings of the study, interpreting the findings of this research with particular emphasis placed on the theoretical framework for the study. Additionally, recommendations for future research and practical applications will be suggested. Finally, the chapter will conclude this research project.

Human Subjects / IRB

The researcher, responsible for the protection of participants and data attained for this study, implemented numerous safeguards to ensure data privacy and safety. This dissertation was subject to all the safeguards established by the

Institutional Review Board at The George Washington University that were set in place to ensure the safety of subjects participating in research projects. This study planned to conduct secondary data-analysis, which is exempt from IRB approval. By conducting secondary data-analysis, the researcher did not contact human subjects directly. In addition to the IRB protections established by The George Washington University, all CIRP surveys were required to go through approval by the Institutional Review Board at the University of California, Los Angeles. CIRP only gave the researcher data in which all identifiers had been removed, so the researcher did not have the ability to identify any of the respondents who were used in this particular research. Once the data was downloaded onto an institutional computer for analysis, the data did not leave the institutional computer. All data analysis was to be conducted at their location using SPSS/PASW version 17.0 and Stata IC version 10.0.

IV

DATA ANALYSIS

This chapter will present the data and analysis for this study. It will begin with an explanation on how data was obtained for this research, followed by how data was cleaned up for analysis. Then, a description of the demographics of the sample will be presented. Next, the chapter will reiterate why logistic regression is appropriate for the analysis in this research. Finally, the chapter will present the analysis for each research question that was presented in Chapter 1.

Data

This study used the Freshman Survey, which is the largest survey in the United States that is conducted on issues pertaining to higher education (HERI, n.d.). Students are questioned in the Freshman Survey about a number of subjects, including demographics, political ideology, and college choice from over 400,000 individuals annually. The Freshman Survey is administered through colleges and universities to obtain information during fall orientation. While the data from the Freshman Survey was dated in nature (only data from 2005 was available), this study took advantage of the large dataset, such as the ability to generalize the results to larger populations because of the number of observations.

Data was obtained through a proposal process at the Higher Education Research Institute (HERI) at the University of California, Los Angeles (UCLA). Staff associated with HERI reviewed the proposal and approved use of data for this research project. Data requested from HERI included the responses for the

desired sample for a number of areas, among which were demographics, financial aid, and influential factors in the college selection process. Data was sent to the researcher in an SPSS/PASW file format for a fee of \$250 for the administrative costs associated with obtaining the data.

Upon receiving the data file, the researcher reviewed the data to ensure all needed variables were there. In total, 93,338 survey responses were received by the researcher of those individuals who indicated that they had achieved an A/A+ grade average in high school. Responses from those individuals who did not answer this question and those who only applied to one institution of higher education were deleted from the file because of the set delimitations for this study; this resulted in a reduction of 913 responses. The research resulted in a final sample of 92,425 cases.

One variable needed to be recoded based on the research questions. The researcher recoded the dependent variable so that it existed in a dichotomous format, allowing logistic regression to be an appropriate statistical analysis technique. Originally, the dependent variable came from The Freshman Survey, question 18, which asks “This college is your...” and allows students to select either *first-choice*, *second-choice*, *third-choice*, or *greater-than-third-choice*. Recoding of the variable combined the responses second-choice, third-choice, and greater-than-third-choice to “not first-choice.” The dichotomous answers for the dependent variable, after recoding, were “first-choice” and “not first-choice.”

Analysis for this study comprised of three statistics. The Wald χ^2 was conducted to test the statistical significance of each variable. When variables were tested individually, the threshold was relaxed to $p = .30$ (Hosmer & Lemeshow, 2000). When variables were combined into a final model, the threshold was set to $p = .001$. Variables were shown to be significant when they reflect a p -value under the set threshold. The logistic regression analyzed the odds-ratio statistic. As the log-odds statistic was computed at a base of 0, it is important to remember that any result below 0 means that there was a negative correlation and any result above 0 means that there is a positive correlation. Marginal effects reflect the slope of the influence of the variable should it be graphed. The discrete change will explore the influence of specific variables in the model, while holding other variables constant at their means. Discrete change will show the likelihood of enrollment in one's first-choice institution based on the variables in question. Discrete change was interpreted as a percentage reflecting the change in likelihood of first-choice enrollment as the independent variable increases in degree (for continuous variables) or to a "yes" identification (for categorical variables).

Demographics

This section will present the demographics of the sample. This includes information about the sample's distribution of gender, race, and age, and their enrollment patterns. Demographic information was obtained to explore the sample and its composition to ensure that these characteristics match those of the

larger population of academically talented students and increase the generalizability of this study's results.

The demographics of respondents are summarized in Table 1. The majority of the sample was female (62.6%). The percentage of females in this sample was larger than what the literature has shown for academically talented students (Lee, Matthews, & Olszewski-Kubilius, 2008; Reis, 1998). The racial background of this sample is disproportionately White (77.7%). As revealed in the review of the literature, non-White students made up a small percentage of academically talented students, which also held true in this sample (College Board, 2006; Matthews & Kitchen, 2007). Following White students, Asian students represented the second largest racial/ethnic group as a percentage (8.8%). Latino students made up the third largest racial/ethnic group as a percentage of racial background in this sample (5.3%). Black students made up the fourth largest racial/ethnic group as a percentage (4.2%). Respondents indicating they are American Indian, Pacific Islander, and Other made up less than two percentage points each. Students were able to select multiple answers on the survey when asked to identify their race or ethnicity. The final *N* for racial identification is larger than the number of total individuals who completed the survey. Students who identify as multiracial, or more than one race/ethnicity, were not provided a specific option for multiracial and therefore selected all that applied. This multiple selection allowed a greater total for race/ethnicity than the total sample.

The vast majority of individuals in this sample were in the traditional college-age range of 18–24. The largest number of individuals in the sample was 18 years of age (67.6%), with a sizeable percentage being 19 (29.5%). This age range represented in the sample was consistent with expectations for first-year students. All other ages were minor in comparison with 18- and 19-year-olds in the distribution.

The sample was enrolled in a wide variety of institutional types of higher education. Individuals were most likely to enroll in highly selective institutions (48.4%), compared with those enrolled in medium-selective institutions (21.2%) or low-selective institutions (10.3%). Forty three and a half percent of respondents enrolled in a public university of college, while 38.6% of respondents enrolled in a private university or a nonsectarian, four-year college and 17.5% respondents enrolled in a religiously affiliated institution. When evaluating each type of institution and level of selectivity, the sample enrolled in the highest proportions in 4-year public institutions with high selectivity (17.0%), followed by 4-year private institutions with very high selectivity (12.2%). Table 2 summarizes sample enrollment with a complete breakdown of institutional type.

Choice-of-College

The vast majority of individuals in the sample enrolled in their first-choice institution (74.7%). A substantive minority enrolled in their second-choice institution (17.2%). Fewer students enrolled in their third choice (5.0%). Even fewer students enrolled in an institution that was ranked greater than their third

choice (3.2%). When all non–first choice respondents were combined to create a dichotomous variable, those who did not enroll in their first-choice institution composed 25.3% of the sample. Table 3 summarizes the choice level of the sample’s enrollment in higher education.

Table 1.

Respondents by Demographic Information

Demographic Information	<i>n</i>	%	<i>M</i>	σ
Gender	92,135	100.0	1.630	0.484
Male	34,468	37.3		
Female	57,827	62.6		
Race	91,814	100.0	1.755	1.598
Caucasian	71,310	77.7		
African American	3,883	4.2		
American Indian	981	1.1		
Asian American	8,100	8.8		
Pacific Islander	601	0.7		
Latino American	4,844	5.3		
Other	2,094	2.3		
Age	92,150	100.0	3.29	0.531
16 or younger	91	0.1		
17	1,816	2.0		
18	62,336	67.6		
19	27,178	29.5		
20	510	0.6		
21 to 24	190	0.2		
25 and older	29	0.0		

Table 2.

Respondents by Institutional Type With Selectivity Standards (n = 92,425)

Institutional Type and Selectivity	<i>n</i>	%
<i>M</i> =7.410 <i>σ</i> =5.714	92,425	100
Public University—low selectivity	4,063	4.4
Public University—medium selectivity	6,614	7.2
Public University—high selectivity	15,713	17.0
Private University—medium selectivity	3,531	3.8
Private university—high selectivity	5,347	5.8
Private University—very high selectivity	11,308	12.2
Public 4-year College—low selectivity	2,007	2.2
Public 4-year College—medium selectivity	4,142	4.5
Public 4-year College—high selectivity	7,585	8.2
Nonsectarian 4-year College—low selectivity	1,269	1.4
Nonsectarian 4-year College—medium selectivity	2,169	2.3
Nonsectarian 4-year College—high selectivity	5,490	5.9
Nonsectarian 4-year college—very high selectivity	6,621	7.2
Catholic 4-year College—low selectivity	936	1.0
Catholic 4-year College—medium selectivity	1,381	1.5
Catholic 4-year College—high selectivity	3,594	3.9
Other Religious 4-year College—very low selectivity	317	0.3
Other Religious 4-year College—low selectivity	1,165	1.3
Other Religious 4-year College—medium selectivity	1,786	1.9
Other Religious 4-year College—high selectivity	7,066	7.6
2-year College	321	0.4

Table 3.

Respondents by Choice-of-College Enrollment (n = 92,425)

Choice Level	<i>n</i>	%
<i>M</i> =3.630 <i>σ</i> =0.722	92,425	100.0
First-Choice	69,019	74.7
Second-Choice	15,865	17.2
Third-Choice	4,619	5.0
Greater-than-Third-Choice	2,922	3.2

Demographic variables were tested to determine the influence of gender, race, and age on academically talented students' choice-of-college decision. Chapman's (1981) model of college choice did not include these demographic variables. However, literature has consistently demonstrated that demographic characteristics are influential in the college choice decision of numerous groups (e.g., McDonough, 1997; NPEC, 2007; Pitre, 2006). Demographic variables were analyzed to determine the influence that they had on the choice-of-college decision for academically talented students.

Analysis of demographic information found that gender did not influence the choice-of-college decision of academically talented students. Gender was found to not be statistically significant as an indicator of academically talented students' choice-of-college decision, $\chi^2(1) = 0.31, p > 0.30$. To assess significance, a variable has to show a p -value (the point at which a variable shows significance) under the set threshold. For individual variable testing in this research, a variable would need to reflect a p -value under 0.30. Table 4 reflects the logistic regression of gender on academically talented students' choice-of-college decision.

Table 4.

Influence of Gender' on Choice-of-College (n = 92,135)†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Z (P> z)	log-likelihood	BIC
Female					
-0.011 (0.019)	0.989	0.952–1.028	-0.55 (0.580)		
Gender as a Variable			$\chi^2(1) = 0.31 (0.580)^\circ$	-51,367.64	-952,427

†Omitted variable was Male.

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard Error calculated was a Robust Standard Error.

° Reported statistic is Wald χ^2 (Prob> χ^2).

Race was shown to influence the enrollment patterns of academically talented students. Race as a variable was found to be a statistically significant indicator of first-choice college enrollment of academically talented students, $\chi^2(8) = 1,485.55, p < .30$. Compared with White/Caucasian students, all other racial backgrounds were found to be less likely to enroll in their first-choice institution. Asian-American students, in comparison to White students, were the least likely (approximately 1.06 times less likely) to enroll at their first-choice institution. Pacific Islanders and those who indicated "Other" as their racial designation were the next least likely to enroll in their first-choice institution (approximately .77 times and .66 times less likely, respectively). African-American and Latino students were the next least likely groups to enroll in their first-choice institution (approximately .69 times and .51 times less likely, respectively). American-Indian students were approximately .25 times less likely to enroll at their first-choice institution. Individually, identifying as a member of any race other than White significantly influenced the enrollment decision of academically talented students. As such, White students were the only racial group to be positively influenced, in comparison with other racial groups, by their race. Table 5 demonstrates the influence of race on the choice-of-college decision of academically talented students.

Table 5.

Influence of Race' on Choice-of-College (n = 92,400)†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Z (P> z)	log-likelihood	BIC
African-American					
-0.691 (0.046)	0.501	0.458–0.548	-15.10 (0.000)		
American-Indian/Native-American					
-0.249 (0.093)	0.790	0.650–0.935	-2.68 (0.007)		
Asian-American					
-1.056 (0.031)	0.348	0.327–0.369	-34.55 (0.000)		
Pacific Islander/Native-Hawaiian					
-0.768 (0.119)	0.464	0.368–0.586	-6.45 (0.000)		
Latino/Latino-American					
-0.505 (0.043)	0.604	0.554–0.657	-11.62 (0.000)		
Other					
-0.661 (0.061)	0.516	0.458–0.582	-10.79 (0.000)		
Race as a Variable					
				$\chi^2 (6) = 1,485.88 (0.000)^\circ$	-50,039.41 -949,048

[†] Omitted variable was White/Caucasian.

[†] All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard error reported was a Robust Standard Error.

[°]Reported statistic is Wald χ^2 (Prob> χ^2).

Age was found to influence the choice-of-college decision of academically talented students. Age was found to be statistically significant, $\chi^2 (1) = 31.92$, $p < 0.30$. Individuals were slightly more likely (approximately .11 times) to enroll in their first-choice institution as the individual's age increased from one category to the next. As students increased in age, students were more likely to enroll in their first-choice institution. Table 6 reflects the influence of age on academically talented students' choice-of-college decision.

Table 6.

Influence of Age on Choice-of-College (n = 92,150)†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Wald χ^2 ($P>\chi^2$)	log-likelihood	BIC
0.110 (0.019)	1.116	1.074–1.159	31.92" (0.000)	-51,242.19	-950,878

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard Error calculated was a Robust Standard Error.

"This variable had one degree of freedom.

Research Question Explanation and Analysis

This chapter will now discuss the data analysis based on each research question. First, analysis was conducted on individual variables and the influence they had on the enrollment decision of academically talented students. They will be discussed in the following order: income, educational expectation, out-of-pocket costs, distance, the influence of an individual's parents, and the influence of high school counselor. After individual analysis, the significant variables were combined into an expanded logistic model to test how the combination of variables influenced academically talented students' choice-of-college decision. Factors were added to the model in the same sequence as an individual would experience them in the college choice process.

To what extent does the family income influence the decision of academically talented students to enroll at their first-choice institution? The first research question refers to the extent to which family income influences the decision of academically talented students to enroll at their first-choice institution. The hypothesis for this research question stated that those individuals from

families with higher income are more likely to enroll at their first-choice institution. The independent variable for this question was family income and the dependent variable was first-choice enrollment.

Data for this variable came from a survey question that queried “What is your best estimate of your parents’ total income last year?” Response options and frequency responses are listed in Table 7. This question was answered by 83,021 academically talented individuals who completed the Freshman Survey in 2005. The question was left blank by 9,404 individuals, who were not included in the analysis for this research question. An analysis of those individuals who failed to answer the question did not discover any demographic differences from the larger group of academically talented students. The plurality of respondents reported family income between \$100,000 and \$149,999 (19.9%). A slightly smaller percentage reported income between \$75,000 and \$99,999 (16.3%). The third highest percentage reported income between \$60,000 and \$74,999 (12.1%). Those who earned \$150,000 and over accounted for 19.5% of the respondents while those who earned less than \$60,000 accounted for 32.2% of academically talented students in this survey.

Table 8 provides a summary of statistics from the logistic regression that was calculated for this research question. As reflected by the Wald chi square statistic, income was found not to be statistically significant, $\chi^2(1) = 0.520, p > .30$. The failure of significance demonstrates that the null hypothesis was not rejected and family income was not a good indicator of first-choice enrollment. Family

income was not a variable that predicted the enrollment decision of academically talented students.

Table 7.

Respondents by Income Level (n = 83,021)

Income Level	<i>n</i>	%
<i>M</i> =9.300 <i>σ</i> =3.004	83,021	100.0
Less than \$10,000	1,802	2.2
\$10,000 to \$14,999	1,564	1.9
\$15,000 to \$19,999	1,472	1.8
\$20,000 to \$24,999	2,129	2.6
\$25,000 to \$29,999	2,220	2.7
\$30,000 to \$39,999	4,579	5.5
\$40,000 to \$49,999	5,818	7.0
\$50,000 to \$59,999	7,174	8.6
\$60,000 to \$74,999	10,045	12.1
\$75,000 to \$99,999	13,540	16.3
\$100,000 to \$149,999	16,498	19.9
\$150,000 to \$199,999	6,430	7.7
\$200,000 to \$249,999	3,300	4.0
\$250,000 or more	6,450	7.7

Table 8.

Influence of Income on Choice-of-College†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Wald χ^2 ($P>\chi^2$)	log-likelihood	BIC
-0.004 (0.003)	0.996	0.989–1.003	0.520" (0.469)	-46,441.95	-847,460

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on college enrollment in which institution of higher education a student enrolled.

*Standard Error calculated was a Robust Standard Error.

" This variable had one degree of freedom.

To what extent does an individual's level of educational expectation influence the decision of academically talented students to enroll at their first-choice institution? The second research question examines the propensity of an academically talented student's educational expectations influence on enrollment at their first-choice institution. The hypothesis for this research question stated that academically talented students who have higher educational expectations are more likely to enroll at their first-choice institution. The independent variable for this research question was educational expectation and the dependent variable was enrollment at their first-choice institution.

Data for this variable came from a survey question which queried "What is the highest academic degree that you intend to obtain?" Response options and frequency of responses are reported in Table 9. Responses for this research question were obtained by 81,338 individuals in the sample of academically talented students who completed the Freshman Survey in 2005. Responses left blank by 11,087 individuals were not included in the analysis of this variable. An analysis of those who did not respond compared with those who did respond to this question discovered no major differences. The largest percentage of respondents indicated they intended to get a master's degree (38.1%). Respondents to a large percentage said they intended to get a terminal degree of some kind (22.9%). A bachelor's degree was the intended degree of 14.9% of the respondents. The second largest response was those who planned to obtain a Ph.D. or Ed.D. (22.3%).

Table 10 illustrates the analysis of educational expectations on the decision of academically talented students to enroll in their first-choice institution. As reflected by the Wald chi square statistic, educational expectations was found to be statistically significant, $\chi^2(8) = 867.31, p < .30$. Educational expectations as a variable proved to be influential in the choice-of-college decision of academically talented students.

Academically talented students who were interested in attaining an associate's degree were slightly more likely (0.03 times more so) to attend their first-choice institution than those students who were interested in attaining a bachelor's degree. Individuals who were planning to pursue a master's were 0.62 times less likely to enroll in their first-choice institution. Students who wanted to earn a law degree were 1.11 times less likely to enroll in their first-choice institution. Students who wanted to obtain an earned doctorate or a medical doctorate were, respectively, 0.95 and 0.92 times less likely to enroll in their first-choice institution than were the students who wanted to earn a bachelor's degree. Those academically talented students who did not have educational expectations or listed "Other" as their degree attainment desire were also less likely (0.68 times less likely) to enroll in their first-choice institution compared with those who listed a bachelor's degree as their educational expectation. Educational expectation was shown to be a variable that influences the college enrollment of academically talented students. Educational expectation levels, other than a bachelor's degree, negatively influenced the enrollment decisions of academically talented students.

Table 9.

Respondents by Educational Expectation Level (n = 81,338)

Educational Expectation	<i>n</i>	%
<i>M</i> =5.650 <i>σ</i> =1.267	81,338	100.0
None	215	0.3
Vocational Certificate	33	0.0
Associate's Degree	133	0.2
Bachelor's Degree	12,117	14.9
Master's Degree	31,018	38.1
Ph.D. or Ed.D.	18,162	22.3
M.D., D.O., D.D.S., D.V.M. (medical)	12,813	15.8
LL.B. or J.D. (law)	5,567	6.8
B.D. or M. Div. (Divinity)	253	0.3
Other	1,024	1.3

Table 10.

Influence of Educational Expectation' on Choice-of-College†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Z (P> z)	log-likelihood	BIC	
None						
-0.503 (0.202)	0.604	0.407–0.898	-2.49 (0.013)			
Vocational Certificate						
-1.098 (0.462)	0.333	0.135–0.824	-2.38 (0.017)			
Associate's Degree						
0.028 (0.282)	1.029	0.592–1.786	0.10 (0.920)			
Master's Degree						
-0.620 (0.036)	0.538	0.501–0.578	-17.02 (0.000)			
Ph.D. or Ed.D.						
-0.951 (0.038)	0.387	0.359–0.416	-24.99 (0.000)			
M.D., D.O., D.D.S., D.V.M. (medical)						
-0.915 (0.040)	0.400	0.370–0.433	-22.78 (0.000)			
LL.B. or J.D. (law)						
-1.112 (0.047)	0.329	0.300–0.361	-23.52 (0.000)			
B.D. or M.Div. (Divinity)						
-0.621 (0.188)	0.537	0.372–0.777	-3.30 (0.001)			
Other						
-0.679 (0.097)	0.507	0.420 0.613	-7.02 (0.000)			
Educational Expectations as a Variable						
				$\chi^2 (8) = 867.31 (0.000)^\circ$	-45097.64	-829,329

*Omitted variable was Bachelor's Degree.

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard Error calculated was a Robust Standard Error.

° Reported statistic is Wald χ^2 (Prob> χ^2).

To what extent does the out-of-pocket cost of the institution influence the decision of academically talented students to enroll at their first-choice institution? The third research question refers to the extent that out-of-pocket costs of the institution influence the decision of academically talented students to enroll at their first-choice institution. The hypothesis for this research question is that academically talented students who pay more in out-of-pocket costs are less

likely to attend their first-choice institution. The independent variable for this research question is out-of-pocket costs and the dependent variable is enrollment in their first-choice institution.

Data for this variable was obtained from a survey question that queried “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? Family resources?” Options and frequency of responses are reported in Table 11.

Responses for this research question were obtained from 79,956 academically talented students. Data was excluded from analysis for the 13,382 individuals who did not respond to the variable. No significant demographic differences emerged between those who did not answer the survey question and those who did.

Respondents indicated that they overwhelmingly paid more than \$10,000 from family resources for their college education (39.5%). Remaining respondents were relatively equally distributed among other categories. Respondents indicated in almost equal percentages that they spent \$1,000–\$2,999, \$3,000–\$5,999, and \$6,000–\$9,999 (13.2%, 13.8%, and 12.6% respectively). Those who spent less than \$1,000 or nothing made up a smaller percentage of respondents (10.9% and 9.9% respectively).

Table 12 provides a summary of statistics from the logistic regression calculated for this research question. The influence of out-of-pocket costs is shown to be significant, $\chi^2(1) = 15.75, p < .30$. As out-of-pocket costs increase, academically talented students are less likely to enroll in their first-choice

institution. The statistical significance of the Wald chi square statistic reflects a rejection of the null hypothesis and shows that out-of-pocket costs significantly influence the decision of academically talented students to enroll at their first-choice institution. Similar to other populations, academically talented students are constrained by costs, and increased costs inhibit the enrollment of these students. For each increase in category for out-of-pocket costs, an individual is about .02 times less likely to enroll in their first-choice institution. These results demonstrate that the null hypothesis of out-of-pocket costs was rejected and out-of-pocket costs influence an individual's decision to enroll at their first-choice institution. Out-of-pocket costs negatively influence the enrollment decisions of academically talented students.

Table 11.

Respondents by Out-of-Pocket Costs (n = 84,963)

Out-of-Pocket Costs	<i>n</i>	%
<i>M</i> =4.27 <i>σ</i> =1.760	84,963	100.0
None	8,453	9.9
Less than \$1,000	9,257	10.9
\$1,000–\$2,999	11,216	13.2
\$3,000–\$5,999	11,727	13.8
\$6,000–\$9,999	10,735	12.6
\$10,000 or greater	33,575	39.5

Table 12.

Influence of Out-of-Pocket Costs on Choice-of-College[†]

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Wald χ^2 ($P>\chi^2$)	log-likelihood	BIC
-0.022 (0.006)	0.978	0.967–0.989	15.75" (0.000)	-47,501.35	-869,302

[†] All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard Error reported was a Robust Standard Error.

"This variable has one degree of freedom.

To what extent does the distance from the college to an academically talented student's home influence the student's decision to enroll at their first-choice institution?

The fourth research question refers to the extent that the distance from the college to an academically talented students' home influences the student's ability to enroll at their first-choice institution. The hypothesis for this question was that academically talented students are not likely to be constrained by distance in the decision to enroll at their first-choice institution. The independent variable for this question was distance from home and the dependent variable was enrollment at one's first-choice institution.

Data for this variable was obtained from a survey question that queried "How many miles is this college from your permanent home?" Options for response and frequencies of responses are reported in Table 13. This variable was responded to by 91,154 academically talented students who participated in the 2005 Freshman Survey. The question was left blank by 1,271 individuals, who were not considered in the individual variable analysis. A comparison on the demographics of those who did not answer this question and those who did was

conducted and no significant differences were identified between the two groups. The largest percentage of respondents lived between 101 and 500 miles from their permanent home (37.3%). A sizeable minority lived between 11 and 50 (19.8%), over 500 miles (19.5%), and 51 to 100 (15.5%) miles from their permanent home.

Table 14 provides a summary of statistics from the logistic regression that was completed for this research question. As reflected by the Wald chi square statistic, distance was statistically significant, $\chi^2(1) = 54.16$, $p < .30$. As the distance between an individual's enrolled institution and their permanent residence increases, the less likely an individual is to enroll in their first-choice institution; this increasing distance means an individual is approximately .06 times less likely to enroll in their first-choice institution as the distance increased by response category. Distance negatively affected the enrollment patterns of academically talented students in this sample.

Table 13.

Respondents by Distance Between Permanent Home and Institution (n = 91,154)

Distance	<i>n</i>	%
<i>M</i> =4.39 <i>σ</i> = 1.289	91,154	100.0
5 or less	2,965	3.3
6 to 10	3,748	4.1
11 to 50	18,080	19.8
51 to 100	14,104	15.5
101 to 500	34,448	37.8
Over 500	17,809	19.5

Table 14.

Influence of Distance on Choice-of-College[†]

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Wald χ^2 ($P>\chi^2$)	log-likelihood	BIC
-0.058 (0.008)	0.944	0.930–0.959	54.16" (0.000)	-50,667.72	-939,586

[†] All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard error reported was a Robust Standard Error.

"This variable has one degree of freedom.

To what extent do parents influence the decision of academically

talented students to enroll at their first-choice institution? The fifth research question refers to the extent to which parents influence the decision of academically talented students to enroll at their first-choice institution. The hypothesis for this research question stated that parents do not greatly influence the decision of academically talented students to enroll at their first-choice institution. The independent variable for this question was parental influence and the dependent variable was the decision to enroll in the first-choice institution.

Data for this research question came from a survey question that queried “In deciding to go to this college, how important to you was each of the following reasons? My parents wanted me to go?” Options for response and frequency of responses are reported in Table 15. This variable was responded to by 91,185 academically talented students who participated in the 2005 Freshman Survey. It was left blank by 1,240 individuals, who were not included in the analysis for this variable. A relatively even distribution of answers was reflected in the responses given to this variable, with “somewhat important” and “very important” both receiving approximately 38.9% of all respondents. Analysis of those individuals

who did not respond to those questions did not reflect any major differences with the larger sample.

Table 16 provides a summary of statistics from the logistic regression that was completed for the effect of parental influence on the enrollment decision of academically talented students. The influence of the parent is shown to be significant, as reflected by the Wald chi square statistic, $\chi^2 (1) = 31.25, p < .30$. The statistical significance of the Wald chi square statistic reflects a rejection of the null hypothesis and shows that parents significantly influence the first-choice enrollment decision of academically talented students. Individuals who viewed their parents' influence with greater importance were more likely to enroll in their first-choice institution. As parental influence increased in importance, academically talented students were .08 times more likely to enroll in their first-choice institution over individuals who valued their parent's influence less. These results demonstrate that the null hypothesis of parental influence was rejected and parental influence was instrumental in an individual's decision to enroll in their first-choice institution.

Table 15.

Respondents by Influence of Parent (n = 91,185)

Response	<i>n</i>	%
<i>M</i> =2.17 <i>σ</i> =0.764	91,185	100.0
Not Important	20,285	22.2
Somewhat Important	35,457	38.9
Very Important	35,443	38.9

Table 16.

Influence of Parent on Choice-of-College†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Wald χ^2 ($P>\chi^2$)	log-likelihood	BIC
0.079 (0.012)	1.082	1.056–1.109	31.25"(0.000)	-50,684.53	-940,000

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard error reported was a Robust Standard Error.

"This variable has one degree of freedom.

To what extent do high school counselors influence the decision of academically talented students to enroll at their first-choice institution? The sixth research question refers to the extent to which the high school counselor influences the decision of academically talented students to enroll at the student's first-choice institution. The hypothesis for this research question stated high school counselors fail to influence the decision of academically talented students to enroll at their first-choice institution. The independent variable for this question was the influence of high school counselors and the dependent variable was first-choice institution enrollment.

Data for this variable came from a survey question which queried “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? High school counselor advised me.” Options for response and frequency of responses are reported in Table 17. This question on the Freshman Survey was answered by 89,204 academically talented students in 2005. The response was omitted by 3,221 individuals. Analysis was completed between those who did not fill out this particular question and those who did, and no significant differences in demographic composition were found. The majority of individuals (67.4%) reported that the high school counselor was not important in their enrollment decision. A small minority indicated that the high school counselor was somewhat important (26.7%).

Table 18 provides a summary of statistics from the logistic regression that was completed for this research question. The influence of the high school counselor is shown to be significant, $\chi^2(1) = 31.62, p < .30$. The statistical significance of the high school counselor reflects that the high school counselor affects the choice-of-college decision of academically talented students. As academically talented students increase in their value of the high school counselor’s influence, they are .09 times less likely to enroll in their first-choice institution. The magnitude of the decrease is relatively small, but the high school counselor’s influence negatively affects the enrollment patterns of academically talented students. These results show that the hypothesis for this research question

was proven incorrect and that the high school counselor influences the choice of college decision of academically talented students.

Table 17.

Respondents by Influence of High School Counselor (n = 89,204)

Response	<i>n</i>	%
<i>M</i> =1.39 <i>σ</i> =0.596	89,204	100.0
Not Important	60,111	67.4
Somewhat Important	23,833	26.7
Very Important	5,260	5.9

Table 18.

Importance of High School Counselor on Choice-of-College†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Wald χ^2 (P> χ^2)	log-likelihood	BIC
-0.089 (0.160)	0.915	0.887–0.994	31.62" (0.000)	-49,559.55	-917,666

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard error reported was a Robust Standard Error.

"This variable has one degree of freedom.

To what extent do campus visits influence the decision of academically talented students to enroll at their first-choice institution? The seventh research question refers to the extent that campus visits influence the decision of academically talented students to enroll at their first-choice institution. The hypothesis for this question stated that academically talented students are positively influenced by campus visits when choosing to enroll in their first-choice institution. The independent variable for this question was the influence of campus visits and the dependent variable was first-choice college enrollment.

Data for this variable was obtained from a survey question that queried “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? A visit to the campus?” Options for response and frequency of responses are reported in Table 19. This variable was responded to by 89,325 academically talented students who completed the 2005 Freshman Survey. This item was left unanswered by 3,100 individuals, who were not included in this analysis. An analysis was completed on those who did not respond to this variable and no major demographic discrepancies were detected between those individuals and the larger sample. The majority of individuals responded that a visit to the campus was very important (49.0%). Thirty-three and a third percent of the respondents reported that the campus visit was somewhat important, while 16.6% of respondents reported that the campus visit was not important in their choice-of-college decision.

Table 20 provides a summary of statistics from the logistic regression that was completed for this research question. The influence of the campus visit is shown to be significant, $\chi^2(1) = 1904.36, p < .30$. The statistical significance of the Wald chi square statistic demonstrates a rejection of the null hypothesis. As academically talented students increased their value of the importance of the campus visit, they were .56 times more likely to enroll in their first-choice institution, reflecting support for the hypothesis established for this research question. These results demonstrated that the null hypothesis was rejected and

that the campus visit significantly influenced an individual's decision to enroll in their first-choice institution.

Table 19.

Respondents by Importance of Campus Visit (n = 89,325)

Response	<i>n</i>	%
<i>M</i> =2.32 <i>σ</i> =0.742	89,325	100.0
Not Important	14,784	16.6
Somewhat Important	30,744	33.3
Very Important	43,797	47.4

Table 20.

Influence of Campus Visit on Choice-of-College†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Wald χ^2 ($P > \chi^2$)	log-likelihood	BIC
0.556 (0.123)	1.744	1.701–1.789	1904.36" (0.000)	-48,158.36	-921,969

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard error reported was a Robust Standard Error.

"This variable has one degree of freedom.

Summary of Individual Variables.

The majority of variables explored in this research were found to be statistically significant. Table 21 reflects the log-odds and the odds-ratio of those variables. Three variables positively influenced the enrollment decision of academically talented students: the expectation to achieve an associate's degree (rather than a bachelor's degree), Parent Influence, and Campus Visit Influence. The most influential of those variables were the campus visit and the least influential was the desire to attain an associate's degree. The other variables

tested that were statistically significant negatively influenced the college enrollment decision of academically talented students. Students who had educational expectations of obtaining a vocational certificate and law degree (both as opposed to a bachelor's degree) were most negatively influenced compared with the other solo variables. The largest negative influence on first-choice college enrollment was the decisions to obtain a vocational certificate and law degree (both compared to a bachelor's degree). Outside of educational expectations, the influence of the high school counselor had the largest negative influence on the enrollment decision of academically talented students; this reflected that the more reliance that academically talented students put in their high school counselor, the less likely they were to enroll in their first-choice institution. For all statistically significant variables, parent influence and campus visit had a positive influence on the enrollment decision of academically talented students, while out-of-pocket costs, distance, high school counselor's influence, and the majority of educational expectation levels had a negative influence on the first-choice college enrollment of academically talented students.

Table 21.

Variables Determined to Be Statistically Significant, Log-Odds and Odds-Ratio

Variable	Log-Odds	Odds-Ratio
Educational Expectations		
None	-0.303	0.604
Vocational Certificate	-1.098	0.383
Associate's Degree	0.028	1.029
Master's Degree	-0.620	0.538
Doctoral Degree	-0.551	0.387
Medical Degree (terminal)	-0.915	0.400
Law Degree (terminal)	-1.112	0.329
Divinity Degree (terminal)	-0.621	0.537
Out-of-Pocket Costs	-0.022	0.978
Distance	-0.058	0.944
Parent Influence	0.079	1.082
High School Counselor Influence	-0.089	0.915
Campus Visit	0.556	1.744

Two variables were found not to be statistically significant in the previous analysis. Gender and family income were found not to be a significant indicator of first-choice enrollment of academically talented students. Variables not found to be statistically significant were excluded from consideration of an expanded model due to the likelihood that the inclusion of insignificant variables would decrease the significance and predictive utility of an expanded model. Gender and family income was not found to be statistically significant and was not combined into the expanded model.

Combination of Variables

After analyzing individual variables to determine which ones were statistically significant, variables were combined to make an integrated model of

choice of college. Race was selected as the base variable and then variables were selected to be entered into the model based on the chronological order in which the variable might begin to interact on an individual's choice of college decision. The alpha level was tightened to $p = .001$ for the final model to test for significance in the variables when they were combined into one model. The tightening of alpha levels allows for a more stringent test for the influence of variables on academically talented students' choice-of-college decision (Hosmer & Lemeshow, 2000). The alpha level of .001 was selected because of the prevalence in literature of this alpha level's use for analysis (e.g., Abraham & Clark, 2003; Cooper, 2005; Kim, 2004).

Influence of race, age, parental, high school counselor, educational expectations, out-of-pocket costs, campus visit, and distance on choice-of-college. Upon the analysis of individual variables and their influence on the choice-of-college decision of academically talented students, variables were combined to create a final model. The final model included variables that were found to be statistically significant. The variables of gender and family income were omitted from the final model because they failed to obtain statistical significance as solo, independent variables on the choice-of-college decision. Table 22 reflects the logistic regression model for the final model of academically talented students' choice of college.

The final model presented reflects a model of academically talented students' choice-of-college decision, as influenced by Chapman's (1981) model of

college choice. The final model was found to be statistically significant, $\chi^2 = 3,241.94, p < 0.001$. Compared with the BIC statistic computed by the analysis of individual variables on the choice-of-college decision of academically talented students, the final model's increased value reflects a much more predictive model than any single, independent variables tested earlier in this chapter. The final model was a stronger model to explore the choice-of-college decision of academically talented students as compared with individual variables.

In the final model, racial characteristics still continue to reflect the benefits of being White in the decision to enroll in one's first-choice institution. Out of the racial characteristics of the sample, the variable of Native American / American Indian was not found to be statistically significant, $Z = -1.35, p > .001$. Other racial categories were shown to be statistically significant, but reflected a negative influence on first-choice enrollment, compared to White students. Asian-American students, in comparison with White students, were shown to be the least likely to enroll in their first-choice institution. Asian-Americans, Pacific-Islanders and African-American/Black students were the next least likely categories to enroll in their first-choice institution. Those who indicated "Other" as their race and Latino students were influenced the least negatively in comparison with White students' enrollment decision.

Age also reflected an influential variable on the choice-of-college decision of academically talented students. Age was found to be a statistically significant variable in the final model, $Z = 3.83, p < 0.001$. As individuals progress into the

higher age groups, academically talented students are slightly more likely to enroll in their first-choice institution. Age, in the final model, was found to have a positive influence on the enrollment decision of academically talented students.

Parents' influence was also an influential variable on the choice-of-college decision of academically talented students. The influence of parents was found to be a statistically significant variable in the final model, $Z = 5.48$, $p < .001$. As academically talented students increase their view in the importance of their parents in the college choice process, they are more likely to enroll in their first-choice institution. Parents' influence, in the final model, was found to have a positive influence on the enrollment decision of academically talented students.

The influence of the high school counselor was also found to be influential on the choice-of-college decision of academically talented students, and this influence was found to be a statistically significant variable in the final model, $Z = -5.18$, $p < .001$. As an individual increased in their value of the high school counselor's influence, they were slightly less likely to enroll in their first-choice institution. The high school counselor was found to have a negative influence on the choice-of-college decision of academically talented students.

Educational expectations were explored in relation to the choice-of-college decision of academically talented students. As a categorical variable, response options were compared with another option (bachelor's degree), which was not included in the model so that other options could be compared against it. Using a .001 significance level, the number of responses that were not statistically

significant increased to four: none, Vocational Certificate, Associate's Degree, and Divinity Terminal Degree. Among all options, the only degree option when compared with the bachelor's degree that had a positive influence on the enrollment of academically talented students in their first-choice institution was the decision to obtain an associate's degree. However, the lack of statistical significance of this variable negates the predictive ability of this variable. For the remaining variables (Master's Degree, Ph.D./Ed.D., Medical Terminal Degree, Law Terminal Degree, and Others), which were statistically significant at the .001 level, there was a slightly negative influence between each category and an academically talented student's decision to enroll in their first-choice institution. Compared with a bachelor's degree, other degree-attainment levels negatively influenced the enrollment decision of academically talented students.

Out-of-pocket costs were shown to influence the choice-of-college decision of academically talented students. The influence of out-of-pocket costs was shown to be a statistically significant variable in the final model, $Z = -8.93$, $p < .001$. As a student increased the amount they paid in college costs, they were less likely to enroll in their first-choice institution of higher education. Out-of-pocket costs were therefore found to have a negative influence on the enrollment decision of academically talented students.

The campus visit was shown to influence the choice-of-college decision of academically talented students. The influence of the campus visit was shown to be a statistically significant variable in the final model, $Z = 38.35$, $p < .001$. As a

student felt that the campus visit was increasingly important, they were more likely to enroll in their first-choice institution. As students indicated an increase in the importance of their campus visit on the survey instrument, they were approximately 0.58 times more likely to enroll in their first-choice institution than those who indicated importance in a lower categorization on the survey instrument. The campus visit positively influences the choice-of-college decision of academically talented students.

Distance, too, was shown to influence the choice-of-college decision of academically talented students. The influence of distance was shown to be a statistically significant variable in the final model, $Z = -9.20$, $p < .001$. As the distance between the school and the student's permanent residence increases, students are less likely to enroll in their first-choice institution. Distance negatively influences the choice-of-college decision of academically talented students.

Table 22.

Influence of Race', Age, Parent, High School Counselor, Educational Expectations`, Out-of-Pocket Costs, Campus Visit, and Distance on Choice-of-College (n = 92,425)†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Z (P> z)	log-likelihood	BIC
Race: African-American/Black					
-0.583 (0.056)	0.558	0.500–0.623	-10.36 (0.000)		
Race: Native-American/American-Indian					
-0.151 (0.112)	0.860	0.691–1.070	-1.35 (0.176)		
Race: Asian-American					
-0.791 (0.036)	0.453	0.423–0.487	-21.94 (0.000)		

Race: Pacific-Islander				
-0.741 (0.149)	0.477	0.356–0.638	-4.97 (0.000)	
Race: Latino				
-0.438 (0.052)	0.645	0.583–0.715	-8.41 (0.000)	
Race: Other				
-0.497 (0.074)	0.608	0.526–0.703	-6.71 (0.000)	
Age				
0.082 (0.022)	1.086	1.041–1.133	3.81 (0.000)	
Parent's Influence				
0.080 (0.015)	1.083	1.053–1.115	5.48 (0.000)	
High School Counselor				
-0.096 (0.019)	0.909	0.876–0.942	-5.18 (0.000)	
Educational Expectations: None				
-0.215 (0.237)	0.806	0.507–1.283	-0.91 (0.364)	
Educational Expectations: Vocational Certificate				
-0.952 (0.488)	0.386	0.148–1.004	-1.95 (0.051)	
Educational Expectations: Associate's Degree				
0.144 (0.321)	1.147	0.615–2.168	0.45 (0.654)	
Educational Expectations: Master's Degree				
-0.618 (0.040)	0.539	0.499–0.583	-15.43 (0.000)	
Educational Expectations: Ph.D./Ed.D.				
-0.832 (0.042)	0.435	0.401–0.472	-19.78 (0.000)	
Educational Expectations: Medical Terminal Degree				
-0.787 (0.045)	0.455	0.417–0.497	-17.66 (0.000)	
Educational Expectations: Law Terminal Degree				
-1.065 (0.052)	0.348	0.314–0.385	-20.30 (0.000)	
Educational Expectations: Divinity Terminal Degree				
-0.551 (0.203)	0.577	0.387–0.859	-2.71 (0.007)	
Educational Expectations: Other				
-0.523 (0.105)	0.593	0.483–0.728	-4.99 (0.000)	
Out-of-Pocket Costs				
-0.059 (0.007)	0.943	0.931–0.955	-8.93 (0.000)	
Campus Visit				
0.580 (0.015)	1.786	1.721–1.825	38.35 (0.000)	
Distance				
-0.083 (0.009)	0.920	0.906–0.937	-9.20 (0.000)	
Model as a Whole				
		$\chi^2 (21) = 3,241.94 (0.000)^\circ$	-37,693.16	721,254

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard error reported was a Robust Standard Error.

° Reported statistic is Wald $\chi^2 (P > \chi^2)$.

' Omitted variables were Caucasian/White for Race and Bachelor's Degree for Educational Expectations.

Marginal Effects and Discrete Change of the Model

Upon exploring the logistic model, marginal effects and discrete change were determined for those variables found to be statistically significant in the final model. Five variables were removed from the model for failing to be statistically significant: Race: Native-American; Educational Expectations: None; Educational Expectations: Vocational Certificate; Educational Expectations: Associate's Degree; and Educational Expectations: Divinity Terminal Degree.

Table 23 reflects the marginal effects and discrete changes for each variable while holding all other variables at their mean. Among racial background characteristics, identifying as Asian/Asian-American decreased the likelihood of enrollment in their first-choice institution the most when compared with all other races. An Asian/Asian-American student was approximately 16.7% less likely to enroll in their first-choice institution than the White students in the sample. Those who identified Pacific-Islander or African-American were the next least likely to enroll in their first-choice institution, by approximately 16.0% and 12.1% respectively. Following those variables, identifying one's racial background as "Other" or Latino/Latino-American were the next least likely to enroll in their first-choice institution, approximately 10.2% and 8.9% respectively. As an individual increased in age, they were 1.6% more likely to enroll in their first-choice institution. As academically talented students increased the importance they placed on their parents' feedback and influence, they were 2.3% more likely to enroll in their first-choice institution. Academically talented students who

placed more importance on the influence of their high-school counselor were 1.7% less likely to enroll in their first-choice institution. Individuals who wanted to earn a law degree were the least likely to enroll in their first-choice institution by 23.2%, compared with those wishing to pursue a bachelor's degree. Academically talented students who wanted to earn a master's degree were 11.8% less likely to enroll in their first-choice institution than those individuals who wanted to earn a bachelor's degree. Individuals who wanted to earn a Ph.D./Ed.D., or Medical terminal degree, were respectively 17.0% and 16.3% less likely to enroll in their first-choice institution compared with those who wanted to earn a bachelor's degree. As out-of-pocket costs increased for academically talented students, they were less likely to enroll in their first-choice institution by approximately 1.0% for each increase in cost range. As academically talented students increased the value they placed on the campus visit, they were 14.4% more likely to enroll in their first-choice institution. As distance increased, academically talented students were 1.3% less likely to enroll in their first-choice institution.

Table 23.

Marginal Effects and Discrete Change of Individual Variables in Final Model†

Variable	Discrete Change			Difference
	Marginal Effects	from x = 0	to x = 1	
Race: African-American	-0.1076	0.7603	0.6390	-0.1213
Race: Asian	-0.1459	0.7691	0.6017	-0.1674
Race: Pacific-Islander	-0.1367	0.7569	0.5974	-0.1595
Race: Latino	-0.0807	0.7602	0.6717	-0.0885
Race: Other	-0.0916	0.7581	0.6560	-0.1021
Age	0.0152	0.7021	0.7197	-0.0157
Parent Influence	0.0147	0.7229	0.7386	-0.0231
High School Counselor	-0.0177	0.7798	0.7629	-0.0169
Ed. Expectations: Master's	-0.1139	0.7969	0.6790	-0.1179
Ed. Expectations: Ph.D.	-0.1535	0.7890	0.6192	-0.1697
Ed. Expectations: Medical	-0.1452	0.7784	0.6151	-0.1632
Ed. Expectations: Law	-0.1948	0.7692	0.5368	-0.2324
Ed. Expectations: Other	-0.0964	0.7573	0.6492	-0.1082
Out-of-Pocket Costs	-0.0109	0.7996	0.7900	-0.0096
Campus Visit	0.1069	0.4450	0.5888	0.1438
Distance	-0.0153	0.8173	0.8045	-0.0128

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

Case Studies

To further explore the discrete change of the above variables, variables were combined to explore five case studies on how combinations of variables influence academically talented students' choice-of-college decision. Variables were added into a model with those variables not included being held at their mean. Table 24 reflects the final likelihood percentage of enrollment in an academically talented students' first-choice institution for the individualized case studies.

In Case Study 1, the variables Race: Asian; Educational Expectations: Ph.D./Ed.D.; and Out-of-Pocket Costs of over \$10,000 were combined while holding other variables at their means. Students who held these characteristics were 41.7% likely to enroll in their first-choice institution, a decrease of 33.0% from the sample as a whole. In Case Study 2, the variables Race: African-American; Age 19; and high importance on the High School Counselor were combined while holding other variables at their means. Students who held these characteristics were 61.7% likely to enroll in their first-choice institution, a decrease of 13% from the sample as a whole. In Case Study 3, the variables Race: Latino; high importance on the campus visit; and Educational Expectations: Master's Degree were combined, holding other variables at their means. Students who held these characteristics were 39.2% likely to enroll in their first-choice institution, a decrease of 35.5% from the sample as a whole. In Case Study 4, the variables of Age 18; Educational Expectations: Law Degree; and a distance of over 500 miles between the institution and permanent residence were combined while holding other variables at their means. Students who held these characteristics were 49.8% likely to enroll in their first-choice institution, a decrease of 24.9% from the sample as a whole. In Case Study 5, the variables of low importance on the High School Counselor, high importance of Parent Influence, and a distance of 11 to 50 miles between the student's personal residence and the institution were combined while holding other variables at their

means. Students who held these characteristics were 79.5% likely to enroll in their first-choice institution, an increase of 4.8% over the sample as a whole.

Table 24.

Discrete Change Case Study Results†

Variables		Discrete Change		
		from x = 0	from x = 1	Difference
Race	Asian			
Educational Expectations	Ph.D./Ed.D.			
Out-of-Pocket Costs	Over \$10,000	0.5828	0.4172	-0.1656
Race	African-American			
High School Counselor	High			
Age	19	0.3834	0.6166	0.2332
Race	Latino			
Campus Visit	High			
Educational Expectations	Master's Degree	0.6079	0.3921	-0.2158
Age	18			
Educational Expectations	Law Degree			
Distance	Over 500 miles	0.5023	0.4977	-0.0046
High School Counselor	Low			
Parent Influence	High			
Distance	11 to 50 miles	0.2055	0.7945	0.5890

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

The final model of choice of college was found to be a statistically significant indicator of enrollment for academically talented students, $\chi^2 = 3,241.94, p < .001$. The majority of the variables tested had a negative influence on enrollment at the first-choice institution. Continuous variables that elicited a positive influence on academically talented students' choice-of-college decision

were age, parent influence, and the influence of the campus visit. Further explanations of these influences are discussed in Chapter 5. Continuous variables that had a negative influence on academically talented students' choice-of-college decision were the influence of the high school counselor, out-of-pocket costs, and distance. Racial categories were compared against being White to establish the influence of being non-White on the decision of academically talented students to attend their first-choice institution. While Native-American was found to not be statistically significant, all racial categories were less likely to enroll in their first-choice institution compared with White students. Educational expectations were compared against a bachelor's degree. Responses of none, Vocational Certificate, Associate's Degree, and Divinity degrees were found to not be statistically significant. Other educational expectation responses were found to negatively influence the choice-of-college decision of academically talented students compared with those interested in obtaining only a bachelor's degree.

V

DISCUSSION

Over the past few decades, colleges and universities have developed efficient organizations to handle enrollment management. Marketing, admissions, financial aid, and other offices have been organized so as to better reach out to potential students and encourage individuals to select that institution of higher education (Hossler, 1984; 2000). In addition, higher education research also has focused on enrollment management, especially how students make decisions regarding their college enrollment decisions. Beginning in the 1970s, studies focusing on college choice explored the factors that individuals considered when making a decision to pursue a postsecondary education (Chapman, 1981; Davis & Van Dusen, 1975; Hossler, 1984; Tillery & Kildegaard, 1973). These early studies culminated in 1981, when Chapman published the first integrated model of college choice. Since the inception of Chapman's model, other models of college choice have been developed, including Litten's (1982), which expanded Chapman's model, and Hossler and Gallagher's (1987), which explored college choice as a chronological process. Higher education research and practitioners have been concerned with college enrollment decisions of students for some time.

Academically talented students are a desired population that are highly desired and recruited by institutions of higher education. Enrollment management practitioners place special focus on certain populations that will meet the goals of the institution. For example, institutions of higher education focus on diverse

groups of students to ensure diversity in their student bodies and focus on those with special skills and talents to increase the quality of their art, music, and athletic programs (Moll, 1994). In addition to these groups and others, colleges and universities heavily recruit academically talented students, those students who earn high grades during high school (Moll). Colleges and universities want these students because they raise the level of academic and intellectual discourse on campus. An increase of these factors on campus increases the prestige of the college, including the average GPA and standardized test scores of the student body, which in turn helps increase the admissions selectivity of the university (Morse & Flanagan, 2008; Rinn, 2007). Institutions of higher education entice academically talented students through a variety of techniques, including creation of special academic/honors programs to challenge these students and awarding merit scholarships as financial incentives to reduce the cost of tuition (Moll, 1994; Rinn & Plucker, 2004). Colleges and universities focus on the recruitment of specialized populations through academic and financial incentives, especially those individuals with academic talent.

Enrollment management practitioners can be influenced by college choice research to improve their techniques, skills, and approaches to recruiting students and research on academically talented students can help enrollment managers better recruit and enroll this population. College choice research has focused on a number of populations to explore college enrollment decisions, including women, first generation, and Black students (e.g., McDonough, 1997; Merranko, 2005;

Pitre, 2006). Studies have explored academic performance and preparation in other populations and found that those with higher academic grades and better academic preparation are more likely to pursue postsecondary education (Bers & Galowich, 2002; Hossler, Schmit, & Vesper, 1999). As a population, neither the college enrollment patterns of academically talented students nor the factors that influence their enrollment decisions have been regularly focused on in academic studies. Academically talented students have not been studied in great detail as a population, despite the interest that schools have in recruiting them.

The purpose of this research was to explore the college choice decision of academically talented students. While academic performance has been tested as a characteristic in the college choice for various populations, the literature on college choice has not focused on academically talented students as a unique population. This study explores the college enrollment decisions for individuals with A/A+ grades in high school to further the understanding of what characteristics influence the college enrollment decisions of these students. Due to the high likelihood of this population pursuing a college education, this research focused on the definition of college choice as the decision to enroll in a particular institution of higher education over another (choice-of-college), or more specifically why students enrolled in their first-choice institution. Consequently, this research focused on the decision of academically talented students to enroll in their first-choice college over another institution.

This research used Chapman's (1981) Model of College Choice to explore the choice-of-college decision of academically talented students. Chapman's model explained college choice as a number of variables that influenced the enrollment decision of individuals as they decide to enroll in college. Chapman characterized the variables in two ways, internal and external. Internal characteristics (socioeconomic status, high school performance, aptitude, and level of educational aspirations) were defined as those characteristics that were inherent to the individual. External characteristics were those characteristics that were not inherent to the individual and were further subcategorized in three ways: fixed college characteristics (tuition cost, location of the institution, availability of program); significant persons (parents, high school personnel); and college efforts to communicate with students (campus visits, written information). This model provided the framework to select the variables used to explore the choice of college decision of academically talented students.

This research was guided by the following research questions:

1. To what extent does the family income influence the decision of academically talented students to enroll at their first-choice institution?
2. To what extent does an individual's level of educational expectation influence the decision of academically talented students to enroll at their first-choice institution?

3. To what extent does the out-of-pocket cost of an institution influence the decision of academically talented students to enroll in their first-choice institution?
4. To what extent does the distance from the college to an academically talented student's home influence the decision of academically talented students to enroll at their first-choice institution?
5. To what extent do parents influence the decision of academically talented students to enroll at their first-choice institution?
6. To what extent do high school counselors influence the decision of academically talented students to enroll at their first-choice institution?
7. To what extent do campus visits influence the decision of academically talented students to enroll at their first-choice institution?

Literature Review and Background

Beginning in the 1980s, many researchers formulated comprehensive models to explore an individual's college choice decision. College choice models were one of three types: chronological, variable, or mixed. The chronological type, such as Hossler and Gallagher's (1987) model, explored college choice in time-line form, in order of which events occur to an individual in their decision to pursue a postsecondary education. The variable type of model, such as Chapman's (1981), explored the influence of specific characteristics on enrollment patterns. The mixed model, such as Litten's (1982) model, combined the

chronological process and specific variables to explore the college choice decisions of individuals.

Characteristics. Many characteristics have been explored as predictors of college choice. This research explored only those variables that are addressed in Chapman's (1981) model of college choice. These are income, socioeconomic status, educational expectations, out-of-pocket costs, the influence of the high school counselor, the influence of parents, and the influence of the campus visit.

Internal characteristics. Academic strength and talent, as manifested in high school grades, have been shown to be a significant predictor in postsecondary enrollment (Bers & Galowich, 2002; Hossler, Schmit, & Vesper, 1999; Hu & Hossler, 2000). Academic performance has been shown to be the strongest predictor in the decision to pursue postsecondary education, as students with high grades are more likely to enroll in college than are those with low grades (Bers & Galowich). Individuals with higher grades are most likely to attend selective institutions and have more choices between institutions (Hu & Hossler, 2000; Kim, 2004). Those with strong academic performances are one of the most sought-after groups by colleges and universities and are heavily recruited by institutions of higher education (Moll, 1994). Academic performance is one of the strongest predictors for college enrollment.

Socioeconomic status is another characteristic that influences the college choice decision (Cooper, 2006; Hossler, Schmit, & Vesper, 1999; McDonough, 1997). Individuals from higher SES backgrounds are more likely to attend college

as compared with those from lower economic backgrounds (McDonough).

Individuals from lower economic groups are less likely to enroll in college, and those who do are more likely to enroll in a local or regional college or a community college, or be otherwise constrained in their college choice.

Socioeconomic status influences the ability of individuals to be academically prepared, understand the process, and afford to enroll in postsecondary education.

External characteristics. Tuition and assorted costs are significant barriers that affect the enrollment patterns of individuals (Kim, 2004; Kurlaender, 2006).

Research has shown that the most significant barrier to students who were academically qualified to attend college was the affordability of college (Hahn & Price, 2008). Financial aid, loans, and scholarships decrease the cost of tuition and make college more affordable, thereby increasing enrollments (Kim, 2004).

Affordability is a significant barrier to enrollment patterns, which is mitigated through the awarding of financial resources.

Distance between an individual's home and the institution also influences the enrollment of individuals. Students, especially low-income and non-White students, tend to enroll in institutions relatively close to their home (Kurlaender, 2006; NPEC, 2007; Santiago, 2007). Individuals tend to enroll at institutions near their permanent residence, with the exception of those institutions of higher education that exist in specific cities, who have the ability to broaden their recruitment based on their location.

An individual's parent is often found to be the most important individual in the college choice process (Hossler & Stage, 1992; NPEC, 2007). Parents have the most influence by setting the expectation that an individual should attend college, and individuals often turn to their parents for expertise in navigating the college application process and for an understanding of tuition affordability (Hossler & Gallagher, 1987). Parents tend to be most influential at the predisposition phase of college choice, when an individual decides to attend college. An individual's parents are particularly influential in the early stages of the college choice process.

The high school counselor is another individual who has some influence on the college choice process (Isherwood, 1991; McDonough, 1997; NPEC, 2007). The high school counselor tends to be seen as less influential than many other individuals because of their late entry into the college application process (McDonough, 1997; NPEC, 2007). Students tend to see the high school counselor as an individual who can help navigate the college application process, but who is relatively out of touch for providing substantive, individualized feedback (Filter, 2007; McDonough, 1997). Many students see their high school counselor as unapproachable, in addition to being unhelpful with college-going help (NPEC, 2007; Perna et al., 2008). However, the high school counselor may be increasingly influential toward students from low economic groups or who are first-generation as they lack the cultural capital to navigate the college choice process (McDonough, 1997; NPEC, 2007; Perna et al., 2008). High school

counselors have been shown to have different influences on students depending on the individual background of the student and the amount of information a student already possesses about the college application process.

Campus visits are seen by practitioners as the most influential tool that colleges have to entice enrollment at a particular college or university (Mayher, 1998). The campus visit is the moment when a student is able to evaluate the culture of the institution to determine if the culture is a match for the individual (Mayher). Campus visits are considered by practitioners to be very important in the college choice process, even though very little has been studied on the concept in empirical literature.

Chapman's (1981) model of college choice influenced the selection of variables. From those characteristics that are intrinsic to the individual to those characteristics that are intrinsic to the institution, Chapman's model provided a comprehensive model to explore the college choice decision of academically talented students. Though not exhaustive, Chapman's model provided a basis to begin studying the enrollment patterns of academically talented students.

Methodology

This research was conducted utilizing quantitative methodological techniques. Data was obtained from a large-scale survey instrument and analyzed using logistic regression. This methodology provides strength to this research in analyzing responses from a large number of individuals. Using a national survey

increases the generalizability of this data by creating a large, diverse sample from across the country, one that more accurately reflects the population as a whole.

Data for this research was obtained from the Higher Education Research Institute (HERI) at the University of California, Los Angeles (UCLA). Respondents in this study participated in the 2005 Freshman Survey, which was administered to over 400,000 individuals at over 700 institutions of higher education across the country. Data from 2005 was the most recent data available to the researcher. Subjects were narrowed down to those individuals who self-reported that they received A or A+ averages as their high school Grade Point Average. Responses were further delimited by only examining those individuals who reported a preference for their enrolled institution (e.g., first choice, second choice) and also reported that they applied to at least two institutions of higher education. Through these delimitations, this research was able to explore the enrollment choices of academically talented students who applied to multiple institutions, and to provide the opportunity to classify each student as either attending an institution that was their first-choice institution or attending one that was not their first-choice institution. Through these delimitations, a sample size of 92,245 individuals was obtained.

Variables for these analyses were selected from background characteristics, and were based on Chapman's (1981) Model of College Choice. This research also tested a varied definition of college choice (the decision to attend one's first-choice institution) and a sample from a population that had not previously been

studied exhaustively in the realm of college choice (academically talented students). The model was compared with the survey instrument to ensure that variables were included in the instrument as well as the ability to analyze the desired population. The Freshman Survey had appropriately worded questions to answer the research questions for this study.

Data Collection. In 2005, HERI collected the survey data used in this study. Institutions of higher education who participated in the Freshman Survey distributed the survey to incoming students during fall orientation and registration. Survey responses were collected by the institutions and submitted to HERI, who tabulated results. Results were sent to each participating institution along with comparisons of peer institutions. Individuals have the option to not submit responses or to not respond to a particular instrument question. After data is tabulated by HERI staff and responses are sent to each institution, data is made available to researchers after a 3-year delay. Researchers using HERI data must go through approval at UCLA to be granted access to the data.

Instrumentation. The Freshman Survey was originally developed in 1965 and is considered the longest-running survey on college students. In 2005 the Freshman Survey was a 40-multipart-question survey instrument. Questions on the survey were predominately multiple choice, with most responses being formed using Likert-scaled responses. Questions were grouped by topic and included segments on demographics, family finances, political and cultural sensitivities, and reasons for choosing enrollment in college. For example, the survey asks “What is

your best estimate of your parents' total income last year?" The survey also asks the question "In deciding to go to college, how important was it that your parents wanted you to go?" with the options being "very important, somewhat important, not important."

Data Analysis

Information received from HERI was analyzed using PASW/SPSS version 17 and Stata IC version 10. Logistic regression was employed to analyze the data because it allows the researcher to explore the influence of multiple independent variables (both categorical and continuous) on a dependent variable that is dichotomous. The dependent variable, enrollment at one's first-choice college, was presented as enrolling in one's first-choice institution or not enrolling in one's first-choice institution. Variables were tested independently for significance at the $p < .30$ level, and those that were found to be significant were combined into an integrated model to test for a combined effect. In the final combined model, variables were tested for significance at the $p < .001$ level. Data was obtained through school involvement in the survey rather than by an individual's involvement in a survey, reflecting a clustered sampling strategy. As this research used an established database to analyze academically talented students' choice-of-college decision, a true random sampling did not take place. As this research has a selection bias in that those who responded to the survey were those individuals who attended a college or university who participated in the Freshman Survey, a true random sampling did not occur in this research. To deal with non-response

bias, weighting occurred based on the institution that an individual enrolled in. Variable influence was analyzed using log-odds and odds-ratio. Followed by that, discrete change was analyzed to explore how changes in variables may impact the likelihood of an individual enrolling in their first-choice institution.

Limitations

This research is not without limitations. First, the delimitations of this research limit the generalizability to other populations. The results from this study should not be applied to populations or samples which are not academically talented students. In addition, the findings in this research may not be generalizable to academically talented students defined in a way other than those students with A/A+ averages in high school. Also, it may not be appropriate to generalize these results to those academically talented students who did not apply to more than one institution of higher education or did not prioritize potential colleges or universities in a ranking of importance in their decision-making process. The delimitations of this research limit this research and it would be inappropriate to apply these results to individuals outside of the parameters.

The dated nature of the data will also limit generalizability. The most recent data the researcher could obtain was from 2005, which may limit the ability to apply to results to academically talented students in other years. Situations that are unique to the particular time-frame, such as the economic situation of the year, may reflect on survey responses and make the data inappropriate to apply to other years. The data for this research might not be appropriate to apply to individuals

in other years because of the unique situations that occurred during the time-frame that the data was collected.

The demographic makeup of this population may limit the ability to generalize results to a sample of academically talented students which is not predominately White . Race was found to be a significant factor in this study as a predictor of academically talented students' enrollment decisions. The vast majority of students in this study were White, at over 81% of the sample. Asian, Black, and Latino students accounted for 9.3%, 4.8%, and 5.7%, respectively. The small percentage of non-White students in the overall sample of academically talented students may diminish the ability of the results of this research to be applied to non-White populations. The overwhelming representation of White students in the sample may therefore limit the generalizability of this research to non-White populations.

Discussion

This research has contributed to the literature on college choice in multiple ways. This section will explore the results of this study by explaining the variables that were found to be significant independently. Then it will discuss the integrated logistic regression model, followed by an analysis of those variables that were not found to be significant independently.

Significant Variables. While family income and gender were not found to be significant indicators of the choice-of-college enrollment decision, eight other variables were found to be significant in the enrollment patterns of academically

talented students. Those variables were the influence of race, age, educational expectations, out-of-pocket costs, distance, parents, high school counselors, and campus visits. Independently, these variables were found to be significant at the $p=.30$ threshold and influenced the enrollment decisions of academically talented students deciding to enroll at their first-choice institution. Table 25 reflects the logistic regression of variables tested independently for academically talented students.

Race was found to be influential in the choice-of-college decision of academically talented students. Race, as a variable, was found to be statistically significant, $\chi^2 (6) = 1,485.88, p<.30$. White, as a response, was omitted from analysis to allow for comparisons between other categorical responses in the regression analysis. All other racial categories negatively related to the enrollment decision of academically students compared to being White, reflecting that any non-White group were less likely to enroll in their first-choice institution than White students. The most negatively influenced group were Asian-Americans, but all non-White academically talented students were negatively influenced by their race when it came to enrolling in their first-choice institution. Race, as a variable, influenced an academically talented student's first-choice enrollment; compared with White students, all non-White students were negatively influenced by their race in their enrollment decisions.

The influence of age was found to be significant in the choice-of-college decision for academically talented students, $\chi^2 (1) = 31.92, p<.30$. As a student

increased in age groupings they were slightly more likely to enroll in their first-choice institution. As the majority of the population fell between the ages of 17 and 19 and options for response included 17, 18, and 19 separately, the influence of age reflects a marginal increase since responses were not grouped in larger age categories. However, the increase of even 1 year may reflect a student's increased critical ability to think about and research colleges over an individual who is just 1 year younger. Age positively affects the choice of college enrollment of academically talented students.

Educational expectations were also found to be a significant factor in the choice-of-college decision for academically talented students, $\chi^2 (1) = 867.31$, $p < .30$. Subcategories of this variable were tested against the educational expectations of obtaining a bachelor's degree. All subcategories were found to be statistically significant except for associate's degree. Those statistically significant subcategories showed a negative influence on the decision of academically talented student's to enroll in their first-choice institution. It would be understandable that those whose desire was to receive less than a bachelor's degree might be less inclined to attend their first-choice institution. Individuals who desire to earn a master's, doctoral, or Terminal degree of some kind were also less likely to attend their first-choice institution than those who only wanted to earn a bachelor's degree. Compared with a bachelor's degree, all other degree-expectation levels that were statistically significant negatively influenced the choice-of-college decision of academically talented students.

Out-of-pocket costs were shown to be a significant indicator of choice-of-college enrollment for academically talented students, $\chi^2 (1) = 15.75, p < .30$. Students who were required to pay more for their college education were slightly less likely to enroll in their first-choice institution. Reflection on the relationship between income and out-of-pocket costs may lend support that costs have a significant influence, but that academically talented students receive merit-aid to mitigate costs, which allows the costs of the institution to decrease while not using a family's income. Institutional and state policies allow for awarding financial incentives to students to entice their enrollment that does not take into account needs analysis through merit scholarships (e.g., Farrell, 2004; Ness, 2007). These scholarships allow students who come from higher economic backgrounds to receive funds to reduce tuition and other educationally related costs. By reducing these costs, the amount that academically talented students pay for college is reduced and the likelihood of them enrolling in those institutions that award scholarship funds is increased. This concept also explains why out-of-pocket costs were shown to be a significant predictor of first-choice college enrollment, whereas family income was not. Further, this lends support to the idea that these institutions of higher education are actively recruiting academically talented students by awarding them financial incentives for enrollment. Regardless of financial assistance, the increase of tuition costs decreases the likelihood that an academically talented student will enroll in their first-choice institution. Out-of-

pocket costs had a negative influence on an academically talented student's enrollment in their first-choice institution.

Distance proved to be an inhibitor on the enrollment decision of academically talented students, $\chi^2 (1) = 54.16, p < .30$. Academically talented students proved to be adversely affected by distance in the same way that studies have reflected other populations to be affected by distance (NPEC, 2007). As the distance between the institution and the students' permanent residence increased, students were slightly less likely to enroll in their first-choice institution. Thus, distance negatively affected an academically talented student's enrollment in their first-choice institution.

The influence of parents was found to be significant in the choice-of-college decision for academically talented students, $\chi^2 (1) = 31.25, p < .30$. This finding lends additional support to the literature (e.g., Hossler & Gallagher, 1987; Hossler & Stage, 1992; NPEC, 2007), which shows that parents significantly influence the enrollment patterns of students by setting up an expectation that the individual will go to college. A positive influence was reflected in the odds ratio to reflect that as individuals valued their parents input, they were more likely to attend their first-choice institution. Table 25 reflects a summary of these statistics for all variables tested independently. This lends support to the idea that those individuals who incorporated their parents into the college selection process were more likely to be assisted by their parents in formulating their top choices. This may provide students with a greater ability to find an institution that would be a

good match, as well as what institution would be affordable to the family. As college graduates tend to earn more money, it might be assumed that the parents of academically talented students have college degrees and can therefore lend support on the college choice process, as well as provide the initial expectations development that a college education should be obtained. The role of the parent positively affected an academically talented students' choice-of-college decision.

The high school counselor was found to be a significant indicator for choice-of-college enrollment for academically talented students, $\chi^2(1) = 31.62$, $p < .30$. As academically talented students increasingly valued the importance of their high school counselor, they were less likely to enroll in their first-choice institution. This negative influence of the high school counselor may indicate that high school counselors do not have enough training on assisting academically talented students in their college choice decision, or have too many responsibilities to assist academically talented students in their choice-of-college enrollment decision. The influence of the high school counselor negatively influenced academically talented students' enrollment decision.

Campus visits were found to be a significant indicator for choice-of-college decision, $\chi^2(1) = 1,904.36$, $p < .30$. Students who rate the value of the campus visit as more important are more likely to enroll at their first-choice institution. This could be explained by saying that academically talented students were predisposed toward selecting a college before visiting the institution, or that the campus visit provided a strong demonstration of what campuses had to offer and that

institutions were able to increase their selective rank within this population of students. Of all variables explored independently, campus visits had the largest odds-ratio of all variables explored in this study. Students were indeed positively influenced by the campus visit in the selection of their first-choice institution.

Table 25.

Results of Simple Regression of Individual Significant Variables†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Wald χ^2 ($P>\chi^2$)	log-likelihood	BIC
Race: African-American*					
-0.691 (0.046)	0.501	0.458–0.548	-15.10 (0.000)		
Race: American-Indian/Native-American*					
-0.249 (0.093)	0.790	0.650–0.935	-2.68 (0.007)		
Race: Asian-American*					
-1.056 (0.031)	0.348	0.327–0.369	-34.55 (0.000)		
Race: Pacific-Islander/Native-Hawaiian*					
-0.768 (0.119)	0.464	0.368–0.586	-6.45 (0.000)		
Race: Latino/Latino-American*					
-0.505 (0.043)	0.604	0.554–0.657	-11.62 (0.000)		
Race: Other*					
-0.661 (0.061)	0.516	0.458–0.582	-10.62 (0.000)		
Race* as a Variable					
			χ^2 (6) = 1,485.88 (0.000)	-50,039.41	-949,048
Age					
0.110 (0.019)	1.116	1.074–1.159	31.92" (0.000)	-51,242.19	-950,878
Educational Expectations: None'					
-0.503 (0.202)	0.604	0.407–0.898	-2.49 (0.013)		
Educational Expectations: Vocational Certificate'					
-1.098 (0.462)	0.333	0.135–0.824	-2.38 (0.017)		
Educational Expectations: Associate's Degree'					
0.028 (0.282)	1.029	0.592–1.786	0.10 (0.920)		
Educational Expectations: Master's Degree'					
-0.620 (0.036)	0.538	0.501–0.578	-17.02 (0.000)		
Educational Expectations: Ph.D. or Ed.D.'					
-0.951 (0.038)	0.387	0.359–0.416	-24.99 (0.000)		
Educational Expectations: Medical Terminal Degree'					
-0.915 (0.040)	0.400	0.370–0.433	-22.78 (0.000)		
Educational Expectations: Law Terminal Degree'					
-1.112 (0.047)	0.329	0.300–0.361	-23.52 (0.000)		
Educational Expectations: Divinity Terminal Degree'					
-0.621 (0.188)	0.537	0.372–0.777	-3.30 (0.000)		

Educational Expectations: Other'					
-0.679 (0.097)	0.507	0.420–0.613	-7.02 (0.000)		
Educational Expectations' as a Variable					
			$\chi^2 (8) = 867.31(0.000)$	-45,097.64	-829,329
Out-of-Pocket Costs					
-0.022 (0.006)	0.978	0.967–0.989	15.75" (0.000)	-47,501.35	-869,302
Distance					
-0.058 (0.008)	0.944	0.930–0.959	54.16" (0.000)	-50,667.72	-939,586
Parents					
0.079 (0.012)	1.082	1.056–1.109	31.25" (0.000)	-50,684.53	-940,000
High School Counselor					
-0.089 (0.160)	0.915	0.887–0.994	31.62" (0.000)	-49,559.55	-917,666
Campus Visit					
0.556 (0.123)	1.744	1.701–1.789	1,904.36" (0.000)	-48,158.36	-921,969

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Omitted variable was Caucasian/White.

"Indicates one degree of freedom.

'Omitted variable was Bachelor's Degree.

Upon analysis of each variable independently, those variables were combined into a final model to explore the choice-of-college decision for academically talented students. Table 26 reflects a summary of the final, combined model of choice of college. Table 27 reflects the marginal effects and discrete change of the variables included in the final model of choice of college.

No drastic changes occurred in the final model as compared to when the models were individually tested, although the final model was significantly more predictable in the determining the choice-of-college decision. The BIC statistics for the individual variables ranged from -950,878.349 to -829,329.072. The final model showed a significant increase to -721,254.407. This increase in the BIC statistic reflected a large increase in adequacy for the final model with the

combined variables over the variables being used independently to explore academically talented students' choice-of-college decision.

Racial identification categories were compared with White students in the final model, as they were when Race was tested independently. In the final model, Native-American/American-Indian racial identification was not found to be statistically significant, $Z = -1.35, p > .001$. All other racial identification categories had a negative influence on the choice-of-college decision compared with White students. Asian-American and Pacific-Islander were the least likely to enroll in their first-choice institutions, compared with White students and followed by African-American and Latino students. While holding other variables at their means, students who identified as African-American were approximately 12.1% less likely to enroll in their first-choice institution than all others. Asian students were 16.7% less likely to enroll in their first-choice institution, the largest negative enrollment for any racial group in the sample. Pacific Islanders and Latino students were 15.6% and 8.9% less likely to enroll at their first-choice institution. The decreased likelihood of enrollment in first-choice institutions for non-White students may reflect another aspect of a race-based problem of access. Policymakers focusing on issues of race and college access have concentrated solely on the ability of non-White students to enroll in an institution of higher education, not on the ability to enroll in their first-choice institution of higher education. When it comes to academically talented students, what compounds that concept is that issues of access are not considered as paramount due to the high

percentage of students who enroll in college (Bers & Galowich, 2002; Hossler, Schmit, & Vesper, 1999). However, the ability of students to enroll in equal-caliber and equally prioritized institutions of higher education, regardless of race, should be a concern on issues of access. The results of this research may explain that this concern is being addressed as an issue of access. The more polarized decrease of first-choice enrollment of Asian students, which was greater than African-American and Latino students, may reflect the fact that policies are addressing non-White student enrollment patterns beyond the ability to merely enroll in an institution of higher education, but to enroll in their top-choice college. Concerns of racial access have usually focused on African-American and Latino students, but have not addressed other racial minorities in the college selection process as much, such as Asian, Pacific-Islander, and Native-American students (EdWeek, 2010; U.S. Department of Education, 2002). Non-White racial categories, when compared with White students, were less likely to enroll in their first-choice institution.

Age, in the final model, was found to be statistically significant, $Z = 3081$, $p < .001$. Age was found to have a slightly positive influence on the choice-of-college decision of academically talented students. As academically talented students increase in age, they are 1.6% more likely to enroll in their first-choice institution for each age group they increase. As mentioned previously, the narrow response categories may influence this variable, as respondents chose between one

specific age and another instead of age ranges. Age had a slightly positive influence on academically talented students' choice-of-college decision.

The influence of the parent was found to be statistically significant in the final model of choice of college, $Z = 5.48$, $p < .001$. Parents were found to have a slight positive influence on the choice-of-college decision. Academically talented students may have parents involved in the process, which allows for parents to influence the institutional ranking process that the student completes with additional information that the student might not be aware of, such as the ability to pay. As students reported an increase in the importance of their parents in their choice-of-college decision, they were 2.3% more likely to enroll in their first-choice institution. Academically talented students' choice-of-college decision was positively influenced by their parents.

The influence of the high school counselor was found to be statistically significant in the final model of choice of college, $Z = -5.18$, $p < .001$. The high school counselor has a slightly negative influence on the choice-of-college decision of academically talented students. When academically talented students reported an increased importance of their high school counselor in the college choice process, they were less likely to enroll in their first-choice institution. As academically talented students report an increase in the importance of their high school counselor, they are 1.7% less likely to enroll in their first-choice institution. To fully explore this phenomenon, it must be noted that the vast majority (67.4%) of the sample reported that they found their high school counselor to be not

important in their choice-of-college decision. Those who rely on their high school counselor are individuals whose families do not have experience with the college choice process and are low-income (McDonough, 1997). High school counselors have a multitude of responsibilities, including scheduling and grief counseling, and have large case loads of students to oversee, a condition that limits their ability to know students on a personal level, to be completely familiar with their backgrounds, interests, and college priority levels (Perna et al., 2008).

Counselors' lack of knowledge regarding academically talented students unfamiliar with the college choice process in their case loads may result in encouragement to apply only to safety schools or schools of a lesser caliber, rather than finding institutions that may be a good match with the interests of the student. The more that academically talented students take this advice, the more likely they are to ultimately enroll in a lesser-choice school. Policymakers should work to alleviate the high work load of high school counselors to allow them to become more enmeshed in the college choice process of their students. Thus, the high school counselor has a slightly negative influence on academically talented students' choice of college.

Educational expectations were compared against the desire to attain a bachelor's degree, as occurred when analyzing the variable independently. Additional educational expectations levels were also not found to be statistically significant, in addition to associate's degree, which was still found to not be statistically significant. Besides Associate's Degree, the response of "none" was

not found to be statistically significant, $Z = -0.91, p > .001$. Also, Vocational Certificate was not found to be statistically significant, $Z = -1.95, p > .001$. Finally, a terminal Divinity Degree was not found to be statistically significant in the final model, $Z = -2.71, p > .001$. For those educational expectation levels that were found to be statistically significant, all were found to have a slight negative influence on academically talented students' choice-of-college decision. The desire to attain a law degree had the largest negative influence on the choice-of-college decision, followed by Ph.D/Ed.D and a Medical Terminal Degree. Individuals who wanted to attain a master's degree were 11.8% less likely to enroll in their first-choice institution. Students who wanted to earn a Ph.D/Ed.D or a Medical Terminal Degree were, respectively, 17.0% and 16.3% less likely to enroll in their first-choice institution. Individuals who wanted to earn a law degree were 23.2% less likely to enroll in their first-choice institution, which was the least likely enrollment pattern of any educational expectations. The decrease in first-choice institution enrollment for any degree other than a bachelor's degree may be explained in many ways. Academically talented students who desire to achieve a higher degree may explore the economic costs of multiple degrees and look for ways to mitigate the costs of an extended education by enrolling in a lesser-choice but less expensive institution of higher education for their bachelor's degree. However, this does not account for the positive impact that educational expectations have on academically talented students' choice-of-college decision. More probably, high schools focus on preparation and encouragement to all

college-bound students to earn a bachelor's degree, but rarely address college choice when an individual plans to earn a degree beyond a bachelor's. These students might not understand the assistance being offered in regards to college counseling, or may feel that the counseling being offered is not of value to them. High schools should provide additional college choice resources to academically talented students who desire to achieve more than a bachelor's degree. When compared with the desire to attain a bachelor's degree, the desire to attain other degree level had a negative influence on the choice of college degree of academically talented students.

Out-of-pocket costs were influential in the choice of college of academically talented students in the final model. These costs were found to be statistically significant, $Z = -8.93, p < .001$. Out-of-pocket costs had a negative influence on academically talented students' choice of college. As costs increase, an academically talented student is less likely to enroll at his or her first-choice institution. As individuals increase in the amount paid for, academically talented students were 9.6% less likely to enroll in their first-choice institution. Out-of-pocket costs negatively influence the choice-of-college decision of academically talented students.

Campus visits, in the final model, were influential in the choice-of-college decision for academically talented students. The campus visit was found to be statistically significant, $Z = 38.35, p < .001$. Campus visits were found to have a positive influence on academically talented students' choice-of-college decision.

As individuals increased the value they placed on the campus visit, they were more likely to enroll in their first-choice institution. As academically talented students reported an increase in the importance of their campus visit, they were 14.4% more likely to enroll in their first-choice institution. While campus visits may sway the decision of academically talented students to enroll in a specific institution of higher education, it is likelier that students who visit campuses are already more disposed to enrollment at that institution. Students tend to not visit schools early in their college selection process, but to visit campuses when they are selecting a final institution, and are therefore more disposed to enrolling at those institutions they visit (Mayher, 1998). The campus visit was the greatest influence of first-choice enrollment for academically talented students both independently and in the final, combined model. However, this influence may be explained by the potential that students tend to visit colleges as they have created a list of finalists in their college choice decision and only visit those schools that they seriously consider enrolling in. Students may create a final ranking of potential colleges based on the campus visit and decide on a first-choice college based on visiting each campus. However, in either possibility, the list of campuses that a student visits has been significantly narrowed to a list of finalists rather than a student visiting all potential college campuses, which would increase the influence of the college visit on the choice-of-college decision. As such, the campus visit may help make an institution an individual's first-choice institution, but may not influence a student to enroll in a school which is not their first-choice

selection. Campus visits had a positive influence on academically talented students' choice-of-college decision.

In the final model, distance was shown to have an influence on academically talented students' choice-of-college decision. Distance was found to be statistically significant, $Z = -9.20, p < .001$. Distance was found to have a negative influence on academically talented students' choice-of-college decision. As the distance between the individual's permanent residence and the institution increased, the less likely a student was to enroll in their first-choice institution. As the distance between the permanent residence of the student and the institution increased, academically talented students were 1.3% less likely to enroll in their first-choice institution.

In the final model, all variables had marginal influence on academically talented students' choice-of-college decision. The majority of variables had a negative influence on academically talented students' first-choice institution. Campus visits had the greatest positive influence on the choice of college. The influence of the high school counselor had the largest negative influence on academically talented students' choice-of-college decision. Compared with White students, Asian-American students were the least likely to enroll in their first-choice institution. Compared against a bachelor's degree, those wanting to attain a law degree were the least likely to enroll in their first-choice institution.

Table 26.

Influence of Race, Age, Parent, High School Counselor, Educational Expectations, Out-of-Pocket Costs, Campus Visit, and Distance on Choice-of-College (n = 92,425)†

Log-odds (SE*)	Odds-Ratio	Confidence Interval	Z (P> z)	log-likelihood	BIC
Race: African-American/Black					
-0.583 (0.056)	0.558	0.500–0.623	-10.36 (0.000)		
Race: Native-American/American-Indian					
-0.151 (0.112)	0.860	0.691–1.070	-1.35 (0.176)		
Race: Asian-American					
-0.791 (0.036)	0.453	0.423–0.487	-21.94 (0.000)		
Race: Pacific-Islander					
-0.741 (0.149)	0.477	0.356–0.638	-4.97 (0.000)		
Race: Latino					
-0.438 (0.052)	0.645	0.583–0.715	-8.41 (0.000)		
Race: Other					
-0.497 (0.074)	0.608	0.526–0.703	-6.71 (0.000)		
Age					
0.082 (0.022)	1.086	1.041–1.133	3.81 (0.000)		
Parent's Influence					
0.080 (0.015)	1.083	1.053–1.115	5.48 (0.000)		
High School Counselor					
-0.096 (0.019)	0.909	0.876–0.942	-5.18 (0.000)		
Educational Expectations: None					
-0.215 (0.237)	0.806	0.507–1.283	-0.91 (0.364)		
Educational Expectations: Vocational Certificate					
-0.952 (0.488)	0.386	0.148–1.004	-1.95 (0.051)		
Educational Expectations: Associate's Degree					
0.144 (0.321)	1.147	0.615– 2.168	0.45 (0.654)		
Educational Expectations: Master's Degree					
-0.618 (0.040)	0.539	0.499–0.583	-15.43 (0.000)		
Educational Expectations: Ph.D/Ed.D					
-0.832 (0.042)	0.435	0.401–0.472	-19.78 (0.000)		
Educational Expectations: Medical Terminal Degree					
-0.787 (0.045)	0.455	0.417–0.497	-17.66 (0.000)		
Educational Expectations: Law Terminal Degree					
-1.065 (0.052)	0.348	0.314–0.385	-20.30 (0.000)		
Educational Expectations: Divinity Terminal Degree					
-0.551 (0.203)	0.577	0.387–0.859	-2.71 (0.007)		
Educational Expectations: Other					
-0.523 (0.105)	0.593	0.483–0.728	-4.99 (0.000)		

Out-of-Pocket Costs				
-0.059 (0.007)	0.943	0.931–0.955	-8.93 (0.000)	
Campus Visit				
0.580 (0.015)	1.786	1.721–1.825	38.35 (0.000)	
Distance				
-0.083 (0.009)	0.920	0.906–0.937	-9.20 (0.000)	
Model as a Whole				
		$\chi^2 (21) = 3,241.94 (0.000)^\circ$	-37,693.16	-721,254

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard error reported was a Robust Standard Error.

° Reported statistic is Wald $\chi^2 (P>\chi^2)$.

Table 27.

Marginal Effects and Discrete Change of Individual Variables in Final Model†

Variable	Discrete Change			Difference
	Marginal Effects	from x = 0	to x = 1	
Race: African-American	-0.1076	0.7603	0.6390	-0.1213
Race: Asian	-0.1459	0.7691	0.6017	-0.1674
Race: Pacific-Islander	-0.1367	0.7569	0.5974	-0.1595
Race: Latino	-0.0807	0.7602	0.6717	-0.0885
Race: Other	-0.0916	0.7581	0.6560	-0.1021
Age	0.0152	0.7021	0.7197	-0.0157
Parent Influence	0.0147	0.7229	0.7386	-0.0231
High School Counselor	-0.0177	0.7798	0.7629	-0.0169
Ed. Expectations: Master's	-0.1139	0.7969	0.6790	-0.1179
Ed. Expectations: Ph.D	-0.1535	0.7890	0.6192	-0.1697
Ed. Expectations: Medical	-0.1452	0.7784	0.6151	-0.1632
Ed. Expectations: Law	-0.1948	0.7692	0.5368	-0.2324
Ed. Expectations: Other	-0.0964	0.7573	0.6492	-0.1082
Out-of-Pocket Costs	-0.0109	0.7996	0.7900	-0.0096
Campus Visit	0.1069	0.4450	0.5888	0.1438
Distance	-0.0153	0.8173	0.8045	-0.0128

† All models were weighted using sampling weights based on clustered enrollment. Models were weighted based on the college enrollment at the institution of higher education where a student enrolled.

*Standard error reported is a Regular Standard Error.

Insignificant Variables. Two variables in this study were not found to be statistically significant when testing variables individually. Income was not found to be a significant predictor of enrollment, $\chi^2 = 0.520$, $p > .30$. This variable was not added to the integrated model. Income, while usually considered to be an influential factor in the college choice decision for most populations, was not found to be significant for academically talented students' choice-of-college decision (e.g., Hossler, Schmit, & Vesper, 1999; McDonough, 1997). The majority of academically talented students came from families who made over \$60,000. In addition, a larger number of academically talented students enrolled in public institutions, which may have had low tuition. Low tuition may minimize the influence of income on enrollment decisions because families might not feel the need to pay as much as more expensive schools. Combining this information with the knowledge that out-of-pocket costs were found to be a significant indicator of choice-of-college reflects that the cost of the institution was met through sources other than the family's income. The findings about income in this research contradicted other research findings that found income to be a significant factor in the enrollment patterns of academically talented students (e.g., Hahn & Price, 2008; Wyner, Bridgeland, & DiIulio, 2007). The lack of significance of income leaves additional importance on the out-of-pocket costs variable, which was found to be a significant indicator of enrollment for academically talented students. As out-of-pocket costs influenced first-choice enrollment the more that a student has to pay to enroll will lower the ability of the student to enroll at a

particular college. Institutions of higher education offer financial incentives to lower tuition costs and help mitigate financial concerns about college enrollment. The use of financial incentives (financial grants and scholarships) help decrease costs and increase student enrollment. Colleges and universities' usage of financial incentives to entice academically talented students to enroll at their institution explains how income was not a significant influence in choice-of-college enrollment, but out-of-pocket costs were influential. Income did not significantly influence the choice-of-college decision for academically talented students.

In addition to income, gender was found not to be statistically significant, $\chi^2 = 0.31, p > .30$. Approximately 63% of the sample was female and 37% of the sample was male. Gender was removed from the final model of choice-of-college enrollment due to the insignificance of gender as an indicator of first-choice enrollment.

Implications

In addition to drawing attention to a population that is not focused on, this research can provide assistance to enrollment managers looking to recruit academically talented students and to policymakers who are interested in the enrollment patterns of academically talented students; both institutions of higher education and state governments desire to recruit and retain academically talented students. The variables' influence on the choice-of-college decision can help

admissions professionals better recruit academically talented students, and may provide support on how other populations are recruited by enrollment managers.

The exploration of race that occurred in this dissertation demonstrates that being non-White is a hindrance to enrollment in one's first-choice institution.

This study found that race was a significant factor in academically talented students' choice-of-college decision. Comparing racial categories to White students reflected that all non-White categories were less likely to enroll in their first-choice institution of higher education than their White counterparts.

Significant decreases in percentages of Asian, Pacific-Islander, African-American, and Latino students reflect that an enrollment problem based on race exists.

Although academically talented students do enroll in higher education in greater percentages than those with lower grades, a significant difference in enrollment in first-choice institutions does exist between races. As non-White students are less likely to have the same enrollment opportunities as White students, institutions should take special consideration about how they recruit and enroll minority students. The ability to enroll in first-choice institutions may not necessarily need affirmative action programs in the traditional sense, but the ability of students to enroll in their first-choice institution with respect to their abilities, regardless of race, should be a focus of policymakers and institutional enrollment managers.

African-American and Latino students have often been the focus of traditional affirmative action cases and have been shown to have lower college-going rates than their White counterparts (U.S. Census Bureau, 2008). The decrease in

enrollment for Asian students may be more difficult to explain. The key to accounting for this may be found in further analysis of the subpopulations within Asian students, a limitation that this study could not address. While many Asian populations do reflect success in areas of education, some Asian populations, such as Southeastern Asians, have the highest high school dropout rates in the country (Le, 2010). The findings with regard to Asian backgrounds and race may be unique to this sample, since other research found that Asian students were among the most likely students to enroll in their top institutions of choice (McDonough, 2004). Asian students may also have higher educational expectations than White students, and may set their top institutional priorities for those schools with the best reputations but which do not have large numbers of open spots (Goyette & Xie, 1999). Asian students may disproportionately apply for enrollment at institutions that do not have many openings, and may therefore be rejected in large numbers by their first-choice institution. To address the deficiencies of non-White students enrolling in their first-choice institution, attention should be given to race based enrollment recruiting from colleges and universities. While it may be viewed inappropriate to give preferential treatment in the official admissions decision to non-White students, it is clear that non-White students may need additional assistance in the college admissions process to be able to enroll in their first-choice college. Admissions offices should identify specific individuals to be a contact point for minority recruitment so that non-White students are able to have direct contact with a college representative during the college selection

process. Additionally, colleges and universities need to ensure that Asian students are included in any race-based admissions initiatives and that minority recruitment includes more than just Black and Latino students, such as occurs with more affirmative action admissions programs. The findings of this research support the examination of race when exploring the recruitment of academically talented students and their choice-of-college decision.

The influence of parents was shown to support the enrollment patterns of academically talented student's decisions to enroll in their first-choice institution. Parents should be encouraged to support their children in developing college-going expectations at younger ages. In addition, providing opportunities for parents to participate directly in the development of their children's college choice process would help encourage student's ability to enroll in their first-choice institutions. While this may encourage helicopter parenting to some extent, parents have the greatest ability to influence college-going behavior over other individuals (Hossler & Gallagher, 1987; NPEC, 2007). Institutions that reach out to parents in the college recruitment process might do better in enrolling academically talented students. By addressing the issues that parents care about in their children's college selection process, colleges and universities will be able to "double recruit" students by focusing on both the student and their parent in the college selection process. Colleges and universities should develop programs that reach out to parents during the college recruitment process. Recruiting the parents in addition to the students may increase the ranking of a particular school in the

student's perspective, and increase that institution's ranking and possibility of student enrollment. Colleges and universities, to recruit parents, should hold information sessions specifically for parents, and create brochures on issues that parents may be interested in, such as college affordability, campus safety, or strength of academic programs. Admissions and financial aid offices should hold "parent night" information session to inform families about the institution and college affordability. Additionally, colleges and universities should set up offices of parent relations to specifically focus on communicating with and recruiting parents. Parent offices at a college and university would give parents an avenue to participate in the life of the college and may feel more inclined to encourage their children to enroll at that particular school. Parental influence may hold the key for institutions of higher education to recruit academically talented students.

The influence of the high school counselor reflects that the high school counselor decreases the likelihood of academically talented student's enrollment in their first-choice institution. While this research cannot speak to the exact reasons that students were less likely to enroll in their first-choice institution, further research should be conducted to explore this relationship, which has not been duplicated in other studies. One possible explanation may be that the high school counselor actively encourages students to pursue and enroll in colleges that the student has not prioritized as a top-choice option. Another potential explanation is that the high school counselor, in most cases, is unaware of the intricacies of the college choice process and unable to support students in their

college search, prioritization, and application processes. If either of these explanations is accurate, then high school counselors should be given training and support in encouraging, assisting, and supporting students in their enrollment decisions. High school counselors should be given training to help students in their enrollment patterns and thereby work to mitigate the negative influence they have had on the enrollment patterns of academically talented students. To counter the belief that high school counselors are unhelpful to academically talented students' choice-of-college decision, it is important for them to receive training and support on the college selection process. It would be beneficial to designate high school staff to specifically handle college counseling and remove job responsibilities that are not integral to that role, such as creating class assignments for students. In addition, high schools should provide training to high school counselors on how to navigate the college application process, how to help students find the colleges that are a good match with the student, and how to map bridges between high school counselors and college admissions counselors that benefit students. College staff should team up with local high school counselors to assist them in the college choice process. By having colleges directly involved in this process, students would have the luxury of getting information from college staff that may be more informative in the college admissions process than high school staff. In addition, high school counselors should be skilled at assisting students in exploring what qualities they should look for in selecting a college and how to find institutions of higher education that meet those criteria.

Educational expectations reflected that the majority of educational attainment levels discouraged first-choice enrollment when compared with those who wanted to attain a bachelor's degree. Many potential reasons could explain why attainment levels beyond that of the bachelor's degree decrease first-choice enrollment when compared with the educational expectations of a bachelor's degree. One explanation may be that academically talented students recognize the long-term costs of advanced degrees and enroll in a less expensive, lesser-choice institution to offset the costs of planned advanced degrees. However, this seems to go against the concept that colleges and universities offer financial incentives to make college more affordable, and does not address potential funding for advanced degrees, of which academically talented students who have high educational expectations may be aware. Another explanation may be that academically talented students have such high expectations that they may not be able to enroll in their first-choice institution because of the low-enrollment percentage of the highest-caliber colleges. For example, many colleges get more applications than they have openings for and therefore must deny many quality applicants. However, this fails to take into account that academically talented students who have done enough research to determine their interest in attaining an advanced degree would have done enough research to determine the likelihood of acceptance in their first-choice institution. This leaves a third explanation, which seems a likely possibility—that the decrease in enrollment likelihood may reflect the need for an exploratory time period for students in college to decide what to

major in and what career path to pursue. Students who decide, before enrolling in college, that they wish to receive an advanced degree are less likely to enroll in their first-choice institution. As such, allowing students some time to focus on their immediate education plans and focus on additional degrees at a later period of time would allow them a greater likelihood of enrolling in their first-choice institution. Due to the unique characteristics that come with being academically talented, the students might be encouraged earlier on to pursue advanced degrees and consider career paths earlier than other populations. The encouragement at an early point to pursue advanced degrees may overwhelm academically talented students and discourage their enrollment in their first-choice institutions. Limiting this pressure on academically talented students, and instead encouraging them to focus on a bachelor's degree and to later concentrate on additional degrees, could encourage an increase in first-choice college enrollment for academically talented students. There may be a possibility that this third option would increase the costs of advanced degrees for the student, but funding options such as scholarships, fellowships, and assistanceships may be available to subsidize graduate studies for academically talented students. In addition, students who have decided to attain a post-bachelor's degree at the time of entry into their undergraduate institution may change their mind by the time of graduation and decide later on to get only a bachelor's degree. By being encouraged to focus on their bachelor's degree attainment, academically talented students may still have funding opportunities to

make graduate programs affordable, thus helping a greater percentage of these students enroll in their first-choice institution.

Out-of-pocket costs impeded the ability of academically talented students to enroll in their first-choice institution. While income did not influence the enrollment patterns of this group, the influence of out-of-pocket costs lends support to the belief that financial aid and merit scholarships assisted academically talented students to enroll in their first-choice institutions. Financial encouragement and assistance should be offered to academically talented students to assist them in enrolling in their first-choice institution. This supports the plentiful literature that exists on other populations which demonstrates that most populations increase their enrollment patterns based on financial assistance. Institutional financial aid, such as grants and scholarships, influence the enrollment decision of academically talented students. By reducing the costs of tuition, institutions are more likely to increase their enrollments of academically talented students. Colleges and universities should look for ways to increase the awarding of merit scholarships to greater numbers of students and in greater amounts, which will encourage the enrollment of students. Colleges and universities should increase their merit scholarship opportunities by raising specifically endowed funds for the permanent establishment of merit scholarships. In addition, colleges and universities should work to increase the amounts of merit scholarships to reduce the amount of college costs for academically talented students as much as possible. The greater the reduction in costs, the more likely

an academically talented student will enroll in that institution. In addition, colleges and universities should look for ways to reduce overall tuition costs, which would benefit all students, not just academically talented ones. The lower the original charged by the institution, the less academically talented students have to pay for college, which means that the likelihood of enrollment increases. The reduction of out-of-pocket costs helps encourage enrollment of academically talented students, and should be encouraged through the offering of scholarships and financial aid.

Campus visits were the most predictive variable to explain choice of college enrollment for academically talented students. While this study cannot specifically identify what aspect of the campus visit was the most influential in enrollment decision, a number of possibilities may explain the importance of the campus visit. One possibility is that institutions of higher education have highly developed visitor programs and are able to sell their institution to those who visit the school. A second possibility is that the campus visit occurs later in the college choice process, at a point when most students have already prioritized a list of colleges that they wish to attend. A third possibility is that students who visit a campus have a predisposition to campuses that they visit. Academically talented students may only visit campuses that have been prioritized as the top enrollment possibilities and the campus visit solidifies a final ranking, allowing for schools to ensure a first-choice ranking for a high percentage of students who visit the institution. Campuses should implement and take advantage of a campus visitor

program to make sure that students and families are given opportunities to receive guided tours and meet with current students, administrators, and professors. In addition, information delivered to families during campus visits should include honors programs, scholarship opportunities, and an extensive analysis of the co-curriculum at the institution. A well-run campus visit program may increase the ability of student enrollment in their first-choice institution.

Distance was found to be an inhibitor for academically talented student's choice-of-college decision. As the distance between the institution and the student's permanent residence increased, they were less likely to enroll at their first-choice institution. Enrollment managers should take this into consideration as they recruit students. As the largest percentage of students come from the areas near the institution, colleges and universities could save resources by focusing on the students in the geographic vicinity of the institution rather than on national enrollment without sacrificing the academic talent of the institution. Future research should also be conducted to explore the differences that might exist in this variable based on the type of institution, as private universities may do more to canvass the entire country for enrollment, while public universities may be tasked with focusing on the state in which they exist or a region of the state. Admissions offices with limited resources should concentrate on enrolling academically talented students that are close in proximity to the institution. As academically talented students were more likely to enroll in an institution of higher education that was near their permanent residence, students were also more

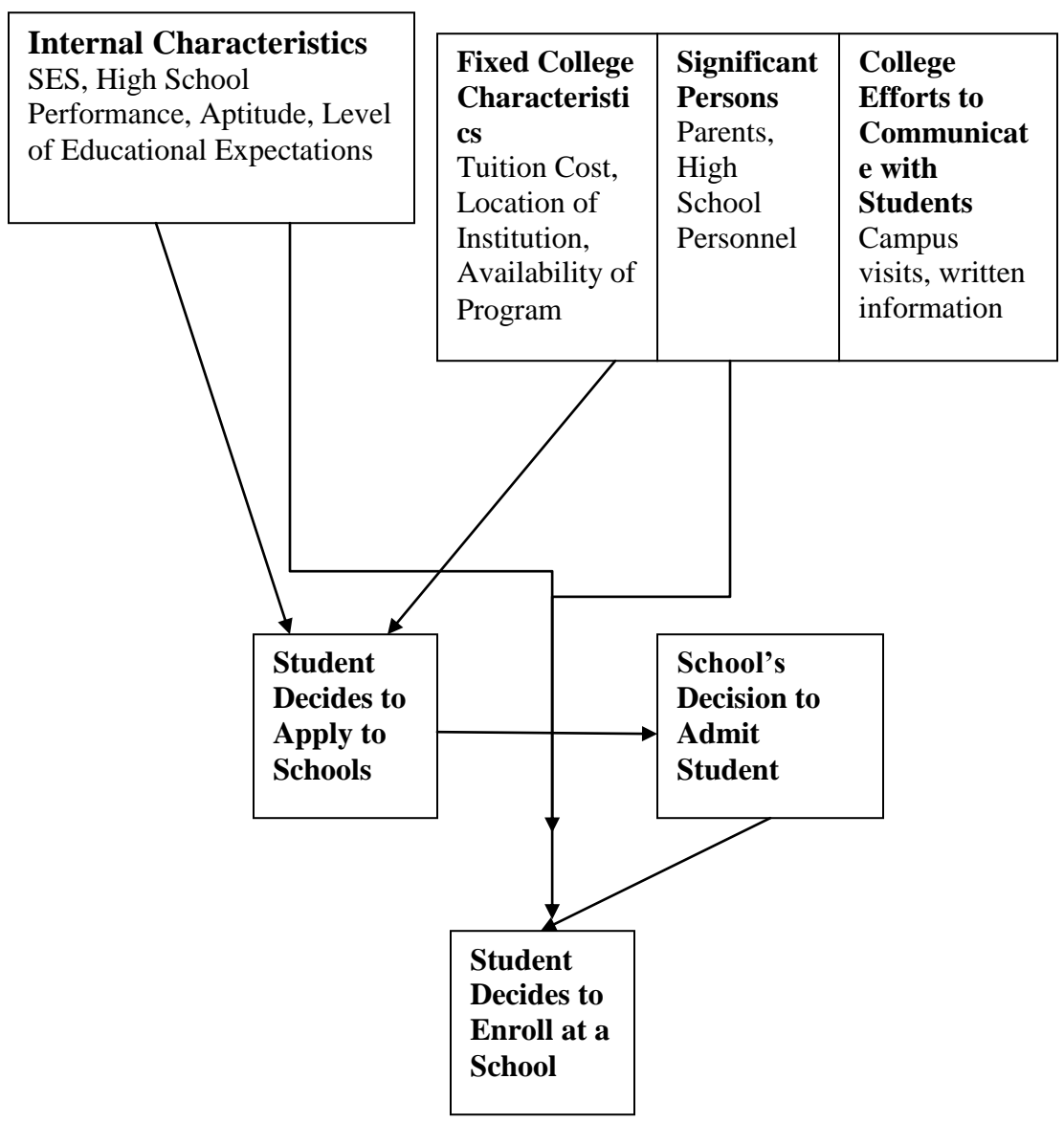
likely to prioritize a local university as their first-choice institution. Many institutions who recruit academically talented students at further distances may be wasting their resources by recruiting in areas that are not geographically close to the school and could save resources by refocusing on local academically talented students. Enrollment managers can use distance to create a more succinct and specific recruiting pattern for students without sacrificing the quality of students they enroll.

Revisions on Chapman's Model

In addition to the findings about variable influence on the choice-of-college decision for academically talented students, this research found a necessary revision of Chapman's model of college choice. While Chapman's model reflected that variables created a general expectation of college life and influenced the decision of students to apply to colleges, it failed to connect the influence of variables to the decision of which institution a student actually enrolls in. This research has shown that the majority of variables continue to influence the student at additional steps in the college selection process. While Chapman's model reflects the independent variables impact the decision to apply to colleges, which sets up a chain reaction of events culminating in the enrollment of an individual in a particular college or university, this research shows that the variables have a unique impact on all parts of the choice of college decision. Chapman's original model neglected to show the importance of how various variables influenced the entire college selection process for students. Chapman's model lessens the

influence of variables after the point that a student decides to apply to college. The revisions to this model, based on the findings of this research, connect the influence of the variables to the final enrollment decision, in addition to their impact on the decision to enroll in college. Figure 2 demonstrates a visual representation of revisions to Chapman's Model of College Choice based on this research. The connection between the variables and the final enrollment decision was shown to be paramount in the choice-of-college decision and should be reflected in Chapman's model of college choice. Additional lines connect the variables to the choice-of-college enrollment decision, which is justified by the findings of this research.

Figure 2. Revisions on Chapman's Model



Future Research

This study provides a strong beginning to future research that would illuminate issues affecting academically talented students and college choice. Academically talented students have traditionally been ignored in higher education research; this is reflected in the relatively few studies on academically talented students compared with studies on other groups, including low-income, first-generation, and academically at-risk students. Researchers have believed that academically talented students are the most likely to attend college, and this belief has provided little enthusiasm to study the college-going characteristics of this population in research. This study explores this population for the first time, giving researchers and practitioners a deeper understanding of these students. Future research should be undertaken on this population.

Additionally, this research explored a new definition of college choice that has not been explored in the literature, that of the choice-of-college decision. Research and policy has focused on the ability of individuals to pursue postsecondary education, but has not considerably focused on which institution of higher education an individual enrolls in or how students rank their institutional preferences. Studies on college choice have focused on the ability of students to enroll in an institution of higher education, which has been a concern of federal and state policy-makers (e.g., NPEC, 2007). These studies generally have not focused on the issues of concern to enrollment managers. Considering the choice-

of-college enrollment decision as a way to explore college choice allows for enrollment practitioners to obtain knowledge about enrollment patterns that are useful to practitioners. The institution of higher education where an individual enrolls can provide additional benefits over competing institutions as they enter the workforce, such as networking connections, job placement, and potential increased earnings from employers. The inclusion of a new definition of college choice will allow researchers to explore college choice for different populations.

Combining additional variables to explore the choice-of-college decision could also be a direction for future research. Conducting research that includes other variables would allow researchers to increase the predictive utility of choice of college models. Gender and the educational background of parents would be appropriate variables to add in order to address internal characteristics.

Geographic location, financial aid policies, type of institution, location of institution, and size of institution would be appropriate variables to add to address the fixed characteristics of the college. The influence of siblings, friends, and the staff of the college would be appropriate variables to add that address the influence of significant others. Mailings, booklets, and advertising of the institution, interviews with college officials, and Internet information would be appropriate variables to add that address the institution's attempts to communicate with the student. The addition of variables would be of value to future research by creating a more predictive model of college choice.

Future research could also be conducted to further explore the academically talented students who were studied in this sample. Breaking down the sample based on race, economic background, and gender would provide additional information on how individuals decide which college to enroll in. Also, research could be conducted exploring the characteristics of students who enroll in certain types of institutions, such as public 4-year institutions or religious institutions. Additional research of subgroupings in the sample would be beneficial to understanding the college choice decision of academically talented students.

Exploring the choice-of-college research in a qualitative manner would be another direction for research that would allow for a deeper exploration of the choice-of-college decision. A qualitative research methodology would allow the researcher to tease out potential variables and influences in the choice-of-college decision of academically talented students. By probing deeper in interview questions, the researcher would be able to gather more information about how academically talented students prioritized their college rankings and were able to select an institution of higher education in which to enroll. Among the conceptual areas that could be explored would be what in the campus visit influences the student in making a college-choice decision, and what occurs in the relationship between the high school counselor and the student that decreases the likelihood of first-choice enrollment for this population of students. Coupling qualitative research with previously conducted quantitative research on choice-of-college

decisions would give a richer and fuller exploration of the choice-of-college decision of academically talented students.

Conclusion

Academically talented students have been a heavily recruited population for colleges and universities. Financial resources and special recruitment strategies used by institutions of higher education have been created specifically to encourage the enrollment strategies of this population. However, very few studies have addressed the college choice process of academically talented students and even less have focused on why academically talented students enroll in their first-choice institution as opposed to a lesser-choice institution. This research found that significant factors that influenced the choice-of-college decision of academically students were race, age, educational expectations, out-of-pocket costs, distance, parental influence, high school counselor influence, and the influence of the campus visit. Non-White students were less likely to enroll in their first-choice institution than were White students. As students aged by even 1 year, they were significantly more likely to enroll in their first-choice institution. Individuals who desired the attainment of any degree level other than a bachelor's degree were less likely to enroll in their first-choice institution than individuals who merely wanted to earn a bachelor's degree. As out-of-pocket costs and the distance between the student's permanent residence and the institution increased, an academically talented student was less likely to enroll in their first-choice institution. The more that students valued their parents' influence in their choice-

of-college decision, they more likely they were to enroll in their first-choice institution. Conversely, as individuals' value of their high school counselor increased, an academically talented student was less likely to enroll in their first-choice institution. As students increased the value placed on the campus visit, the student was more likely to enroll in their first-choice institution. The campus visit had the largest impact on the choice-of-college decision for academically talented students. The findings from this study will help enrollment managers better recruit these students.

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